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THE STATE OF FOOD SECURITY AND NUTRITION IN THE WORLD

SAFEGUARDING AGAINST
ECONOMIC SLOWDOWNS
AND DOWNTURNS

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DEMOCRATIC REPUBLIC OF THE CONGO. Young woman selling fruit at a street market.

2019

**THE STATE OF
FOOD SECURITY
AND NUTRITION
IN THE WORLD**

**SAFEGUARDING AGAINST ECONOMIC
SLOWDOWNS AND DOWNTURNS**

Food and Agriculture Organization of the United Nations
Rome, 2019

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**TAJIKISTAN**

Fresh Tajik puff cakes being prepared as part of a project supporting inclusive agriculture and food security initiatives.
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FOREWORD

The 2030 Agenda for Sustainable Development puts forward a transformational vision recognizing that our world is changing, bringing with it new challenges that must be overcome if we are to live in a world without hunger, food insecurity and malnutrition in any of its forms.

The world population has grown steadily, with most people now living in urban areas. Technology has evolved at a dizzying pace, while the economy has become increasingly interconnected and globalized. Many countries, however, have not witnessed sustained growth as part of this new economy. The world economy as a whole is not growing as much as expected. Conflict and instability have increased and become more intractable, spurring greater population displacement. Climate change and increasing climate variability and extremes are affecting agricultural productivity, food production and natural resources, with impacts on food systems and rural livelihoods, including a decline in the number of farmers. All of this has led to major shifts in the way in which food is produced, distributed and consumed worldwide – and to new food security, nutrition and health challenges.

This is the third year that we have jointly produced *The State of Food Security and Nutrition in the World*. It reaffirms our commitment to working together to overcome these emerging challenges and free the world from hunger, food insecurity and malnutrition.

Recent editions of the report showed that the decline in hunger the world had enjoyed for over a decade was at an end, and that hunger was again on the rise. This year, the report shows that the global level of the prevalence of undernourishment has stabilized; however, the absolute number of undernourished people continues to increase, albeit slowly.

More than 820 million people in the world are still hungry today, underscoring the immense challenge of achieving the Zero Hunger target by 2030. Hunger is rising in almost all subregions of Africa and, to a lesser extent, in Latin America and Western Asia. We welcome the great progress seen in Southern Asia in the last five years, but the prevalence of undernourishment in this subregion is still the highest in Asia.

Another disturbing fact is that about 2 billion people in the world experience moderate or severe food insecurity. The lack of regular access to nutritious and sufficient food that these people experience puts them at greater risk of malnutrition and poor health. Although primarily concentrated in low- and middle-income countries, moderate or severe food insecurity also affects 8 percent of the population in Northern America and Europe. In every continent, the prevalence rate is slightly higher among women than men.

With regard to nutrition indicators, we are faring no better. If current trends continue,

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we will meet neither the 2030 SDG Target to halve the number of stunted children nor the 2025 World Health Assembly target to reduce the prevalence of low birthweight by 30 percent. This year's report warns that one in seven live births (20.5 million babies born globally) was characterized by low birthweight in 2015 – many of these low birthweight babies were born to adolescent mothers. The trends of overweight and obesity give us additional reason for concern, as they continue to rise in all regions, particularly among school-age children and adults. The most recent data show that obesity is contributing to 4 million deaths globally and is increasing the risk of morbidity for people in all age groups.

Our actions to tackle these troubling trends will have to be bolder, not only in scale but also in terms of multisectoral collaboration, involving the agriculture, food, health, water and sanitation, education, and other relevant sectors; and in different policy domains, including social protection, development planning and economic policy.

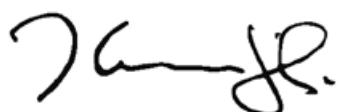
As we seek solutions, we must keep in mind the fragile state of the world economy. Since the sharp 2008–2009 global economic downturn, there has been an uneven pace of recovery in many countries, and the global economic outlook is darkening again.

This year, importantly, the report notes that hunger has been increasing in many countries where economic growth is lagging. Strikingly, the majority of these countries are not low-income countries, but middle-income countries and countries that rely heavily on international trade of primary commodities. Economic shocks are also prolonging and worsening the severity of acute food insecurity in food crisis contexts. Left unattended, these trends may have very unwelcome implications for malnutrition in all its forms. Moreover, we see that economic slowdowns and downturns disproportionately challenge food security and nutrition where inequalities in the distribution of income and other resources are profound.

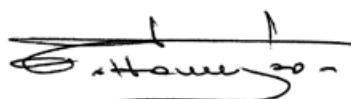
We must recognize the importance of safeguarding food security and nutrition in times of economic difficulty. We must invest wisely during periods of economic booms to reduce economic vulnerability and build capacity to withstand and quickly recover when economic turmoil erupts. We must foster pro-poor and inclusive structural transformation focusing on people and placing communities at the centre to reduce economic vulnerabilities and set ourselves on track to ending hunger, food insecurity and all forms of malnutrition while “leaving no one behind”.

To make our transformational vision pro-poor and inclusive, we must integrate food security and nutrition concerns into poverty reduction efforts to make the most of the synergies between eradicating poverty, hunger, food insecurity and malnutrition. We must also ensure that reducing gender inequalities and social exclusion of population groups is either the means to, or the outcome of, improved food security and nutrition.

This will require accelerated and aligned actions from all stakeholders and countries, including tireless and more integrated support from the United Nations and the international community to countries in support of their development priorities, through multilateral agreements and means of implementation, so that countries can embark on a pro-poor and inclusive path to transformation in a people-centred way to free the world from poverty, inequalities, hunger, food insecurity and malnutrition in all its forms.



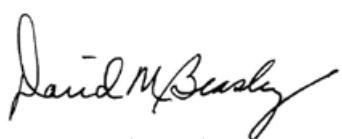
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METHODOLOGY

The State of Food Security and Nutrition in the World 2019 has been prepared by the FAO Agricultural Development Economics Division in collaboration with the Statistics Division of the Economic and Social Development Department and a team of technical experts from FAO, IFAD, UNICEF, WFP and WHO.

A senior advisory team consisting of designated senior managers of the five UN publishing partners guided the production of the report. Led by FAO, this team decided on the outline of the report and defined its thematic focus. It further gave oversight to the technical writing team composed of experts from each of the five co-publishing agencies. Background technical papers were prepared to support the research and data analysis undertaken by the members of the writing team.

The writing team produced a number of interim outputs, including an annotated outline, first draft and final draft of the report. These were reviewed, validated and cleared by the senior advisory team at each stage in the preparation process. The final report underwent a rigorous technical review by senior management and technical experts from different divisions and departments within each of the five UN agencies, both at headquarters and decentralized offices. Finally, the report underwent executive review and clearance by the heads of agency of the five co-publishing partners.

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The State of Food Security and Nutrition in the World 2019 was jointly prepared by the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the United Nations Children's Fund (UNICEF), the World Food Programme (WFP) and the World Health Organization (WHO).

Under the overall guidance of Maximo Torero Cullen, the direction of the publication was carried out by Marco V. Sánchez Cantillo and José Rosero Moncayo, with the overall coordination of Cindy Holleman, the Editor of the publication, all of whom are from the FAO Economic and Social Development Department (ES). The development of the report was guided by a Steering Committee consisting of agency representatives from the five co-publishing partners: Marco V. Sánchez Cantillo (Chair), Sara Savastano (IFAD), Victor Aguayo (UNICEF), Arif Husain (WFP) and Francesco Branca (WHO). Rui Benfica, Alessandra Garbero and Tisorn Songsermsawas (IFAD), Roland Kupka (UNICEF), Yvonne Forsén (WFP), and Marzella Wüstefeld (WHO) contributed to the coordination and provided technical editorial support. Valuable comments and final approval of the report were provided by the executive heads and senior staff of the five co-authoring agencies.

Part 1 of the report was coordinated by Anne Kepple (FAO). Section 1.1 was prepared by Carlo Cafiero with Juan Feng, Mauro Del Grossi, Anne Kepple and Sara Viviani with input from Piero Conforti and Meghan Miller (FAO). Section 1.2 was prepared by Chika Hayashi and Vrinda Mehra (UNICEF) and Laurence Grummer-Strawn (WHO), with input from Anna Lartey, Dalia Mattioni and Trudy Wijnhoven (FAO); Julia Krasevec, Richard Kumapley and Roland Kupka (UNICEF); Mica Jenkins and Jennifer Rosenzweig (WFP); and Melanie Cowan, Katrin Engelhardt, Kaia Engesveen, Karen McColl, Kuntal Saha and Marzella Wüstefeld (WHO), with design support from Nona Reuter (UNICEF). Section 1.3 was prepared by Carlo Cafiero with Abdul Sattar, Cristina Alvarez, Juan Feng, Mauro Del Grossi, Adeeba Ishaq, Anne Kepple and Firas Yassin (FAO); with input from Laurence Grummer-Strawn (WHO). José Rosero Moncayo provided editorial support and input to Part 1.

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Filippo Gheri was responsible for preparing the undernourishment estimates and projections under the supervision of Carlo Cafiero (FAO). Chiamaka Nwosu was responsible for preparing the aggregates for the FIES-based estimates, based on input files prepared by Marinella Cirillo under the supervision of Carlo Cafiero and Sara Viviani (FAO). Supporting data were provided by Salar Tayyib and the Food Balance Sheets team of the FAO Statistics Division and by Boubaker Ben Belhassen, Josef Schmidhuber and the Commodity Balance Sheet team of the FAO Trade and Markets Division. Richard Kumapley (UNICEF) was responsible for consolidating the nutrition data, with input from Chika Hayashi, Julia Krasevec and Vrinda Mehra (UNICEF); and Elaine Borghi and Lisa Rogers (WHO). Valentina Conti (FAO) was responsible for preparing the data and econometric analysis for Part 2 and Annexes 3–6 under the supervision of Cindy Holleman, with data analysis support from Stefania Di Giuseppe and conflict and food crises data input from Aurelien Mellin (FAO).

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ACRONYMS AND ABBREVIATIONS

BMI	Body mass index	LAC	Latin America and the Caribbean
CGP	Child Grant Programme	LICs	Low-income countries
CH	<i>Cadre Harmonisé</i> (harmonized framework)	MDER	Minimum dietary energy requirement
CV	Coefficient of variation	MENA	Middle East and North Africa
DEC	Dietary energy consumption	MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
DES	Dietary energy supply	MICs	Middle-income countries
FAO	Food and Agriculture Organization of the United Nations	NCD	Non-communicable disease
FDI	Foreign direct investment	PAFA	Agricultural Value Chains Support Project
FIES	Food Insecurity Experience Scale	PAL	Physical activity level
FI_{mod+sev}	Prevalence of moderate or severe food insecurity	PoU	Prevalence of undernourishment
FI_{sev}	Prevalence of severe food insecurity	PPP	Purchasing power parity
FSIN	Food Security Information Network	PSNP	Productive Safety Net Programme
GAM	Global acute malnutrition	RFM	Risk Financing Mechanism
GDP	Gross domestic product	SDGs	Sustainable Development Goals
GIEWS	Global Information and Early Warning System on Food and Agriculture	SIDS	Small Island Developing States
GIS	Geographic information system	ToT	Terms of trade
GRFC	<i>Global Report on Food Crises</i>	UHC	Universal health coverage
HLPE	High Level Panel of Experts on Food Security and Nutrition	UNDP	United Nations Development Programme
HSNP	Hunger Safety Net Programme	UNESCO	United Nations Educational, Scientific and Cultural Organization
ICN2	Second International Conference on Nutrition	UNICEF	United Nations Children's Fund
IFAD	International Fund for Agricultural Development	USD	United States dollar
ILO	International Labour Organization	WASH	Water, sanitation and hygiene
IPC	Integrated Food Security Phase Classification	WDI	World Development Indicators
		WFP	World Food Programme
		WHA	World Health Assembly
		WHO	World Health Organization

KEY MESSAGES

→ After decades of steady decline, the trend in world hunger – as measured by the prevalence of undernourishment – reverted in 2015, remaining virtually unchanged in the past three years at a level slightly below 11 percent. Meanwhile, the number of people who suffer from hunger has slowly increased. As a result, more than 820 million people in the world were still hungry in 2018, underscoring the immense challenge of achieving the Zero Hunger target by 2030.

→ Hunger is on the rise in almost all African subregions, making Africa the region with the highest prevalence of undernourishment, at almost 20 percent. Hunger is also slowly rising in Latin America and the Caribbean, although its prevalence is still below 7 percent. In Asia, Western Asia shows a continuous increase since 2010, with more than 12 percent of its population undernourished today.

→ This year's report introduces a second indicator for monitoring SDG Target 2.1: the Prevalence of Moderate or Severe Food Insecurity based on the Food Insecurity Experience Scale (FIES). While severe food insecurity is associated with the concept of hunger, people experiencing moderate food insecurity face uncertainties about their ability to obtain food, and have been forced to compromise on the quality and/or quantity of the food they consume.

→ Considering all people in the world affected by moderate levels of food insecurity together with those who suffer from hunger, it is estimated that over 2 billion people do not have regular access to safe, nutritious and sufficient food, including 8 percent of the population in Northern America and Europe.

→ One in seven newborns, or 20.5 million babies globally, suffered from low birthweight in 2015; no progress has been made in reducing low birthweight since 2012. The number of children under five years in the world affected by stunting, by contrast, has decreased by 10 percent in the past six years. However, with 149 million children still stunted, the pace of progress is too slow to meet the 2030 target of halving the number of stunted children.

→ Overweight and obesity continue to increase in all regions, particularly among school-age children and adults. In 2018, an estimated 40 million children under five were overweight. In 2016, 131 million children 5–9 years old, 207 million adolescents and 2 billion adults were overweight. About a third of overweight adolescents and adults, and 44 percent of overweight children aged 5–9 were obese. The economic costs of malnutrition are staggering.

- ➔ Analysis of household and individual level data from selected countries across all regions shows that food insecurity plays an important role as a determinant of many different forms of malnutrition. In upper-middle- and high-income countries in particular, living in a food-insecure household is a predictor of obesity in school-age children, adolescents, and adults.
 - ➔ Previous editions of this report show how conflict and climate variability and extremes are exacerbating the above trends. This year the report shows that the uneven pace of economic recovery and continuing poor economic performance in many countries after the 2008–2009 global economic downturn are also undermining efforts to end hunger and malnutrition. Episodes of financial stress, elevated trade tensions and tightening financial conditions are contributing to uncertain global economic prospects.
 - ➔ Hunger has increased in many countries where the economy has slowed down or contracted, mostly in middle-income countries. Furthermore, economic shocks are contributing to prolonging and worsening the severity of food crises caused primarily by conflict and climate shocks.
 - ➔ Out of 65 countries where recent adverse impacts of economic slowdowns and downturns on food security and nutrition have been strongest, 52 countries rely heavily on primary commodity exports and/or imports.
- ➔ Economic slowdowns or downturns disproportionately undermine food security and nutrition where inequalities are greater. Income inequality increases the likelihood of severe food insecurity, and this effect is 20 percent higher for low-income countries compared with middle-income countries. Income and wealth inequalities are also closely associated with undernutrition, while more complex inequality patterns are associated with obesity.
 - ➔ To safeguard food security and nutrition, it is critical to already have in place economic and social policies to counteract the effects of adverse economic cycles when they arrive, while avoiding cuts in essential services, such as health care and education, at all costs. In the longer term, however, this will only be possible through fostering pro-poor and inclusive structural transformation, particularly in countries that rely heavily on trade in primary commodities.
 - ➔ To ensure that structural transformation is pro-poor and inclusive requires integrating food security and nutrition concerns into poverty reduction efforts, while ensuring that reducing gender inequalities and social exclusion of population groups is either the means to, or outcome of, improved food security and nutrition.

EXECUTIVE SUMMARY

ADVANCING THE MONITORING OF FOOD SECURITY AND NUTRITION IN THE ERA OF THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

Two years ago, this annual report was transformed to meet the needs of a new era in monitoring the progress made towards achieving a world without hunger and malnutrition in all its forms, within the framework of the Sustainable Development Goals (SDGs). Specifically, the report began in 2017 to monitor progress towards both the targets of ending hunger and ensuring access to food by all (SDG Target 2.1) and of eliminating all forms of malnutrition (SDG Target 2.2). Given the broadened scope to include a focus on nutrition, the report was renamed *The State of Food Security and Nutrition in the World*, and UNICEF and the World Health Organization (WHO) joined the traditional partnership of FAO, IFAD and WFP in preparing it. To provide better guidance on how to meet the challenges of the changing world, the report was also expanded to include an in-depth thematic analysis on the underlying factors and drivers behind the observed food security and nutrition trends, and to link progress towards improved food security and nutrition with other SDGs.

This report has traditionally tracked world hunger using the prevalence of undernourishment (PoU), one of the indicators used to monitor global progress towards SDG Target 2.1. This year the report takes another step forward by reporting, for the first time, another indicator of the global SDG monitoring framework: the prevalence of moderate or severe food insecurity based on the Food Insecurity Experience Scale (FIES). The 2030 Agenda, by including this indicator, recognizes that food insecurity is more than hunger. The Zero Hunger goal aims not simply to

“eradicate hunger”, but also to “ensure access by all people [...] to safe, nutritious and sufficient food all year round” (SDG Target 2.1) and to “eradicate all forms of malnutrition” (SDG Target 2.2). Fortunately, data-gathering and measurement tools are rapidly evolving to meet the monitoring challenges presented by the new agenda and this report now includes this new indicator of food insecurity. The report thus reflects a more comprehensive approach to monitoring progress towards eliminating hunger, food insecurity and malnutrition and to understanding the interrelationships between them.

AFTER A DECADE OF STEADY DECLINE, THE NUMBER OF PEOPLE SUFFERING FROM HUNGER IN THE WORLD HAS SLOWLY INCREASED FOR SEVERAL YEARS IN A ROW, UNDERSCORING THE IMMENSE CHALLENGE OF ENDING HUNGER BY 2030

The two most recent editions of this report already offered evidence that the decline seen in the prevalence of undernourishment in the world over a decade had ended, and that hunger was slowly on the rise. Evidence available this year confirms that the global level of the prevalence of undernourishment has remained virtually unchanged in the last three years, at a level slightly below 11 percent. The absolute number of people suffering from hunger, however, continues to increase, albeit slowly. More than 820 million people in the world are hungry today, underscoring the immense challenge of achieving the Zero Hunger target by 2030.

Hunger is on the rise in almost all subregions of Africa, where the prevalence of undernourishment has reached levels of 22.8 percent in sub-Saharan Africa, and to

a lesser extent in Latin America. In Asia, despite great progress in the last five years, Southern Asia is still the subregion where the prevalence of undernourishment is highest, at almost 15 percent, followed by Western Asia, at over 12 percent, where the situation is worsening. Looking across regions, the undernourished population is distributed unevenly, with the majority living in Asia (more than 500 million). The number has been increasing steadily in Africa where it reached almost 260 million people in 2018, with more than 90 percent living in sub-Saharan Africa.

A broader look at the extent of food insecurity, beyond hunger, shows that 17.2 percent of the world population, or 1.3 billion people, have experienced food insecurity at moderate levels. This means that they do not have regular access to nutritious and sufficient food – even if they are not necessarily suffering from hunger, they are at greater risk of various forms of malnutrition and poor health. The combination of moderate and severe levels of food insecurity brings the estimate to 26.4 percent of the world population, amounting to a total of about 2 billion people.

In high-income countries, too, sizeable portions of the population lack regular access to nutritious and sufficient food. Eight percent of the population in Northern America and Europe is estimated to be food insecure, mainly at moderate levels of severity.

A closer examination of the estimates of food insecurity (moderate and severe) points also to a gender gap. In every continent, the prevalence of food insecurity is slightly higher among women than men, with the largest differences found in Latin America.

CHILDHOOD STUNTING IS DECREASING TOO SLOWLY AND ANAEMIA IN WOMEN PERSISTS; BUT OVERWEIGHT AND OBESITY ARE ACTUALLY RISING IN MOST COUNTRIES, CALLING ATTENTION TO THE NEED FOR GREATER EFFORTS TO HALT AND REVERSE THIS GROWING EPIDEMIC

This year the report takes a closer look at data on overweight and obesity, a serious public health challenge affecting people of all ages. Obesity is on the rise in almost all countries, contributing to 4 million deaths globally. The increase in prevalence of obesity between 2000 and 2016 has been even faster than that of overweight. No region is exempt from the epidemic of overweight and obesity. The prevalence of overweight is increasing in all age groups, with particularly steep increases among school-age children and adults. Throughout the world, most school-age children do not eat enough fruit or vegetables, regularly consume fast food and carbonated soft drinks, and are not physically active on a daily basis. Multifaceted, multisectoral approaches are needed to halt and reverse the obesity epidemic. Policies to protect, promote and support breastfeeding and to increase the availability and affordability of nutritious foods that constitute a healthy diet are required, along with measures to create healthier food environments and limit consumption of harmful fats, salt and sugars.

It is encouraging to note that the number of stunted children has declined by 10 percent over the past six years, but this rate of reduction is too slow to achieve the 2030 target of a 50 percent reduction in the number of stunted children. While the prevalence of stunting is decreasing in almost every region, the extent of progress varies considerably.

EXECUTIVE SUMMARY

Africa has made the least progress in reducing stunting prevalence since 2012. In 2018, Africa and Asia accounted for more than nine out of ten of all stunted children globally, representing 39.5 percent and 54.9 percent of the global total, respectively.

In the next ten years, urgent action is needed to achieve other global nutrition targets as well. Only 40 percent of infants under six months are exclusively breastfed, which is far from the 2030 target of 70 percent. In 2018, 7.3 percent of children were wasted, and this must be reduced by more than half to reach the target of less than 3 percent by 2030. Anaemia currently affects 33 percent of women of reproductive age – more than double the 2030 target of 15 percent.

Low birthweight estimates are included for the first time in this year's edition of the report, following the release of new global estimates. They indicate that one in seven live births, or 20.5 million babies globally, suffered from low birthweight in 2015. New evidence this year also shows that no progress has been made in reducing the prevalence of low birthweight since 2012. This lack of progress signals that it will be difficult to achieve the World Health Assembly global goal of a 30 percent reduction in the prevalence of low birthweight infants by 2030. This is concerning, as low birthweight newborns have a higher risk of dying in the first month of life, and those who survive are more likely to suffer from stunted growth and face increased risk of adult-onset chronic conditions including obesity and diabetes.

Beyond the immense human costs of malnutrition, the economic costs are staggering. It is projected that undernutrition will reduce Gross Domestic Product (GDP)

by up to 11 percent in Africa and Asia, while obesity costs USD 2 trillion annually, largely driven by the value placed on lost economic productivity, plus direct healthcare costs worldwide. The various forms of malnutrition are intertwined throughout the life cycle and between generations, with undernutrition in foetal and early life contributing to stunted physical growth and higher risk of overweight and chronic diseases like diabetes later in life. The UN Decade of Action on Nutrition, based on the ICN2 Framework for Action, emphasizes that tackling malnutrition in all its forms is not the domain of any one sector alone. The health, education, agriculture, social protection, planning and economic policy sectors all have a role to play, as well as legislators and other political leaders.

Moderate levels of food insecurity – defined as uncertain access to food of sufficient quality and/or quantity, but not so extreme that it causes insufficient dietary energy intake (undernourishment) – can increase the risk of seemingly divergent forms of malnutrition, including overweight and obesity. Analysis of household and individual level data from selected countries across all regions reveals that food insecurity plays an important role as a determinant of different forms of malnutrition in all countries studied. In upper-middle- and high-income countries, living in a food-insecure household is a predictor of obesity in school-age children, adolescents and adults. Factors that help to explain the link between food insecurity and overweight and obesity include the higher cost of nutritious foods (and their substitution with cheaper foods that are high in fats and sugar), the stress of living with uncertain access to food, and physiological adaptations to food restrictions.

ECONOMIC SLOWDOWNS AND DOWNTURNS POSE CHALLENGES FOR FOOD SECURITY AND NUTRITION; CREATING SUSTAINED ESCAPES REQUIRES SAFEGUARDING AGAINST THESE AND TACKLING INCREASING INEQUALITIES

Previous editions of this report identified that conflict, climate variability and extremes, and economic slowdowns were behind the recent rise in hunger. The previous two editions respectively provided an in-depth analysis on the first two drivers. This year the report looks closely at the third key driver, economic slowdowns, broadening the focus to also include economic downturns.

The risk that the unwelcome trends in hunger, food insecurity and malnutrition described above will continue is particularly high today, considering the fragile state and worrisome outlook of the world economy. The latest global economic prospects warn of slowing and stalled economic growth in many countries, including emerging and developing economies. Most regions rebounded after the sharp 2008–2009 global economic downturn, but the recovery has been uneven and short lived, as many countries have experienced generally declining trends in economic growth since 2011. Episodes of financial stress, elevated trade tensions and tightening financial conditions are clouding global economic prospects.

New evidence confirms hunger has been on the rise for many of the countries where the economy slowed down or contracted. Most countries (65 out of 77) that experienced a rise in undernourishment between 2011 and 2017 simultaneously suffered an economic slowdown or downturn. Strikingly, the majority of these cases involved not low-income countries, but

middle-income countries. Economic shocks have also prolonged and worsened the impact of conflict and climate events on acute food insecurity requiring urgent humanitarian assistance in food crisis countries. In more than half of the countries affected by food crises in 2018, the compounding impact of multiple economic shocks worsened the severity of acute food insecurity, affecting 96 million people.

Marked declines in primary commodity prices have contributed to economic slowdowns and downturns during the 2011–2017 period, mainly affecting countries highly dependent on primary commodity exports and/or imports. Most countries (52 out of 65) that saw undernourishment rise during recent economic slowdowns and downturns are countries whose economies are highly dependent on primary commodities for export and/or imports. In 2018, most of the countries (81 percent) where economic shocks worsened the severity of the food crises were high primary commodity-dependent countries.

Economic events generally affect food security and nutrition, depending on the extreme poverty level, but also on the existence of inequalities in income distribution as well as in access to basic services and assets, many of which result from social exclusion and the marginalization of groups. Where inequality is greater, economic slowdowns and downturns have a disproportionate effect on food security and nutrition for lower-income populations. Inequality increases the likelihood of severe food insecurity and this effect is 20 percent higher for low-income countries compared with middle-income countries. Income and wealth inequalities are also closely associated with undernutrition, while more complex inequality patterns are associated with obesity.

EXECUTIVE SUMMARY

This report calls for action on two fronts: the first, safeguarding food security and nutrition through economic and social policies that help counteract the effects of economic slowdowns or downturns, including guaranteeing funding of social safety nets and ensuring universal access to health and education; and, the second, tackling existing inequalities at all levels through multisectoral policies that make it possible to more sustainably escape from food insecurity and malnutrition. Acting on these two fronts requires short- and long-term policy responses that will depend on institutional capacity and availability of contingency mechanisms and funds to support them. The latter, in turn, requires strengthening the savings capacity of the economy when it is growing, so as to make countercyclical policies feasible when the need arises.

In the short term, countries need to protect incomes and purchasing power, particularly for the most affected households, through social protection programmes, including cash transfers and school feeding; public works programmes that help reduce unemployment; health sector policies that protect the poor against catastrophic out-of-pocket healthcare costs; and, if needed, policies aimed at reducing excessive volatility of food prices. In the longer term, countries need to invest wisely during periods of economic booms to reduce economic vulnerabilities and inequalities; build capacity to withstand shocks; maintain health and other social expenditures; use policy tools to create healthier food environments; and quickly recover when economic turmoil erupts. This requires balancing a set of policies and investments to achieve a structural transformation that also fosters poverty reduction and more egalitarian societies. It is imperative, in particular, that countries with economies that are highly dependent on

primary commodities foster such inclusive structural transformation to reduce their economic vulnerability.

This structural transformation, involving agriculture and food systems, must help ensure that food security and nutrition objectives are met. This will depend on the type of commodities and the quality of food that is generated under this process, and will require fostering better access to more nutritious foods that constitute a healthy diet to all. Policymakers must also ensure that policies that facilitate trade also help achieve nutrition objectives. Integrating food security and nutrition concerns into poverty reduction efforts, while increasing synergies between poverty reduction, hunger and malnutrition eradication must also be part of the transformation. Furthermore, reducing gender inequalities and those inequalities arising from social discrimination and exclusion of population groups needs to be either the means to improving food security and nutrition, or the outcome of doing so.

The trends, findings and policy recommendations briefly presented in this executive summary are discussed in much greater detail in the two parts of this report.

Part 1 presents the most recent trends in hunger, food insecurity and malnutrition in all its forms with a focus on monitoring progress on SDG Targets 2.1 and 2.2. It introduces for the first time one of the indicators of the SDG monitoring framework for SDG Target 2.1: the prevalence of moderate or severe food insecurity based on the Food Insecurity Experience Scale (FIES). This year's report also presents for the first time low birthweight estimates. The last section of Part 1 presents new evidence on the links between moderate or severe food insecurity and the various forms of malnutrition.

Part 2 looks closely at the role that economic slowdowns and downturns have played in recent food security and nutrition trends. The analysis ultimately points to guidance on what short- and long-term policies are necessary to safeguard food security and nutrition, either during episodes of economic turmoil or in preparation for them. This is particularly relevant today given the alarming

signs in the world economy, so that policy considerations are relevant to achieving the goals of ending hunger and all forms of malnutrition by 2030 (SDG Targets 2.1 and 2.2) as well as other related SDGs, especially – though not exclusively – eradicating extreme poverty (SDG 1), ensuring decent work and inclusive economic growth (SDG 8), and reducing inequalities (SDG 10).



SOUTH SUDAN

A woman prepares
sorghum for her family
in front of her home.
©FAO/Stefanie Glinski

PART 1

FOOD SECURITY AND NUTRITION AROUND THE WORLD IN 2019



FOOD SECURITY AND NUTRITION AROUND THE WORLD IN 2019

Much has changed since 1974, when FAO first began reporting on the extent of hunger in the world. The world population has grown steadily, with most people now living in urban areas. Technology has evolved at a dizzying pace, while the economy has become increasingly interconnected and globalized. All of this has led to major shifts in the way in which food is produced, distributed and consumed worldwide. But these transformations have also brought about worrying developments in malnutrition. Although the prevalence of child stunting has decreased significantly over the past 20 years, overweight and obesity, and diet-related non-communicable diseases, are rapidly on the rise.

This vastly different world calls for new ways of thinking about hunger and food insecurity and their consequences for nutrition. The imperative is to make sure no one suffers from hunger. But we must also recognize that there are many people who, while not “hungry” in the sense that they suffer physical discomfort caused by severe lack of dietary energy, may still be food insecure. They have access to food to meet their energy requirements, yet are uncertain that it will last, and may be forced to reduce the quality and/or quantity of the food they eat in order to get by. This moderate level of severity of food insecurity can contribute to various forms of malnutrition and has serious consequences for health and well-being.

The UN member countries recognized the importance of going beyond hunger when they set universal and ambitious targets for the 2030 Agenda for Sustainable Development. The “Zero Hunger” goal aims not simply to “eradicate hunger”, but also to “ensure access by all people [...] to safe, nutritious and sufficient food all year round” (SDG Target 2.1) and to “eradicate all

forms of malnutrition” (SDG Target 2.2). For this reason, this report was renamed *The State of Food Security and Nutrition in the World* in 2017. Since then it has reported on nutrition indicators, in addition to food security indicators.

Part 1 of this year’s report aims to bring new ways of thinking to bear on the latest trends in hunger, food insecurity, and various forms of malnutrition. Section 1.1 presents global, regional and subregional figures of hunger and introduces a new indicator of food insecurity that goes beyond hunger to include moderate levels of food insecurity. Section 1.2 presents the latest figures for seven nutrition indicators, including three SDG 2 indicators of child malnutrition (stunting, wasting and overweight), with a spotlight on the rapid rise in overweight and obesity. The links between food insecurity and nutritional outcomes – particularly overweight and obesity – are explored in Section 1.3. ■

1.1 RECENT TRENDS IN HUNGER AND FOOD INSECURITY

KEY MESSAGES

- ➔ After decades of steady decline, the trend in world hunger – as measured by the prevalence of undernourishment – reverted in 2015, remaining virtually unchanged in the past three years at a level slightly below 11 percent. Meanwhile, the number of people who suffer from hunger has slowly increased. As a result, more than 820 million people in the world are still hungry today, underscoring the immense challenge of achieving the Zero Hunger target by 2030.
- ➔ This recent trend is confirmed by estimates of severe food insecurity in the world based on the Food Insecurity Experience Scale (FIES), which is another way to monitor hunger.
- ➔ Hunger is on the rise in almost all subregions of Africa, the region with the highest prevalence of undernourishment, at almost 20 percent. It is also rising slowly in Latin America and the Caribbean, although the prevalence there is still below 7 percent. In Asia, where undernourishment affects 11 percent of the population, Southern Asia saw great progress in the last five years but is still the subregion with the highest prevalence of undernourishment, at almost 15 percent, followed by Western Asia at over 12 percent, where the situation is worsening.
- ➔ Estimates of SDG Indicator 2.1.2, which monitors progress towards the target of ensuring access to food for all, reveal that a total of about 2 billion people in the world experience some level of food insecurity, including moderate. People who are moderately food insecure may not necessarily suffer from hunger,

but they lack regular access to nutritious and sufficient food, putting them at greater risk of various forms of malnutrition and poor health.

- ➔ This new indicator also reveals that even in high-income countries, sizeable portions of the population lack regular access to nutritious and sufficient food; 8 percent of the population in Northern America and Europe is estimated to be food insecure, mainly at moderate levels.
- ➔ In every continent, the prevalence of food insecurity is slightly higher among women than men, with the largest differences found in Latin America.

Food insecurity is more than just hunger

The main indicator for monitoring progress on the eradication of hunger in the world reported in this report is the prevalence of undernourishment, or PoU (SDG Indicator 2.1.1). Beginning in 2017, the prevalence of severe food insecurity based on the Food Insecurity Experience Scale (FIES) was also included in the report as another, complementary indicator of hunger using a different approach.

This year's report now takes a step forward by also reporting, for the first time, estimates of the prevalence of moderate or severe food insecurity based on the FIES (SDG Indicator 2.1.2). This indicator provides a perspective on global food insecurity relevant for all countries of the world: one that looks beyond hunger towards the goal of ensuring access to nutritious and sufficient food for all (Box 1). As estimates of SDG Indicator 2.1.2 refer to the total number of people suffering from food insecurity, including at moderate levels, it should come as no surprise that they correspond to a much higher number of people than those who suffer from hunger.

BOX 1

TWO INDICATORS FOR SDG TARGET 2.1 TO MONITOR PROGRESS ON ENDING HUNGER AND ENSURING ACCESS TO FOOD FOR ALL

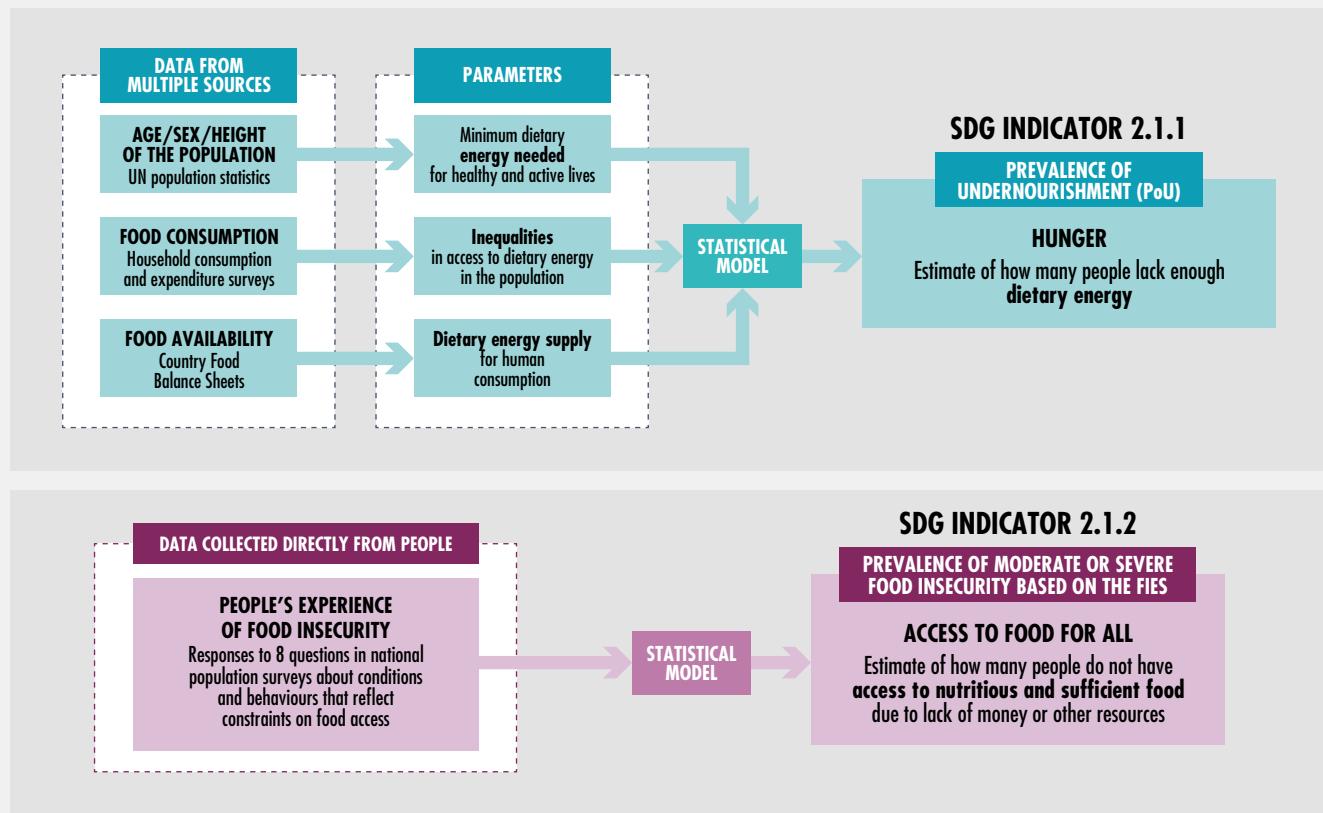
The SDG framework endorsed by member countries of the UN Statistical Commission in March 2017 and adopted by the UN General Assembly on 6 July 2017¹ includes two indicators for monitoring SDG Target 2.1: the prevalence of undernourishment – PoU (SDG Indicator 2.1.1) and prevalence of moderate or severe food insecurity based on the Food Insecurity Experience Scale – FIES (SDG Indicator 2.1.2).

SDG Indicator 2.1.1, the prevalence of undernourishment (PoU), is FAO's traditional indicator used to monitor hunger at the global and regional levels. It is computed from aggregated country-level data on food available for human consumption (compiled annually for most countries in the world in FAO's Food Balance Sheets) and on less frequently obtained data on food consumption from surveys, available for a growing (but still partial) number of countries. For each country, the distribution of average, daily dietary energy consumption in the population is compared with the distribution of dietary energy needs (derived from the composition of the population by age, gender and physical activity levels) to produce an

estimate of the proportion of the population that lacks enough dietary energy for a healthy, active life.

SDG Indicator 2.1.2, the prevalence of moderate or severe food insecurity in the population ($FI_{mod+sev}$) based on the Food Insecurity Experience Scale (FIES), was developed by FAO to complement the information provided by the PoU and to provide a broader perspective on the food access dimension of food security.² The approach relies on data obtained by directly asking people through surveys about the occurrence of conditions and behaviours that are known to reflect constrained access to food. Based on their responses to the FIES Survey Module items, the individuals surveyed are assigned a probability of being in one of three classes, as defined by two globally set thresholds: food secure or marginally insecure; moderately food insecure; and severely food insecure. The $FI_{mod+sev}$ is the cumulative probability of being in the two classes of moderate and severe food insecurity. A separate indicator (FI_{sev}) is computed by considering only the severe food insecurity class.

TWO INDICATORS FOR SDG TARGET 2.1 TO MONITOR PROGRESS ON ENDING HUNGER AND ENSURING ACCESS TO FOOD FOR ALL



SOURCE: FAO.

People experiencing **moderate food insecurity** face uncertainties about their ability to obtain food and have been forced to reduce, at times during the year, the quality and/or quantity of food they consume due to lack of money or other resources. It thus refers to a lack of consistent access to food, which diminishes dietary quality, disrupts normal eating patterns, and can have negative consequences for nutrition, health and well-being. People facing **severe food insecurity**, on the other hand, have likely run out of food, experienced hunger and, at the most extreme, gone for days without eating, putting their health and well-being at grave risk.

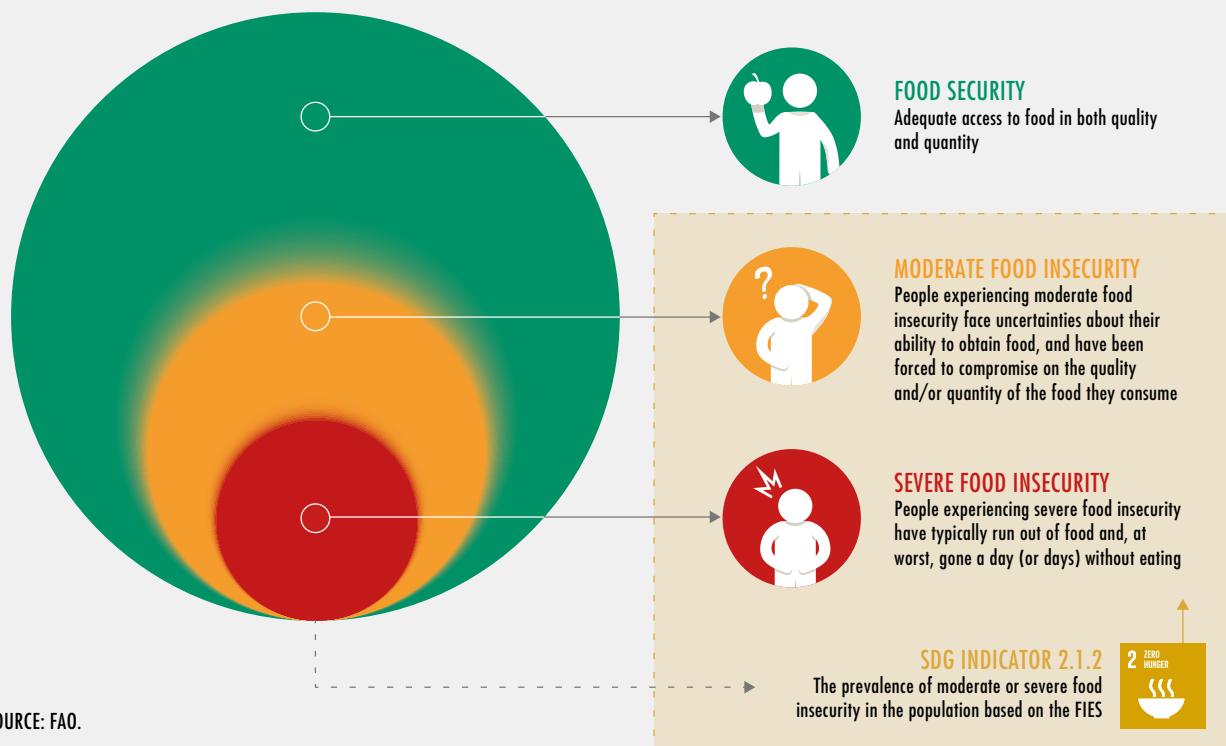
The figure below illustrates the meaning of food security, moderate food insecurity and severe food insecurity, with each category shown as a proportion of the total population. FI_{sev} can be considered a complementary indicator to the PoU in measuring the extent of hunger. SDG Indicator 2.1.2 ($FI_{mod+sev}$) is the proportion of the total population represented by those who experience food insecurity at moderate or severe levels combined. This indicator is particularly

relevant for countries where severe food deprivation may no longer be of concern, but where sizeable pockets of food insecurity still remain. In this sense, it is an indicator that is fully aligned with the universality principles of the 2030 Agenda.

As a measure of access to adequate food, Indicator 2.1.2 brings the perspective of the Right to Food to the SDG monitoring framework. Countries can use the FIES to obtain data-based evidence about the distribution and severity of food insecurity to build political will and implement policies to effectively realize the human right to adequate food, leaving no one behind.

The full potential of the FIES to generate statistics that inform policy is realized when the tool is applied in large national population surveys that allow for detailed analyses of the food-insecurity situation by income, gender, age, race, ethnicity, migratory status, disability, geographic location, or other policy-relevant characteristics. This is already the case for a growing number of countries.

EXPLANATION OF FOOD-INSECURITY SEVERITY LEVELS MEASURED BY THE FIES IN SDG INDICATOR 2.1.2

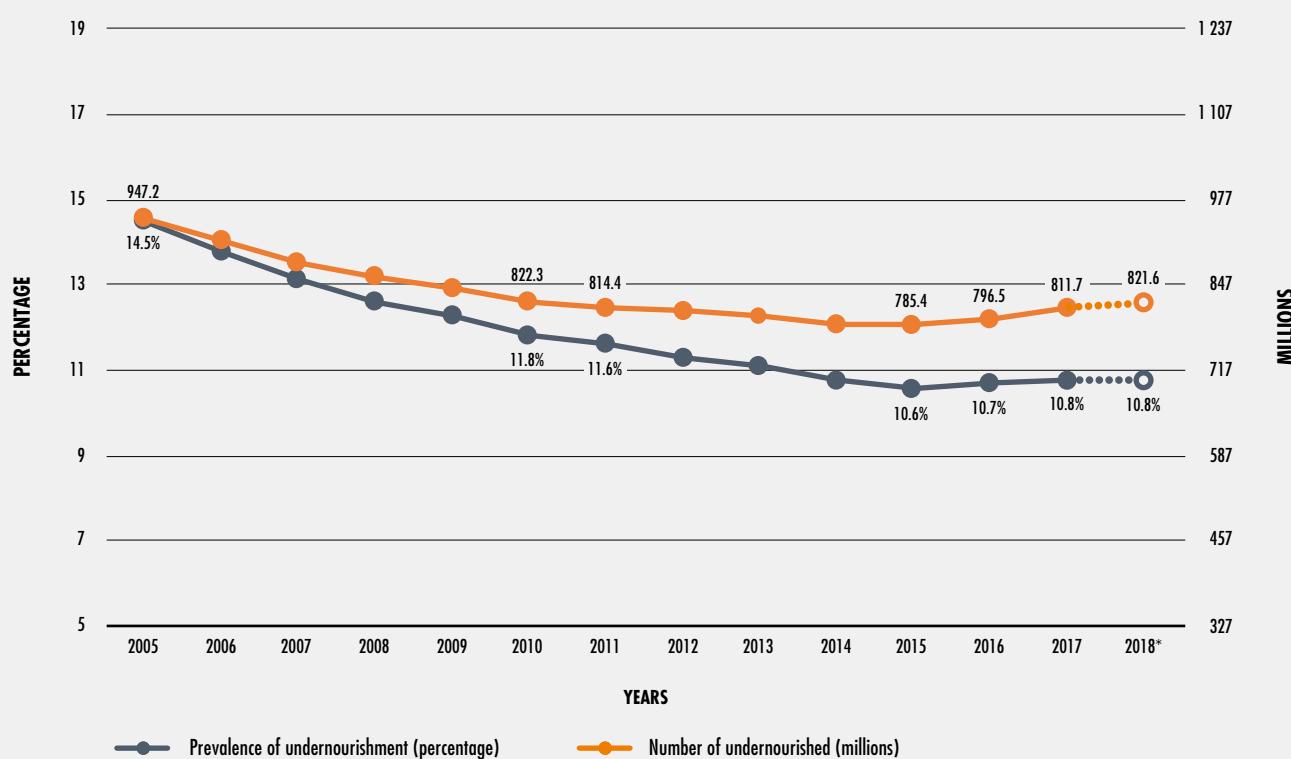


SOURCE: FAO.

¹ UN. 2017. United Nations Statistical Commission – 48th Session (2017). In: UNSD – United Nations Statistical Commission [online]. New York, USA. [Cited 4 April 2019]. <https://unstats.un.org/unsd/statcom/48th-session/>; and UN. 2017. *Indicator 2.1.2: Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)*. [Cited 4 April 2019]. <https://unstats.un.org/sdgs/metadata/files/Metadata-02-01-02.pdf>

² The other three dimensions of food security are food availability, utilization and stability.

FIGURE 1
THE NUMBER OF UNDERNOURISHED PEOPLE IN THE WORLD HAS BEEN ON THE RISE SINCE 2015, AND IS BACK TO LEVELS SEEN IN 2010–2011



NOTES: * Values for 2018 are projections as illustrated by dotted lines and empty circles. The entire series was carefully revised to reflect new information made available since the publication of the last edition of the report; it replaces all series published previously. See Box 2.

SOURCE: FAO.

SDG Indicator 2.1.1 Prevalence of undernourishment (PoU)

The two most recent editions of *The State of Food Security and Nutrition in the World* already offered evidence that the decades-long decline in the prevalence of undernourishment in the world had ended and that hunger was slowly on the rise. Additional evidence available this year confirms that the global level of the PoU has remained virtually unchanged at a level slightly below 11 percent, while the total number of undernourished (NoU) has been slowly

increasing for several years in a row.¹ This means that today, a little over 820 million people suffer from hunger, corresponding to about one in every nine people in the world (Figure 1, Tables 1 and 2). This underscores the immense challenge posed by achieving the Zero Hunger target by 2030.

The situation is most alarming in Africa, where since 2015 the PoU shows slight but steady increases in almost all subregions. It has reached levels of 26.5 percent and 30.8 percent in Middle and Eastern Africa, respectively, with rapid

BOX 2**REVISED SERIES OF ESTIMATES OF THE PREVALENCE OF UNDERNOURISHMENT AND PROJECTIONS FOR 2018**

The PoU series is always revised prior to publication of each new edition of *The State of Food Security and Nutrition in the World*. This is done in order to take into account any new information that FAO has received since the release of the previous edition. As this process usually implies possible backward revisions of the entire series, readers should avoid comparing the PoU values across different editions of this report and always refer to the most current report, including the time series covering past years.

This year's main revision involved an update of the Food Balance Sheet series used to estimate the average Dietary Energy Supply (DES) for the 53 countries with the largest number of undernourished people, bringing them up to date through 2017. When needed to produce PoU estimates for the most recent periods, the DES was projected based on rates of growth in the total availability of dietary energy from cereals

and meats. These rates were deduced from the series of commodity balances prepared by FAO's Trade and Markets Division.¹

An estimate of the coefficient of variation (CV) of per capita levels of habitual, daily energy consumption in the population was obtained from suitable national household surveys and carried forward from the last available year. For countries for which there was no food consumption survey covering the period 2014–2018, the CV was projected based on indirect evidence, including observed changes in the reported prevalence of severe food insecurity estimated using the FIES. This was done in order to capture possible recent changes in the inequality on access to food, which would be reflected in Fl_{sev} .

Minimum dietary energy requirements (MDER) for 2018 were computed based on the 2018 projected population structure from *The World Population Prospects, 2017 Revision*.²

¹ FAO Trade and Markets Division has developed and maintained a Commodity Balance Sheet database (XCBS) that provides up-to-date and elementary information for analysis of the state of agricultural commodity markets at global and regional levels, as well as the food situation of all countries in the world. The XCBS contains balance sheet-structured data for the major commodities in the following groups: cereals, dairy, meat, oil-bearing crops, sugar, tropical beverages, bananas and citrus since the 1980s. Data from the XCBS are used in a number of systems and publications, such as FAO Global Information and Early Warning System, Agricultural Market Information System, *Food Outlook* and *Crop Prospects and Food Situation*.

² For further details, see the methodological note in Annex 1B.

growth in recent years, especially in Western Africa (Figure 2).

As highlighted in past editions of this report, these trends are mostly driven by a combination of factors, including conflicts and extreme weather events, currently affecting a number of countries in Africa. In conflict-affected countries in sub-Saharan Africa² for instance, the number of undernourished people increased by 23.4 million between 2015 and 2018 – a significantly sharper increase compared with countries not exposed to conflicts (Figure 3).

An even more dramatic, longer-term impact on food security seems to be associated with exposure to drought. Countries classified as drought-sensitive³ in sub-Saharan Africa have seen the prevalence of undernourishment increase from 17.4 to 21.8 percent over the last six years, while in the same period the PoU actually *dropped* (from an average of 24.6 to 23.8 percent) in the other countries of the region. The number of undernourished people in drought-sensitive countries has increased by 45.6 percent since 2012 (Figure 4).

TABLE 1
PREVALENCE OF UNDERNOURISHMENT (PoU) IN THE WORLD, 2005–2018

	Prevalence of undernourishment (%)					
	2005	2010	2015	2016	2017	2018*
WORLD	14.5	11.8	10.6	10.7	10.8	10.8
AFRICA	21.2	19.1	18.3	19.2	19.8	19.9
Northern Africa	6.2	5.0	6.9	7.0	7.0	7.1
Sub-Saharan Africa	24.3	21.7	20.9	22.0	22.7	22.8
Eastern Africa	34.3	31.2	29.9	31.0	30.8	30.8
Middle Africa	32.4	27.8	24.7	25.9	26.4	26.5
Southern Africa	6.5	7.1	7.8	8.5	8.3	8.0
Western Africa	12.3	10.4	11.4	12.4	14.4	14.7
ASIA	17.4	13.6	11.7	11.5	11.4	11.3
Central Asia	11.1	7.3	5.5	5.5	5.7	5.7
Eastern Asia	14.1	11.2	8.4	8.4	8.4	8.3
South-eastern Asia	18.5	12.7	9.8	9.6	9.4	9.2
Southern Asia	21.5	17.2	15.7	15.1	14.8	14.7
Western Asia	9.4	8.6	11.2	11.6	12.2	12.4
Western Asia and Northern Africa	8.0	7.1	9.2	9.5	9.8	9.9
LATIN AMERICA AND THE CARIBBEAN	9.1	6.8	6.2	6.3	6.5	6.5
Caribbean	23.3	19.8	18.3	18.0	18.0	18.4
Latin America	8.1	5.9	5.3	5.5	5.7	5.7
Central America	8.4	7.2	6.3	6.1	6.1	6.1
South America	7.9	5.3	4.9	5.3	5.5	5.5
OCEANIA	5.5	5.2	5.9	6.0	6.1	6.2
NORTHERN AMERICA AND EUROPE	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5

NOTES: * Projected values. See Box 2 and Annex 1B for a description of how the projections are made. For country compositions of each regional/subregional aggregate, see Notes on geographic regions in statistical tables inside the back cover.

SOURCE: FAO.

This overall dire picture of undernourishment in Africa is consistent with the extent of poverty in the region. With a headcount ratio of 41 percent, sub-Saharan Africa accounted for 56 percent of the world's extreme poor in 2015, according to the World Bank Group.⁴ However, this is not just a problem of extreme poverty. Even resource-rich countries in these regions still have high rates of undernourishment (Tables A1.1 and A1.2 in Annex 1A), suggesting that something more crucial is at play in terms of the structure of their food systems, and that still much more should be done to improve distribution and consumption of food. Some of

the fundamental determinants of undernourishment related to underlying economic structures and inequalities are discussed in Part 2 of this report.

In Asia, the PoU has been steadily decreasing in most regions, reaching 11.4 percent in 2017. The exception is Western Asia, where the PoU has increased since 2010 to reach more than 12 percent of the population (Figure 5). This level in the region is second only to Southern Asia, which, despite great progress in the last five years, is still the subregion where undernourishment is highest, at almost 15 percent.

TABLE 2
NUMBER OF UNDERNOURISHED PEOPLE IN THE WORLD, 2005–2018

	Number of undernourished (millions)					
	2005	2010	2015	2016	2017	2018*
WORLD	947.2	822.3	785.4	796.5	811.7	821.6
AFRICA	196.0	199.8	217.9	234.6	248.6	256.1
Northern Africa	9.7	8.5	15.5	16.1	16.5	17.0
Sub-Saharan Africa	176.7	180.6	202.4	218.5	232.1	239.1
Eastern Africa	113.5	118.6	119.3	126.9	129.8	133.1
Middle Africa	36.2	36.5	37.9	41.1	43.2	44.6
Southern Africa	3.6	4.2	5.0	5.5	5.4	5.3
Western Africa	33.0	31.9	40.3	45.0	53.7	56.1
ASIA	688.6	572.1	518.7	512.3	512.4	513.9
Central Asia	6.5	4.6	3.8	3.8	4.0	4.1
Eastern Asia	219.1	178.4	138.1	137.8	138.1	137.0
South-eastern Asia	103.8	75.9	61.9	61.9	61.1	60.6
Southern Asia	339.8	293.1	286.1	278.3	276.4	278.5
Western Asia	19.4	20.1	28.8	30.5	32.7	33.7
Western Asia and Northern Africa	29.1	28.6	44.3	46.6	49.2	50.6
LATIN AMERICA AND THE CARIBBEAN	51.1	40.7	39.1	40.4	41.7	42.5
Caribbean	9.1	8.0	7.7	7.6	7.7	7.8
Latin America	42.1	32.6	31.5	32.9	34.0	34.7
Central America	12.4	11.6	10.9	10.6	10.7	11.0
South America	29.6	21.1	20.6	22.2	23.2	23.7
OCEANIA	1.8	1.9	2.3	2.4	2.5	2.6
NORTHERN AMERICA AND EUROPE	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.

NOTES: * Projected values. See Box 2 and Annex 1B for a description of how the projections are made.

n.r. = not reported, as the prevalence is less than 2.5 percent. Regional totals may differ from the sum of subregions, due to rounding. For country compositions of each regional/subregional aggregate, see Notes on geographic regions in statistical tables inside the back cover.

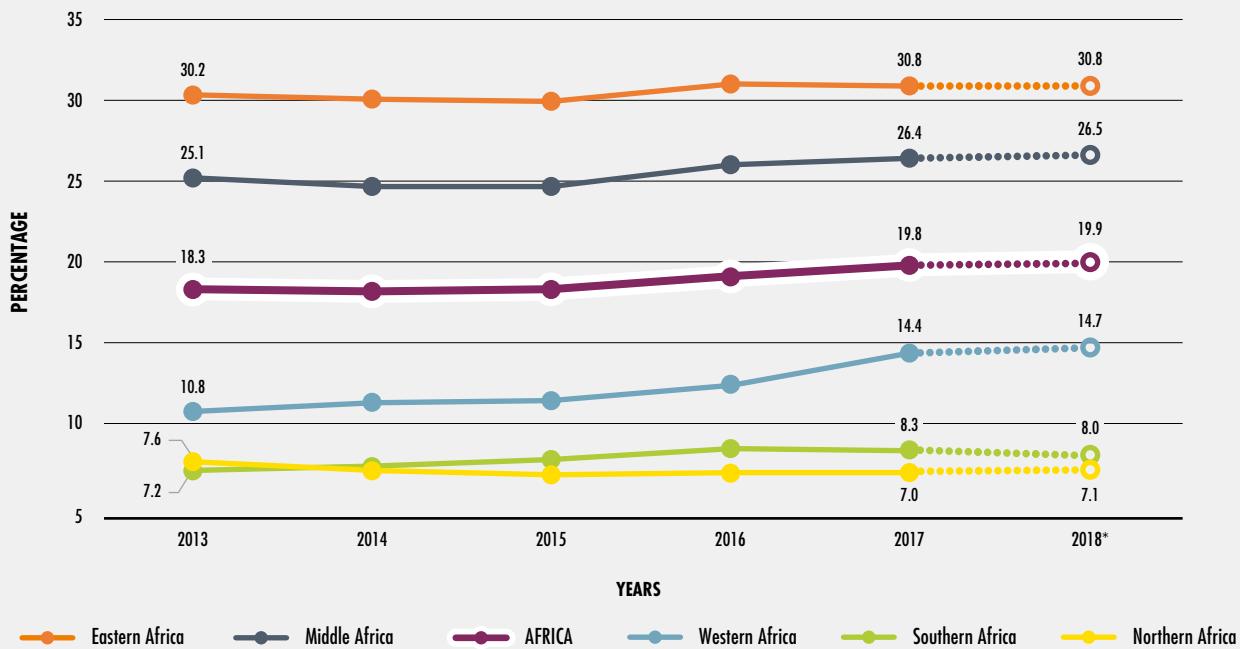
SOURCE: FAO.

Within the Western Asian subregion, the difference is striking between countries that have been affected by popular uprisings in Arab states and other conflicts,⁵ and those that have not been affected. For those affected countries, Figure 6 shows an increase in the PoU from the already higher value of 17.8 percent, to 27.0 percent, almost doubling the number of undernourished between 2010 and 2018. The PoU did not change during the same period in the other countries in the region.

In Latin America and the Caribbean (LAC), rates of undernourishment have increased in recent years,

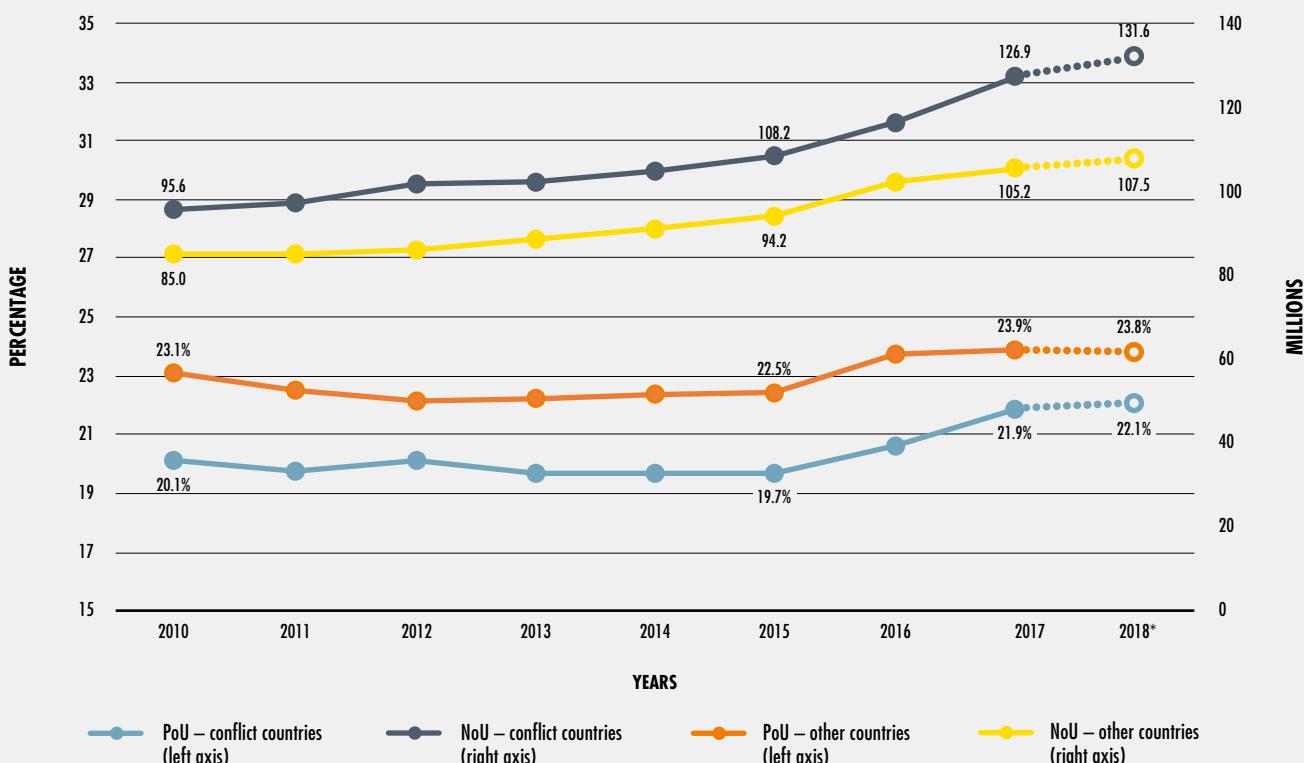
largely as a consequence of the situation in South America, where the PoU increased from 4.6 percent in 2013 to 5.5 percent in 2017 (Figure 7). In fact, South America hosts the majority (68 percent) of the undernourished in Latin America. The increase observed in recent years is due to the economic slowdown in several countries, particularly the Bolivarian Republic of Venezuela, where the PoU increased almost fourfold, from 6.4 percent in 2012–2014 to 21.2 percent in 2016–2018 (Figure 8). During the same recession period, inflation in the country was reported to have reached circa 10 million percent and growth in the real GDP worsened, going from negative

FIGURE 2 UNDERNOURISHMENT IS RISING RAPIDLY IN WESTERN AFRICA



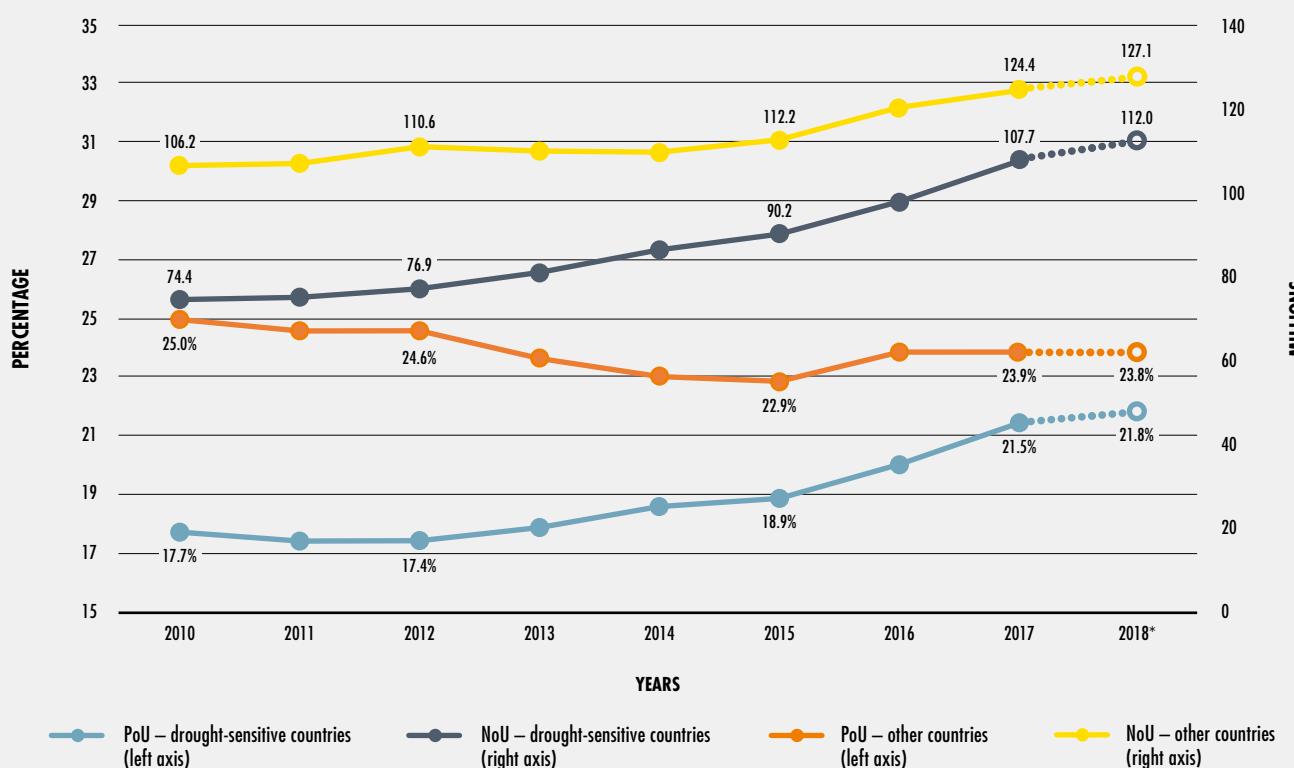
NOTES: * Projected values, illustrated by dotted lines and empty circles.
SOURCE: FAO.

FIGURE 3 UNDERNOURISHMENT INCREASES SHARPLY IN COUNTRIES AFFECTED BY CONFLICT IN SUB-SAHARAN AFRICA



NOTES: * Projected values, illustrated by dotted lines and empty circles.
SOURCE: FAO.

FIGURE 4
**DROUGHTS ARE ONE OF THE FACTORS BEHIND THE RECENT INCREASE IN
 UNDERNOURISHMENT IN SUB-SAHARAN AFRICA**



NOTES: * Projected values, illustrated by dotted lines and empty circles.
 SOURCE: FAO.

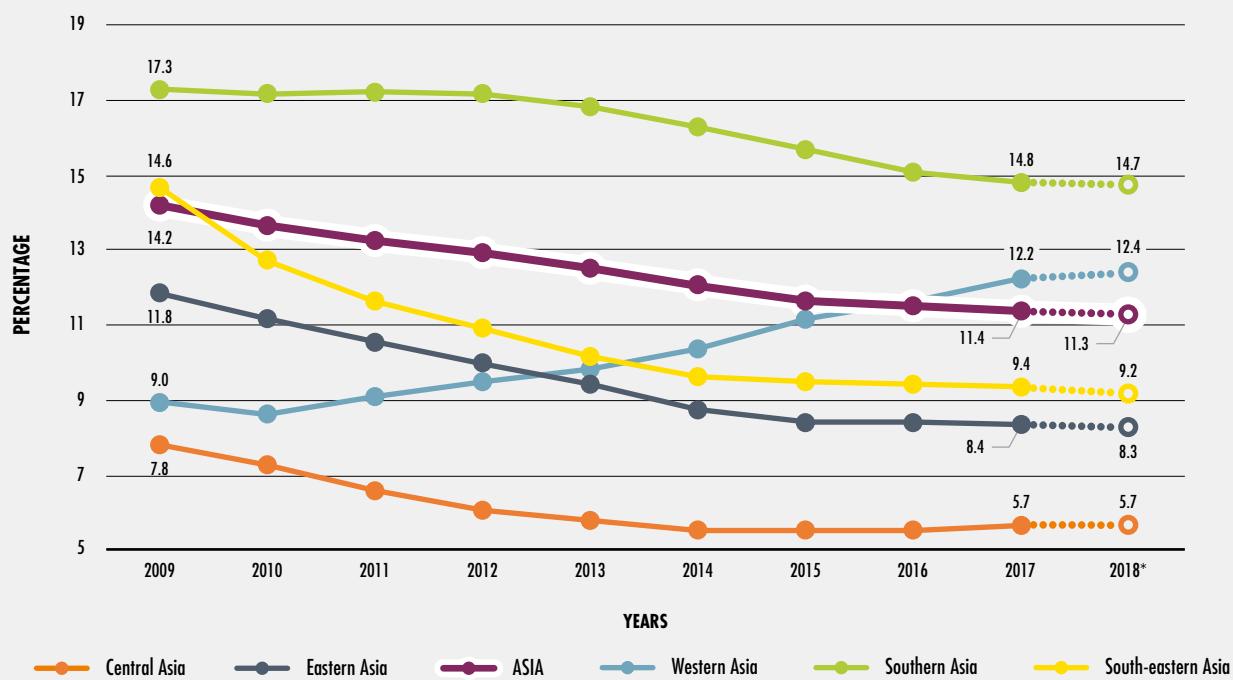
3.9 percent in 2014 to an estimated negative 25 percent in 2018.⁶

By contrast, prevalence rates of undernourishment in Central America and the Caribbean, despite being higher than those in South America, have been decreasing in recent years. This is consistent with the economic growth pattern observed in these subregions, where real GDP grew at a rate of about 4 percent between 2014 and 2018, with moderate rates of inflation consistently below 3 percent in the same period.⁷

Analysis of the distribution of the undernourished population across regions in the world shows that the majority (more than 500 million) live in Asia (Figure 9). The number has been increasing steadily in Africa, where it reached almost 260 million people in 2018, with more than 90 percent living in sub-Saharan Africa.

Given these figures and the trends observed over the last decade, achieving Zero Hunger by 2030 appears to be an increasingly daunting challenge.

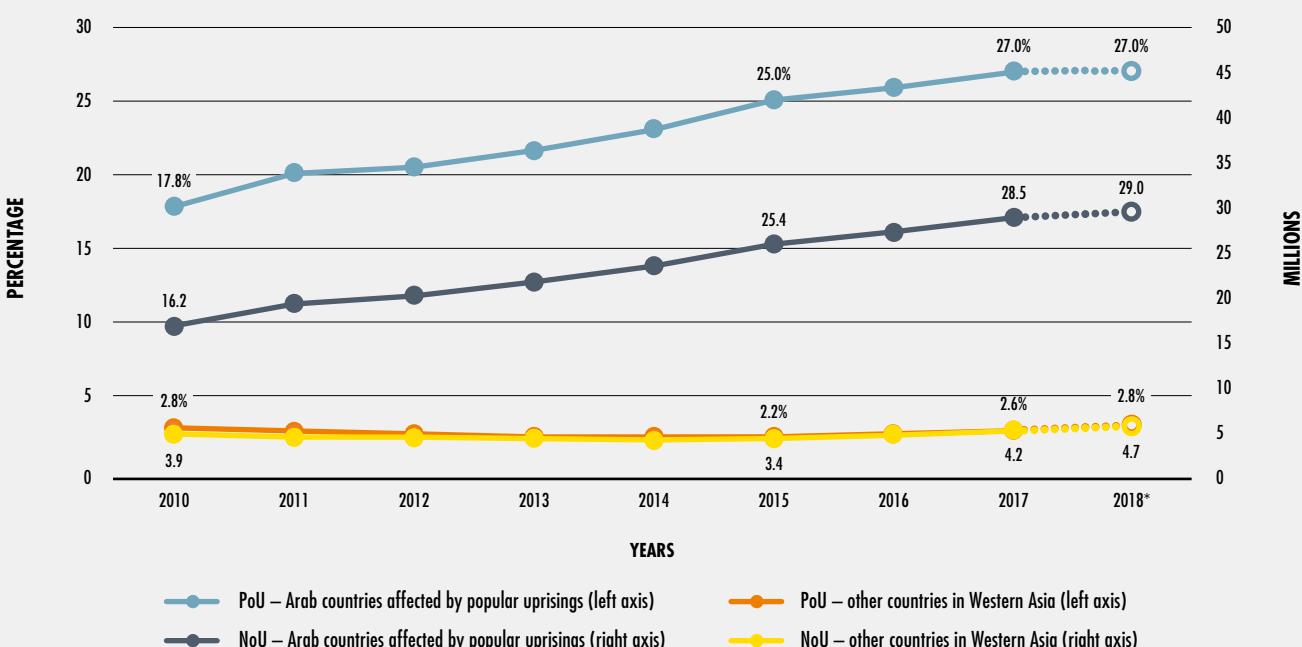
FIGURE 5
WESTERN ASIA IS THE ONLY SUBREGION IN ASIA WHERE UNDERNOURISHMENT IS ON THE RISE



NOTES: * Projected values, illustrated by dotted lines and empty circles.

SOURCE: FAO.

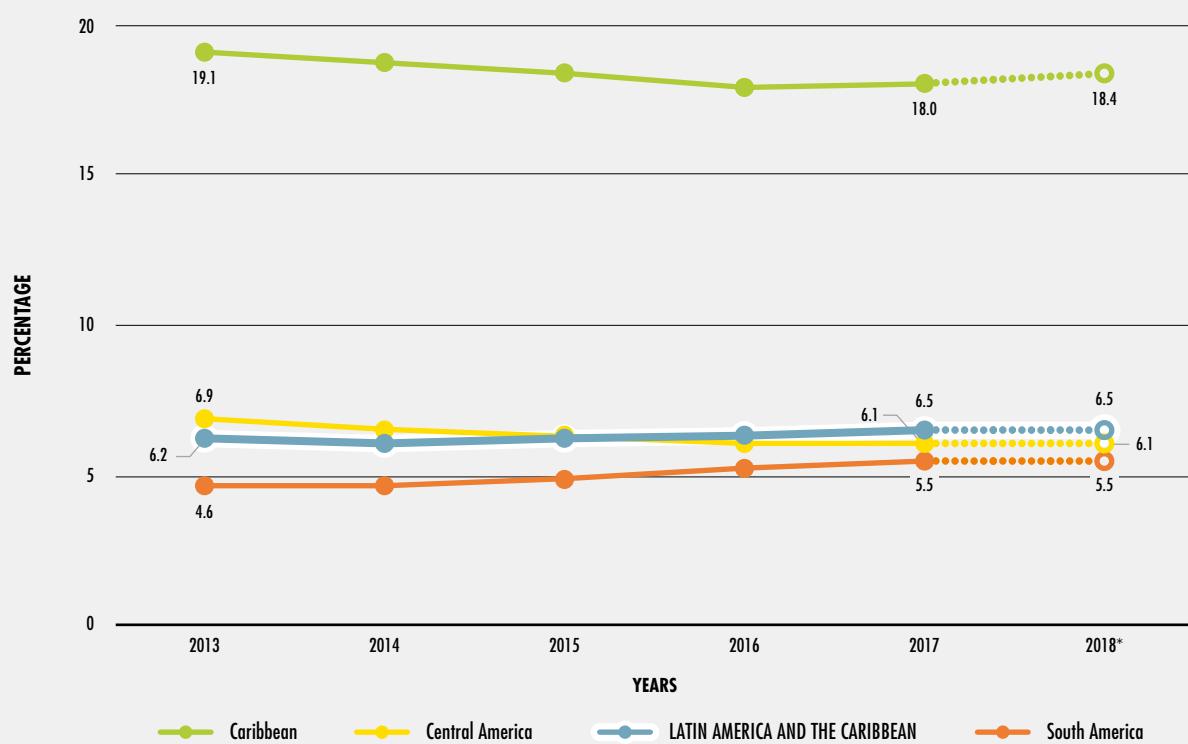
FIGURE 6
UNDERNOURISHMENT IS ON THE RISE IN WESTERN ASIAN COUNTRIES AFFECTED BY POPULAR UPRISINGS IN THE RECENT PAST



NOTES: * Projected values, illustrated by dotted lines and empty circles.

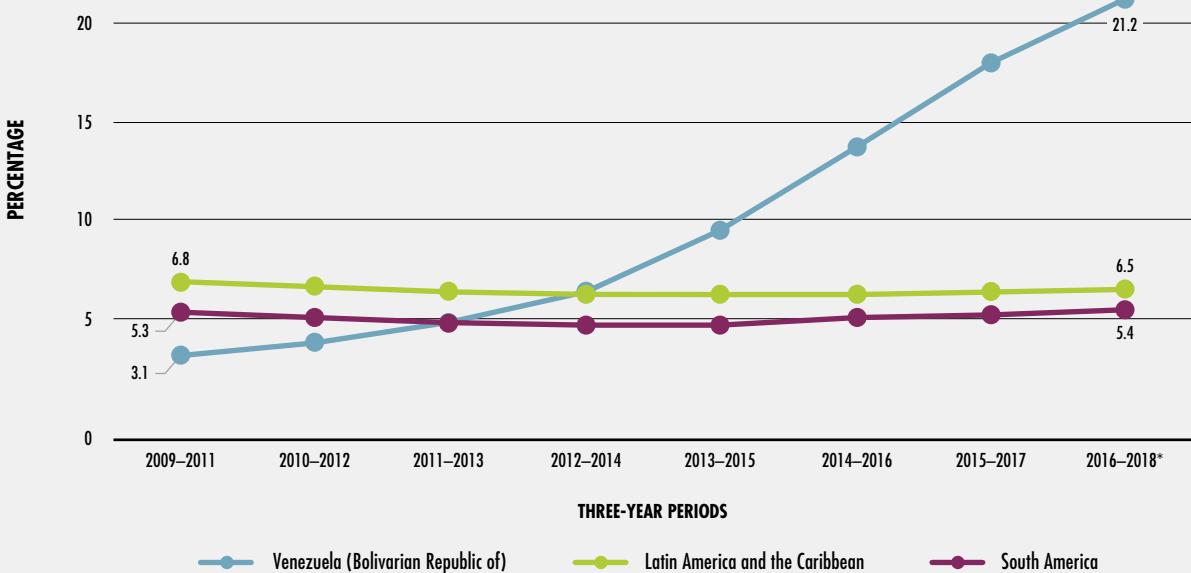
SOURCE: FAO.

FIGURE 7
INCREASING UNDERNOURISHMENT IN SOUTH AMERICAN COUNTRIES IS PUTTING UPWARD PRESSURE ON THE LATIN AMERICA AND THE CARIBBEAN REGIONAL AVERAGE



NOTES: * Projected values, illustrated by dotted lines and empty circles.
SOURCE: FAO.

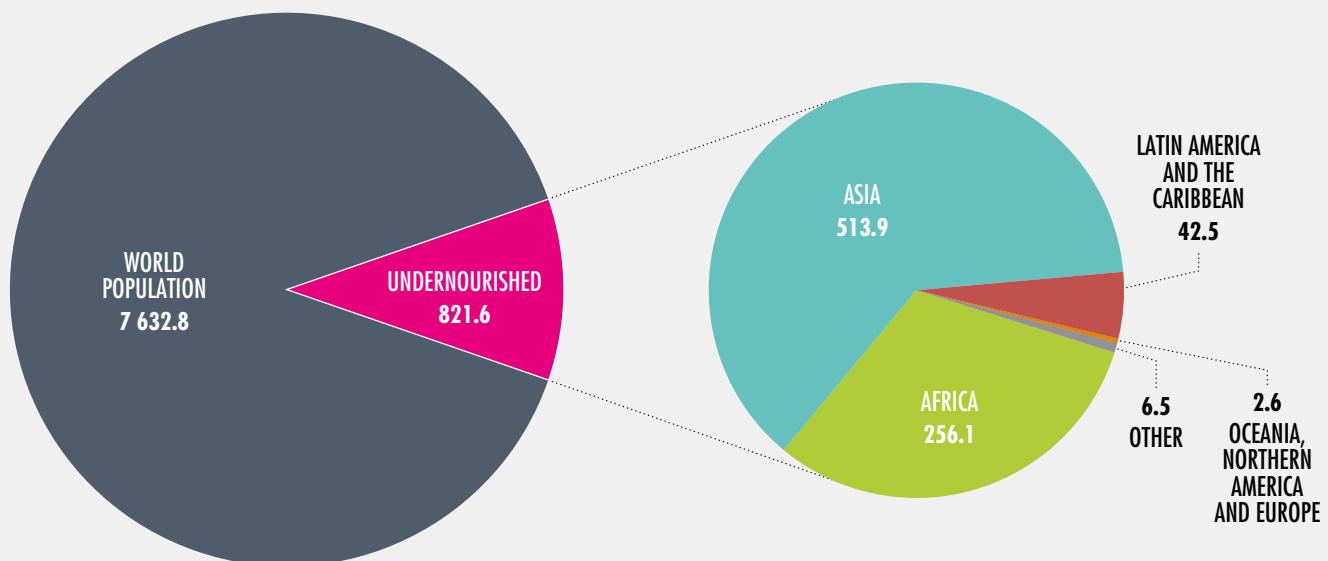
FIGURE 8
THE BOLIVARIAN REPUBLIC OF VENEZUELA SHOWS A SIGNIFICANT INCREASE IN THE PREVALENCE OF UNDERNOURISHMENT IN RECENT YEARS



NOTES: * 2018 estimates in the 2016–2018 three-year averages are projected values.
SOURCE: FAO.

FIGURE 9
EVEN THOUGH ASIA STILL PREDOMINATES, MORE THAN THIRTY PERCENT OF THE UNDERNOURISHED IN THE WORLD LIVE IN AFRICA

DISTRIBUTION OF UNDERNOURISHMENT IN THE WORLD (IN MILLIONS) IN 2018*



NOTES: * Projected values.

SOURCE: FAO.

SDG Indicator 2.1.2
Prevalence of moderate or severe food insecurity in the population, based on the FIES

The 2017 and 2018 editions of *The State of Food Security and Nutrition in the World* already presented estimates of the prevalence of severe food insecurity. As explained in those editions, the prevalence of severe food insecurity is expected to approximate the PoU, as both indicators reflect the extent of severe food deprivation. However, differences may exist because these indicators are based on different sources of data and methodologies (Box 1).

The 2019 edition introduces estimates of the prevalence of food insecurity combining moderate and severe levels to report on SDG Indicator 2.1.2 (Box 1). This second indicator thus refers to an expanded range of food-insecurity severity that encompasses moderate levels. This was in response to the need, in the context of the universal 2030 Agenda, for indicators that are relevant for all countries in the world – “developed” as well as “developing” countries – to monitor progress towards the very ambitious target of ensuring access to safe, nutritious and sufficient food by all people (SDG Target 2.1).

TABLE 3
**PREVALENCE OF MODERATE OR SEVERE FOOD INSECURITY, AND SEVERE FOOD INSECURITY ONLY,
MEASURED WITH THE FOOD INSECURITY EXPERIENCE SCALE, 2014–2018**

	Prevalence of severe food insecurity in the total population (%)					Prevalence of moderate or severe food insecurity in the total population (%)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
WORLD	8.0	7.7	8.0	8.7	9.2	23.2	23.2	24.1	25.6	26.4
AFRICA	18.1	19.0	21.9	22.9	21.5	47.6	48.3	52.6	54.3	52.5
Northern Africa	8.6	7.2	9.3	10.1	8.0	27.1	22.9	27.8	35.2	29.5
Sub-Saharan Africa	20.3	21.7	24.8	25.8	24.6	52.4	54.2	58.3	58.7	57.7
Eastern Africa	23.9	25.1	27.8	28.7	25.9	58.2	59.7	64.8	65.5	62.7
Middle Africa	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Southern Africa	21.4	20.6	30.7	30.8	30.6	45.3	45.9	53.5	53.6	53.6
Western Africa	12.9	14.4	16.5	17.7	17.6	43.7	45.3	47.3	47.7	47.9
ASIA	7.0	6.3	5.9	6.4	7.8	20.0	19.4	19.5	20.6	22.8
Central Asia	2.0	1.8	2.8	3.6	3.2	11.2	11.1	12.6	17.3	17.3
Eastern Asia	0.5	< 0.5	0.9	1.0	1.1	6.5	6.4	6.5	10.3	9.8
South-eastern Asia	4.5	3.7	4.2	5.8	5.2	19.6	17.3	19.0	21.5	20.4
Southern Asia	13.7	12.4	10.6	10.9	14.4	31.4	30.8	30.3	28.1	34.3
Western Asia	8.7	8.9	9.3	10.3	9.9	29.1	29.1	28.3	30.1	29.5
Western Asia and Northern Africa	8.6	8.1	9.3	10.2	9.0	28.1	26.2	28.1	32.5	29.5
LATIN AMERICA AND THE CARIBBEAN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Caribbean	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Latin America	7.7	6.5	7.8	9.9	9.0	24.2	25.9	28.5	33.8	30.9
Central America	12.9	10.3	8.5	12.7	10.6	36.7	33.7	26.2	37.3	31.5
South America	5.6	4.8	7.5	8.8	8.3	19.1	22.7	29.5	32.3	30.6
OCEANIA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
NORTHERN AMERICA AND EUROPE	1.5	1.5	1.2	1.2	1.0	9.6	9.6	8.7	8.5	8.0

NOTES: n.a. = not available, as data are available only for a limited number of countries, representing less than 50 percent of the population in the region.

For country compositions of each regional/subregional aggregate, see Notes on geographic regions in statistical tables inside the back cover.

SOURCE: FAO.

The FIES-based food-insecurity estimates presented in this edition are based on a combination of data: those collected by FAO using the FIES survey module in more than 140 countries, and those collected by national institutions in a number of countries in the Americas, Africa and Asia using the FIES or other similar experience-based food-security questionnaires. Results are made comparable for all countries by calibrating them against the FIES global reference scale (Box 3).⁸

Severe food insecurity

According to the latest estimates, 9.2 percent of the world population (or slightly more than 700 million people) were exposed to severe

levels of food insecurity in 2018, implying reductions in the quantity of food consumed to the extent that they have possibly experienced hunger (Tables 3 and 4). Not surprisingly, the figure for 2018 and the levels over the period between 2014 and 2018, are broadly consistent with those of the prevalence of undernourishment, confirming the complementarity between the two indicators in monitoring the extent of severe food deprivation, or “hunger”.

However, there is a slight difference in trends over the five-year period, with FI_{sev} increasing slowly and the PoU remaining unchanged. This can be explained by the fact that while the PoU estimates »

BOX 3 COMPUTING FIES-BASED ESTIMATES SO THAT THEY ARE GLOBALLY COMPARABLE

Experience-based food security measurement scales have been in use for many years in a number of countries, mainly in the Americas. To create categories for different levels of food insecurity, each country has chosen its own national thresholds, as well as its own naming systems. For example, in the United States of America households are classified as having "high", "marginal", "low" or "very low food security"; while in Brazil or in Mexico they use the terms "mild", "moderate" or "severe" food insecurity. However, although the labels used are similar, the resulting classes are not directly comparable across different countries.

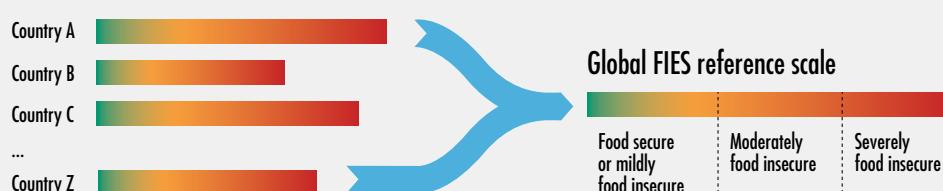
With the objective of ensuring truly comparable classifications, FAO launched the Voices of the Hungry Project in 2012. As described below, it was necessary to establish a global reference scale on which the thresholds for classification into severe and moderate food insecurity could be set, and to develop procedures to calibrate scores obtained in different countries against this global standard.¹

The eight items (questions) that compose the FIES survey module are chosen to represent a range of experiences, common to many cultures, that cover a broad range of severity on the underlying scale of food insecurity, from mild to severe. However, the

position of each item on this scale of severity is not imposed *a priori*, and may vary across countries. The statistical measurement model used to analyse the data (Rasch model)² allows for the identification of the relative position of the various items along a severity scale, based on patterns of responses to the eight items, with the basic idea being that the more severe an experience is, the less likely respondents are to report it. Each country thus obtains its own scale but they are not directly comparable across countries.

To establish the global FIES reference scale, FAO followed a process that is similar to what has been common in many other applications of measurement principles, for example, the establishment of the Coordinated Universal Time, which is used to regulate clocks and time globally. In that case, the average of the time kept by over 400 highly precise atomic clocks in over 50 laboratories worldwide is used to ensure one common standard reference time. To establish the FIES reference scale, FAO used data collected in more than 140 countries worldwide, from 2014 through 2016 and followed process (consisting mainly of two steps) that led to assigning each FIES item a position on what became the standard severity scale.

FIES measures obtained in different countries need to be equated before comparing them, to make sure they are expressed on the same reference scale, and common thresholds are used.



The FIES Survey Module

During the last 12 months, was there a time when, because of lack of money or other resources:

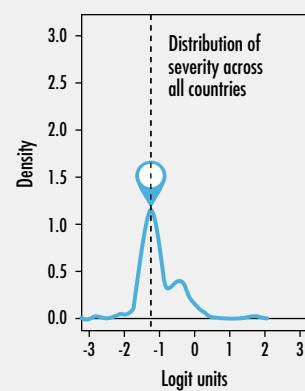
- ① You were worried you would not have enough food to eat?
- ② You were unable to eat healthy and nutritious food?
- ③ You ate only a few kinds of foods?
- ④ You had to skip a meal?
- ⑤ You ate less than you thought you should?
- ⑥ Your household ran out of food?
- ⑦ You were hungry but did not eat?
- ⑧ You went without eating for a whole day?



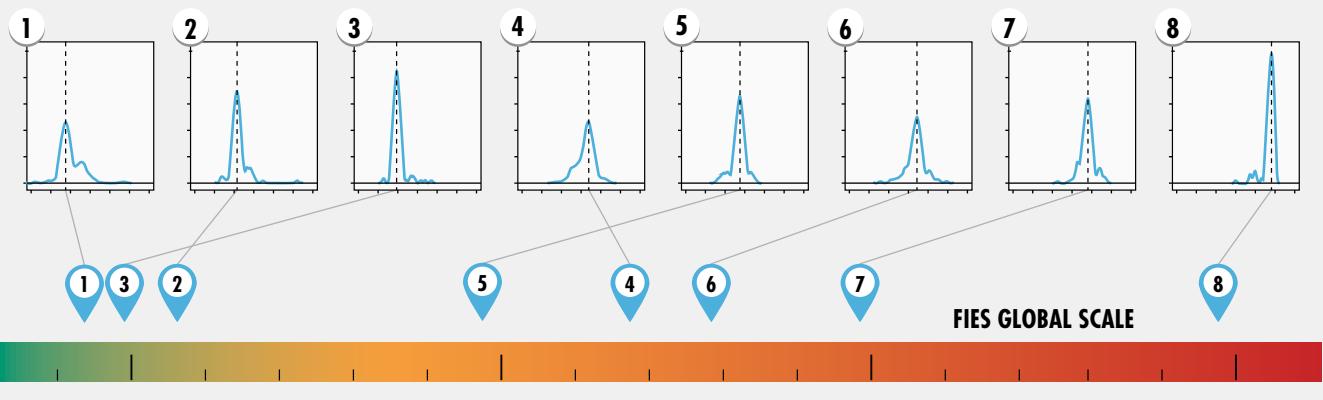
Step 1. Assigning a severity level to each item

The FIES survey module has been applied in **more than 140 countries worldwide**. This has generated a distribution of severity levels for each of eight the items (questions) that compose the FIES survey module.

The **median value** is chosen as the severity level associated to the item on the global FIES scale.



Step 2. Mapping the severity levels on the FIES global reference scale

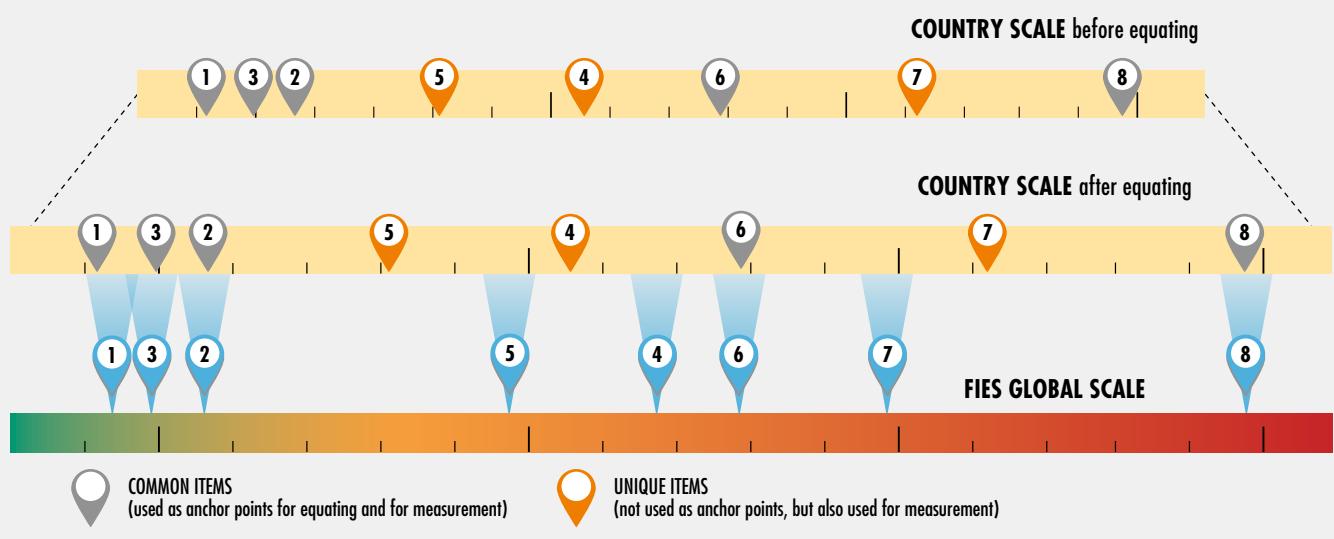


Once the global reference scale has been established, the process of calibrating each country's FIES measures against the FIES global standard is a relatively simple one and can be referred to as an "equating" procedure. Conceptually, converting FIES-based measures obtained in a given country at a given moment, into measures expressed on the global reference scale is like converting temperature readings from Fahrenheit to Celsius, or measures of length from the Imperial to the metric system. It simply requires the identification of "anchor" points for which measures in the two scales are

known. In the FIES methodology, such anchor points are given by the subset of items that can be considered common to the national and the global scale, once the national scale has been appropriately rescaled.

It is important to mention that, though unlikely, differences in interpretation based on language or cultural context could potentially limit the ability to accurately produce estimates using the FIES global reference scale. Research is ongoing to further refine the current methodology and to limit the potential risk of inducing a bias when adjusting country results to the global reference scale.

Calibrating the national scale against the FIES global reference scale



¹ See C. Cafiero, S. Viviani and M. Nord. 2017. Food security measurement in a global context: the Food Insecurity Experience Scale. *Measurement*, 116 (February 2018): 146–152.

² The Rasch model is a statistical model used in various fields of human and social sciences, to obtain estimates of the magnitude of unobservable, measurable traits (i.e. "latent" traits) from discrete data that represent the responses given to a set of appropriately chosen items. For a thorough introduction to the Rasch model, see T.G. Bond and C.M. Fox. 2015. *Applying the Rasch model: fundamental measurement in the human sciences*. London, Routledge; and M. Nord. 2014. *Introduction to item response theory applied to food security measurement: basic concepts, parameters, and statistics* [online]. Rome, FAO. [Cited 24 April 2019]. <http://www.fao.org/3/a-i3946e.pdf>

TABLE 4

NUMBER OF PEOPLE EXPERIENCING MODERATE OR SEVERE FOOD INSECURITY, AND SEVERE FOOD INSECURITY ONLY, MEASURED WITH THE FOOD INSECURITY EXPERIENCE SCALE, 2014–2018

	Number of severely food-insecure people (millions)					Number of moderately or severely food-insecure people (millions)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
WORLD	585.0	568.2	600.4	657.6	704.3	1 696.3	1 712.3	1 801.9	1 929.6	2 013.8
AFRICA	210.7	226.7	268.2	287.5	277.0	554.1	577.1	644.1	682.0	676.1
Northern Africa	19.1	16.3	21.2	23.6	19.0	59.8	51.6	63.8	82.1	70.2
Sub-Saharan Africa	191.6	210.4	246.9	263.9	258.0	494.3	525.5	580.3	599.9	605.8
Eastern Africa	93.0	100.2	114.3	121.3	112.5	226.1	238.4	266.0	276.3	271.7
Middle Africa	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Southern Africa	13.4	13.1	19.8	20.1	20.2	28.3	29.1	34.4	34.9	35.3
Western Africa	44.4	50.9	59.6	66.0	67.2	149.9	159.7	171.1	177.6	182.8
ASIA	305.9	280.0	264.8	288.5	353.6	875.6	858.2	871.1	928.0	1 038.5
Central Asia	1.3	1.2	1.9	2.5	2.3	7.6	7.6	8.8	12.2	12.4
Eastern Asia	7.5	6.8	15.4	16.6	18.4	105.4	104.4	106.3	169.9	162.7
South-eastern Asia	27.9	23.7	27.3	37.5	34.3	123.2	109.9	122.1	139.6	134.0
Southern Asia	247.1	225.4	195.8	204.2	271.7	565.7	561.3	559.6	525.8	649.1
Western Asia	21.9	22.9	24.5	27.6	27.0	73.7	75.0	74.3	80.6	80.2
Western Asia and Northern Africa	41.0	39.2	45.7	51.2	46.0	133.4	126.6	138.1	162.7	150.5
LATIN AMERICA AND THE CARIBBEAN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Caribbean	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Latin America	45.1	38.0	46.5	59.8	54.7	141.2	152.6	170.0	203.2	187.8
Central America	21.9	17.8	14.8	22.5	19.0	62.5	58.2	45.9	66.1	56.7
South America	23.1	20.2	31.7	37.3	35.7	78.7	94.4	124.1	137.1	131.2
OCEANIA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
NORTHERN AMERICA AND EUROPE	16.1	16.3	13.4	13.6	10.6	105.2	104.7	95.8	93.7	88.7

NOTES: n.a. = not available, as data are available only for a limited number of countries, representing less than 50 percent of the population in the region.

For country compositions of each regional/subregional aggregate, see Notes on geographic regions in statistical tables inside the back cover.

SOURCE: FAO.

- » reflect structural factors that influence the availability of and the inequality in access to food, FI_{sev} estimates are more sensitive to short-term factors affecting people's direct experiences in accessing food, as reported in surveys. In addition, the PoU for recent years is computed based on inevitably less timely data, particularly those from household surveys. Therefore the PoU may fail to capture the impact of very recent phenomena that might have affected the extent of inequality in food consumption. Estimates of FI_{sev}, instead, fully reflect these phenomena. It is expected that the two series will tend to converge more closely over time.⁹

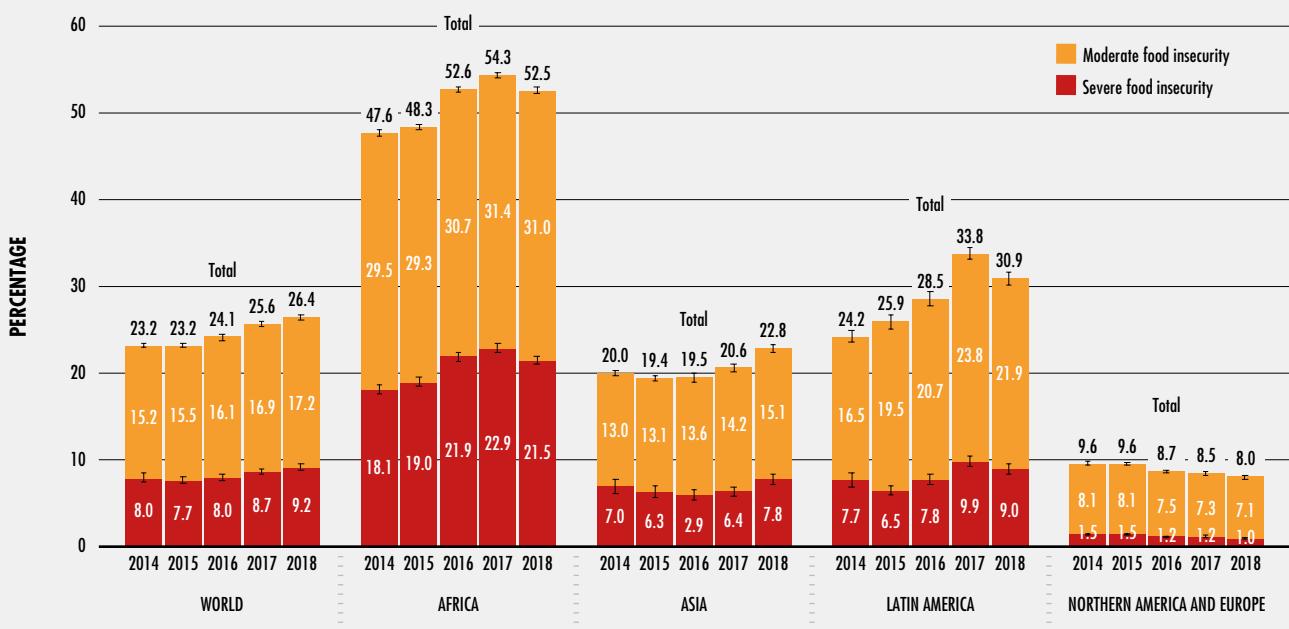
Consistent with the findings for the PoU, Africa is the region with the highest prevalence of severe food insecurity, reaching 21.5 percent in 2018, up from 18.1 percent in 2014.

Severe food insecurity is also increasing in Latin America, driven by South America where FI_{sev} reached 8.3 percent in 2018.

Finally, Asia shows a mixed picture. While the percentage of people exposed to severe food insecurity decreased from 2014 to 2017 – a trend that is consistent with the PoU results – FI_{sev} shows a marked increase in 2018 that

FIGURE 10

OVER THE PAST FIVE YEARS (2014–2018), TOTAL LEVELS OF FOOD INSECURITY HAVE BEEN ON THE RISE AT THE GLOBAL LEVEL, MAINLY DUE TO INCREASES IN AFRICA AND LATIN AMERICA



NOTES: Differences in total are due to rounding of figures to the nearest decimal point.

SOURCE: FAO.

is not mirrored by the projected PoU values. The increase is concentrated in Southern Asia, where FI_{sev} increased from less than 11 percent in 2017 to more than 14 percent in 2018. This possibly reflects an increase in the unemployment rate in India between 2017 and 2018,¹⁰ and especially in Pakistan, where growth is expected to slow down significantly.¹¹

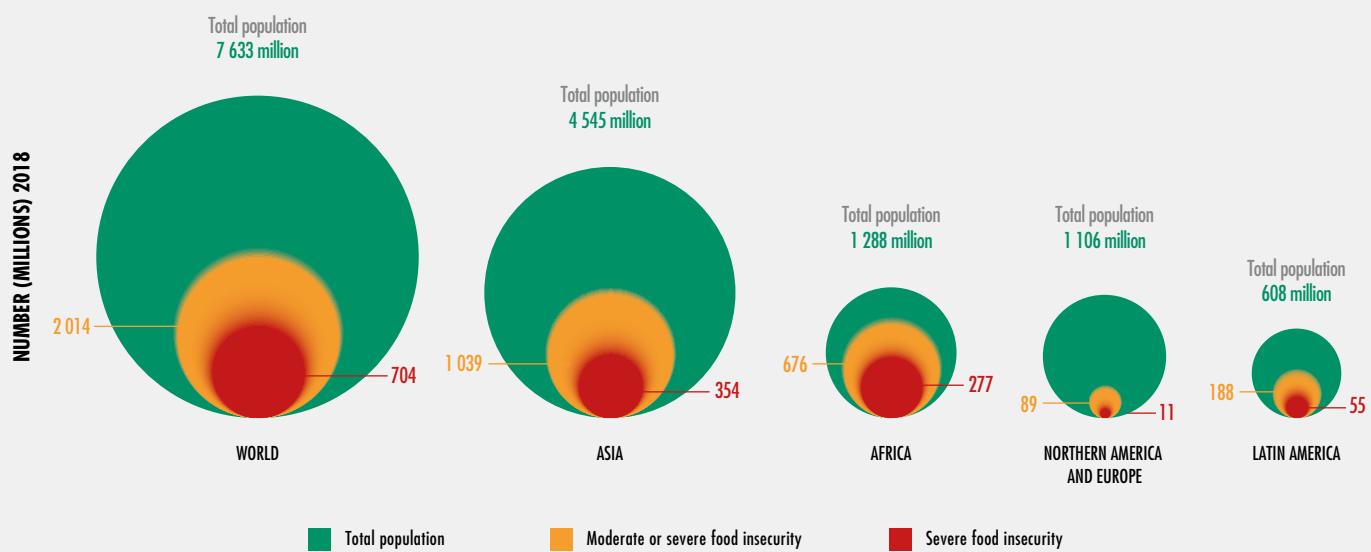
Moderate or severe food insecurity

A broader look at the extent of food insecurity beyond severe levels and hunger reveals that an additional 17.2 percent of the world population, or 1.3 billion people, have experienced food insecurity at moderate levels.

This implies that these additional 1.3 billion people did not have regular access to nutritious and sufficient food, even if they were not necessarily suffering from hunger, thus putting them at greater risk of various forms of malnutrition and poor health than the food secure population.

The combination of moderate and severe levels of food insecurity brings the estimated $\text{FI}_{\text{mod+sev}}$ (SDG Indicator 2.1.2) to 26.4 percent of the world population, amounting to a total of about 2 billion people (Table 3 and 4). Figure 10 shows that, since 2014 when FAO first started collecting FIES data, levels of food insecurity

FIGURE 11
THE CONCENTRATION AND DISTRIBUTION OF FOOD INSECURITY BY SEVERITY
DIFFERS GREATLY ACROSS THE REGIONS OF THE WORLD



SOURCE: FAO.

have been on the rise at the global level as well as in most regions of the world.

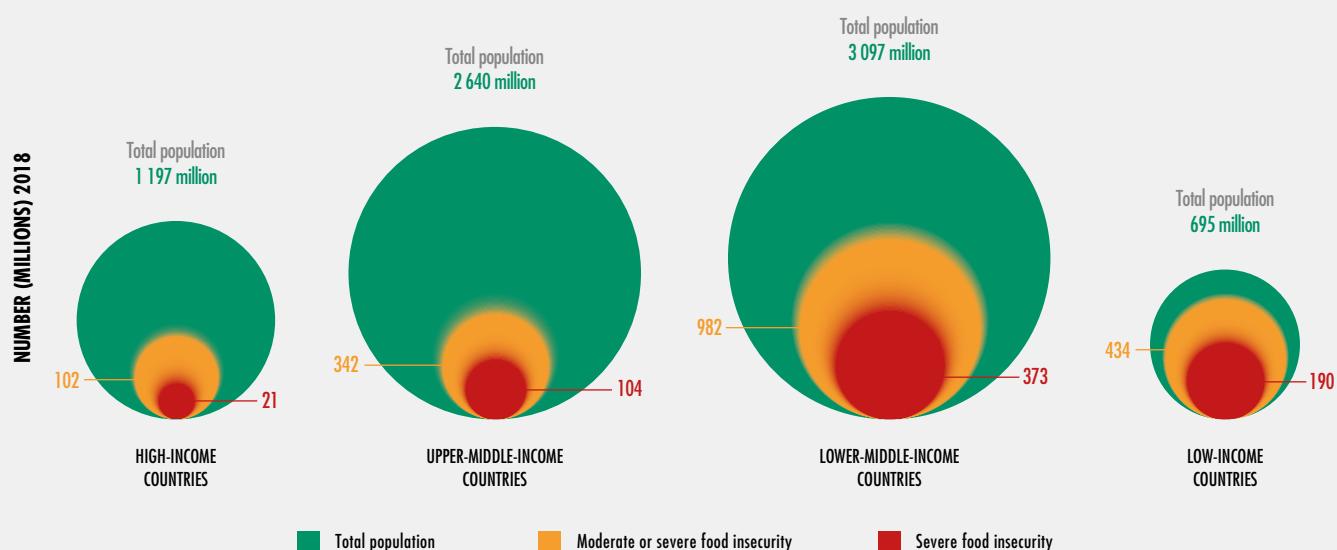
Total food insecurity (moderate or severe) is much higher in Africa than in any other part of the world. Here FI_{mod+sev} affects more than half of the population. Latin America is next, with a prevalence of food insecurity of more than 30 percent, followed by Asia at 23 percent and Northern America and Europe at 8 percent.

Also revealing are the differences observed within regions (Table 3). In Asia, total food insecurity is much higher for Southern Asia (34.3 percent in 2018) than for Eastern Asia (less than 10 percent). In Africa, total food insecurity is also higher for the Southern region (53.6 percent in 2018) and the Eastern region (62.7 percent) compared with Western Africa (47.9 percent). It is

at its lowest in Northern Africa (29.5 percent), where the food-insecurity profile is much more similar to that of the Western Asia region than that of the other regions in Africa.

The distribution of food-insecure people in the world presented in Figure 11 shows that, from a total of 2 billion suffering from food insecurity, 1.04 billion (52 percent) are in Asia; 676 million (34 percent) are in Africa; and 188 million (9 percent) are in Latin America. The figure also illustrates the difference across regions in the distribution of the population by food-insecurity severity level. For example, in addition to being the region with the highest overall prevalence of food insecurity (Table 3), Africa is also the region where severe levels represent the largest share of the total. In Latin America, and even more in Northern America and Europe, the proportion

**FIGURE 12
AS THE COUNTRY LEVEL OF INCOME FALLS, THE PREVALENCE OF FOOD INSECURITY INCREASES AND SO DOES THE PROPORTION OF SEVERE FOOD INSECURITY OVER THE TOTAL**



SOURCE: FAO.

of food insecurity experienced at severe levels is much smaller.

Different patterns in food-insecurity severity emerge also when countries are grouped by income level. Figure 12 shows that, as the level of income falls, not only does the prevalence of food insecurity increase, but so does the proportion of severe food insecurity over the total. In 2018, low-income countries, with a total population of only 695 million, were home to 434 million food-insecure individuals (62 percent of the total), 190 million of whom (equivalent to 27 percent of the total population) were severely food insecure. In contrast, high-income countries were home to 102 million food-insecure individuals (9 percent of the total), of whom 21 million (barely 2 percent of the total) were considered to be severely food insecure.

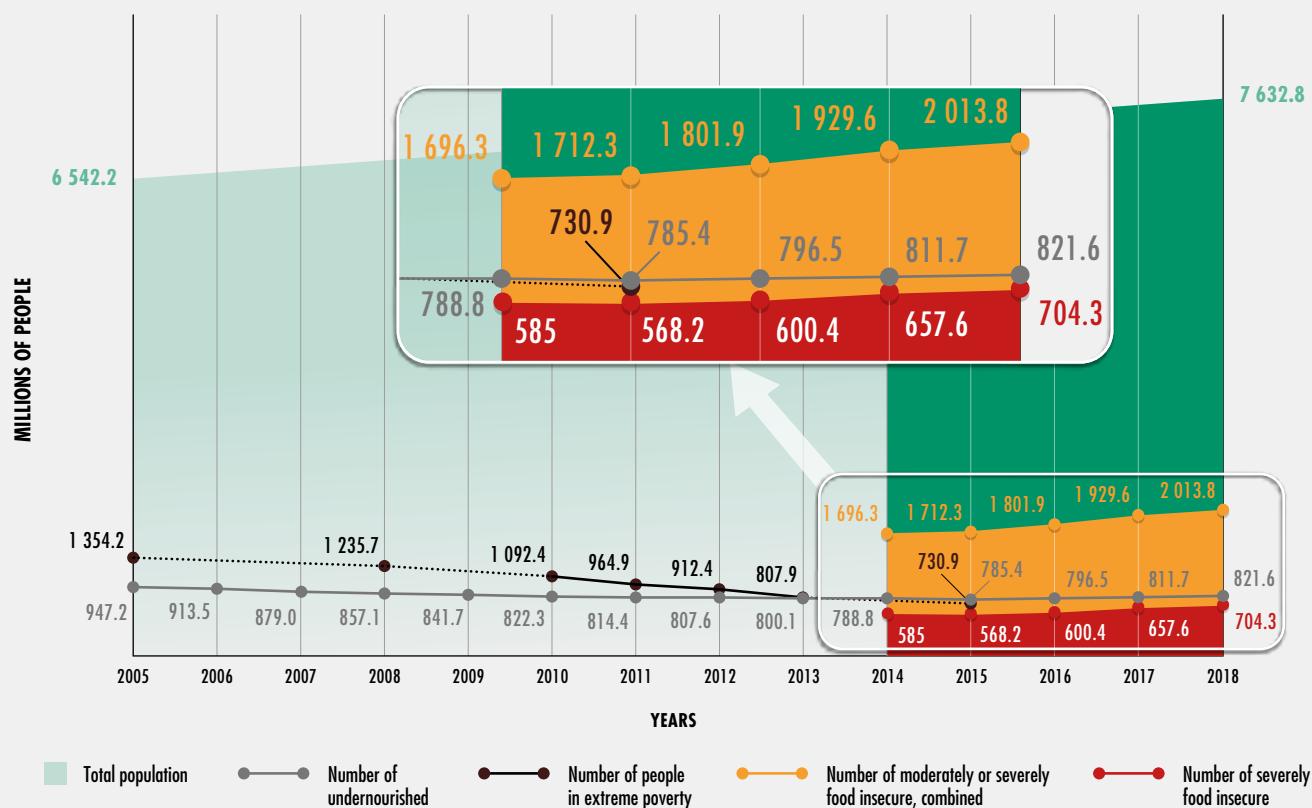
A combined look at past and recent trends in hunger, food insecurity and poverty

The introduction of a new indicator to measure food insecurity allows for a more nuanced view of the state of food insecurity in the world and of recent trends.

Figure 13 shows trends in the number of undernourished, food-insecure and extreme poor¹² people in the world from 2005 to 2018, contrasting them against the growth in the world's population over the same period.

These indicators provide a consistent picture. Both extreme poverty and undernourishment have been declining from 2005 to 2015, though at different rates. The number of undernourished and the number of extreme poor were very close as of 2015, with both

FIGURE 13
THE NUMBERS OF UNDERNOURISHED AND OF FOOD INSECURE HAVE BEEN ON THE RISE IN RECENT YEARS, AFTER A DECADE-LONG DECLINE IN EXTREME POVERTY AND UNDERNOURISHMENT



SOURCE: FAO for number of undernourished, number of moderately or severely food insecure and number of severely food insecure; PovcalNet: an online analysis tool for global poverty monitoring. In: *The World Bank* [online]. Washington, DC. [Cited 9 May 2019]. <http://iresearch.worldbank.org/PovcalNet/home.aspx> for number of people in extreme poverty.

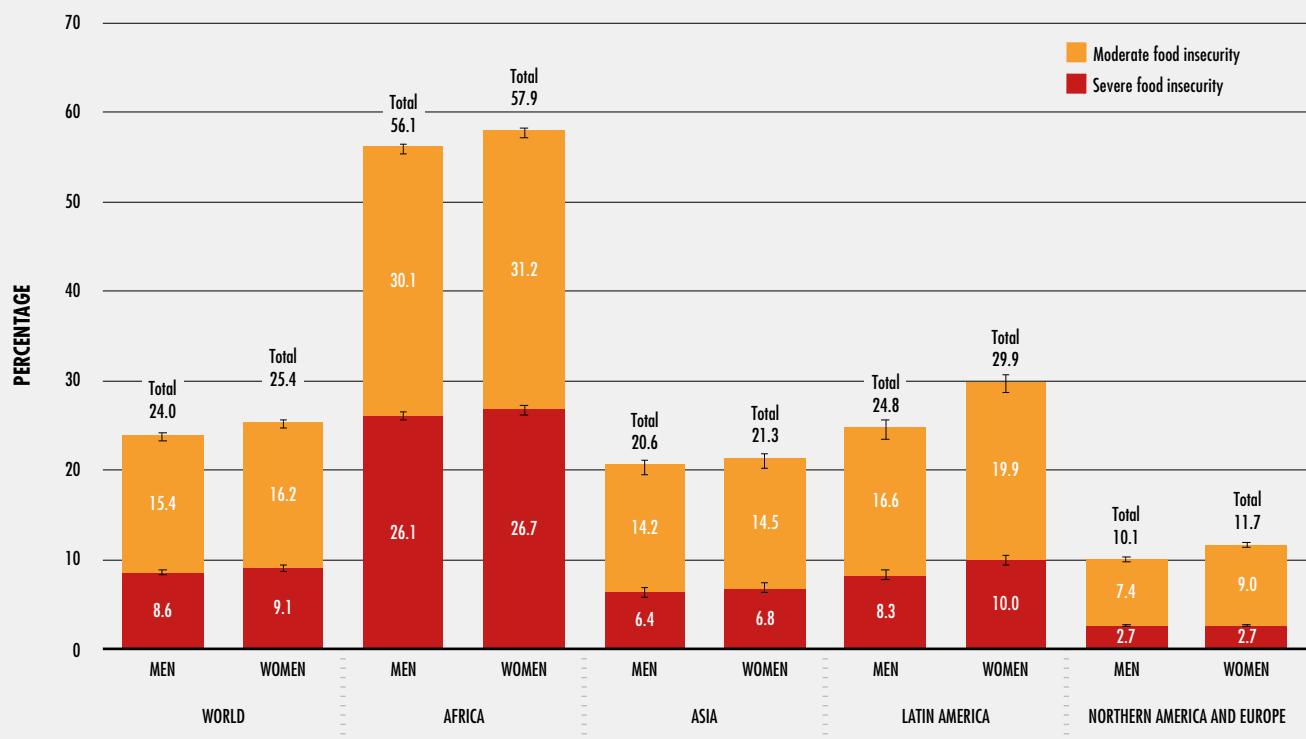
slightly higher than the number of severely food insecure.

To put this in context, one can observe in Figure 13 that even with an increase in world population from 6.5 to 7.6 billion during 2005–2018, the number of undernourished has fallen from almost 950 million people to about 820 million. This is reflected in a reduction of the PoU from 14.5 percent in 2005 to 10.8 percent in 2018.

The figure also reveals the benefits of using FIES data to obtain a more detailed assessment of the most recent years. By zooming in on the period between 2014 and 2015, one notes the close correspondence between the number of severely food insecure, extreme poor and undernourished, and also the comparable increasing trends between the number of undernourished and the number of people affected by severe food insecurity.

FIGURE 14

IN EVERY CONTINENT, THE PREVALENCE OF FOOD INSECURITY IS SLIGHTLY HIGHER FOR WOMEN THAN FOR MEN, WITH THE LARGEST DIFFERENCES FOUND IN LATIN AMERICA (2016–2018 THREE-YEAR AVERAGES)



NOTES: Differences in total are due to rounding of figures to the nearest decimal point.

SOURCE: FAO.

The picture also highlights that most of the increase in food insecurity since 2014, from 1.7 billion to 2.0 billion, has occurred at moderate levels (as seen in the sharper increase for total food insecurity compared with that of severe food insecurity). This increase parallels the troubling increase in overweight and obesity covered in Section 1.3, which will explore in detail the links between food insecurity at moderate or severe levels and various forms of malnutrition, with a focus on overweight and obesity.

Gender differences in food insecurity

The FIES data collected by FAO in more than 140 countries over five years at the individual (rather than household) level provide a unique opportunity to conduct a differential analysis of the incidence of food insecurity by gender.

Figure 14 presents the prevalence of food insecurity estimated separately for men and women worldwide and in all continents (except Oceania). It reveals that in every continent,

the prevalence of food insecurity is slightly higher in women than in men, with the largest differences found in Latin America. Differences are statistically significant, as they extend beyond the margins of error represented with small vertical bars in the figure.

A more extensive analysis conducted by pooling all data collected by FAO in 145 countries in 2014, 2015, 2016 and 2017, shows that area of residence, poverty status and education level are significant determinants of the difference in food insecurity levels between men and women (see Annex 2 for the methodology). Globally, the gender gap in food insecurity appears to be larger among the less-educated, poorer strata of the population, and in urban (large city and suburbs) settings. After controlling for area of residence (rural or small town versus large city or suburbs), poverty status and education level of the respondents, the chances of being food insecure are still approximately 10 percent higher for women than for men. This finding reveals that other – possibly subtler – forms of discrimination make access to food more difficult for women, even when they have the same income and education levels as men and live in similar areas.

Another study using global FIES data found that gender differences in household income, educational attainment and social networks explain most of the gender gap in food insecurity.¹³ This suggests that policies that address gender inequality in employment opportunities and educational attainment may also have an impact on food insecurity. Part 2 of this report looks more closely at the different gender dimensions of inequality that affect food security and nutrition, both within communities and within households, and outlines the policies and approaches needed to address these.

Global FIES data provide evidence of both causes and consequences of food insecurity at the household and individual levels

Studies using the FIES or comparable experience-based food-insecurity measures comprise a growing body of evidence on causes and consequences of food insecurity at the household and individual levels. Three studies in particular – one using FIES data collected by FAO through the Gallup® World Poll in the global

sample of nearly 140 countries,¹⁴ and two others focusing specifically on sub-Saharan Africa¹⁵ and Arab countries¹⁶ – concluded that the likelihood of being food insecure was higher for people who were unemployed and had low levels of education and household income, corroborating the results of the analysis of country-level indicators presented in Box 4. In the first study, it was also found that people with low social capital and weak social networks were more likely to be food insecure. Elsewhere, yet another study using the global FIES data found that food insecurity was strongly and negatively associated with subjective well-being, regardless of household income level or social support. This was found to be true in countries of all income classes, but more so in high-income countries. In fact, food insecurity explained poor physical health and lower subjective well-being more than other indicators of living conditions such as household income, shelter and housing, and employment.¹⁷

Food insecurity can affect health and well-being in many ways, with potentially negative consequences for mental, social and physical well-being. Many studies using experience-based food-insecurity scales have documented negative psychosocial effects of food insecurity in women and children.¹⁸ Furthermore, one particular study using the global FIES data found that food insecurity is associated with poorer mental health and specific psychosocial stressors across global regions independent of socio-economic status.¹⁹

There is also a large body of evidence on the links between food insecurity and nutritional outcomes (as described in the 2018 report). Together with the evidence cited above, this growing body of research highlights the value of experience-based measures of food insecurity like the FIES. It is worth emphasizing, as well, that the FIES-based indicators and the PoU are not to be confused with indicators used in food crisis situations (Box 5).

The next section presents the latest figures on progress towards ending all forms of malnutrition, with a special focus on overweight and obesity. The final section of Part 1 discusses new evidence on the relationship between food insecurity and various forms of malnutrition. ■

BOX 4

HOW DO ESTIMATES OF FOOD INSECURITY COMPARE TO OTHER IMPORTANT INDICATORS OF HUMAN DEVELOPMENT?

National prevalence estimates of moderate or severe food insecurity ($FI_{mod+sev}$) based on the FIES rank countries in ways that are strongly correlated with the rankings produced by other key indicators of human development (see table below). As one would expect, countries with a lower prevalence of food insecurity also tend to have lower levels of poverty and income inequality and higher labour force participation rates, GDP per capita, literacy rates and gender equity. Additionally, countries with a lower prevalence of food insecurity tend to have higher Human Capital Indices, pointing to a strong link between food security and the well-being and development of nations.

The table also shows that the prevalence of food insecurity is higher in countries with higher ratios of dependents (people younger than 15 and older than 64) to the working-age population (age dependency

ratio) and a larger percentage of the population living in rural areas. Prevalence of food insecurity is also lower in countries with greater political stability and less violence, a theme addressed in depth in the 2017 edition of this report.

Countries where health expenditure per capita is lower, and where a larger proportion of the population lacks access to safely managed water and sanitation, also tend to be countries with a higher prevalence of food insecurity. Access to these health-related public services also has a strong effect on two key indicators of the state of a nation's health – child mortality and life expectancy – with which national prevalence of food insecurity are highly correlated. Child mortality tends to be higher and life expectancy lower in countries with higher rates of food insecurity.

CORRELATION BETWEEN COUNTRY ESTIMATES OF FOOD INSECURITY AND OTHER COUNTRY-LEVEL INDICATORS OF HUMAN DEVELOPMENT AND WELL-BEING

Indicator	Period	$FI_{mod+sev}$	
		N	2016–2018
Poverty, inequality and economic growth			
GDP per capita	2017	138	-0.829
Poverty headcount	2013–2017*	88	0.752
GINI index income inequality	2013–2017*	104	0.622
Labour force participation rate	2017	137	-0.229
Human capital and gender			
Human Capital Index	2017	132	-0.895
Literacy rate	2013–2017*	61	-0.675
Gender Development Index	2017	137	-0.426
Demographics			
Age dependency ratio	2015	138	0.612
Rural population	2015	135	0.517
Political stability and absence of violence	2017	140	-0.589
Health-related public services			
Health expenditure per capita	2015	135	-0.829
Basic drinking water services	2015	137	-0.806
Basic sanitation services	2015	138	-0.792
Health and well-being			
Child mortality rate, under 5 years	2017	137	0.874
Life expectancy at birth	2016	139	-0.815
Prevalence of undernourishment (PoU)	2016–2018	133	0.842

NOTES: The table presents coefficients of Spearman rank correlations, all significant at the $p = 0.01$ level. The Spearman rank correlation between two variables is the linear correlation between the ranked values of those two variables – i.e. in the above analysis, the correlation between country rankings based on the two variables. * Used value for the most recent year available during this period. N = number of countries with valid values. For a description of the variables and details of the analysis, see Annex 2.

SOURCE: FAO.

BOX 5 DIFFERENT FOOD SECURITY ASSESSMENTS FOR DIFFERENT OBJECTIVES

The State of Food Security and Nutrition in the World and the *Global Report on Food Crises* (GRFC)¹ are both multi-partnership efforts that provide assessments of food security around the world which complement each other. However, they have distinct objectives and rely on different data and methodologies, so it is important to clarify the difference between the numbers that these two reports provide.

While the GRFC has a narrow focus on acute food insecurity for countries experiencing food crises, the scope of this report is much broader: its objective is to monitor food insecurity in the entire world, on a regular basis. It is obvious, then, that the two reports must be informed by different types of data and analytic methods.

All the indicators used for SDG monitoring and reported here are arguably ill suited to reflect the most current conditions during emergencies, a reason why current data for some of the countries that are experiencing conflicts are not reported in this report. However, that is not the purpose of the report. The two indicators used here to measure hunger (PoU and Fl_{sev}), for example, are meant to reliably capture long-term trends at global and regional levels, while providing the best possible assessment of the most recent structural situation at country level. For this reason, they should not be too conditioned by possibly temporary, short-term fluctuations, typical of acute crises, which are the main focus of the indicators presented in the GRFC.

PoU and Fl_{sev} estimate the extent of severe food deprivation in a population, seen as a chronic condition, and are based on validated, official data which are available with some delay due to various rounds of cleaning and vetting.

The GRFC, on the other hand, focuses on acute food insecurity and is mainly based on analytic approaches such as the Integrated Food

Security Phase Classification/*Cadre Harmonisé* (IPC/CH). Since timeliness is of the essence in crisis situations, rapid estimates are needed of how many people are facing crisis conditions or worse (IPC/CH Phase 3 or above), at the worst (peak) moment in the year, based on all available evidence, including non-official sources.

In other words, while chronic food insecurity as captured by PoU or Fl_{sev} is a long-term or persistent inability to meet food consumption requirements, acute or transitory food insecurity as captured in GRFC numbers is a short-term, possibly temporary, inability to meet food consumption requirements related to sporadic crises, conditions that can be highly susceptible to change and can manifest in a population within a short time frame, as a result of sudden changes or shocks.

This is why this report's estimates of the number of undernourished people in the world at 821.6 million in 2018 must not be directly compared with the figure of around 113 million people in 53 countries facing crisis conditions or worse in 2018, as reported in the 2019 GRFC.

Having clarified that, however, it is worth stressing again how the two reports are highly complementary. Acute and chronic food insecurity are not mutually exclusive phenomena. Indeed, repeated shocks and persistent crises can provoke upturns in severe food insecurity, eventually forcing households into destitution and chronic poverty, and potentially leading to starvation. While acute food insecurity may require shorter-term interventions that address immediate causes, interventions tackling root causes may also be important to prevent repeated transitory acute food insecurity, which may lead to chronic food insecurity. Decision makers worldwide can largely benefit from the findings of the two reports.

¹ FSN. 2019. *Global Report on Food Crises 2019* [online]. Rome. [Cited 9 May 2019]. http://www.fsinplatform.org/sites/default/files/resources/files/GRFC_2019-Full_Report.pdf

1.2 PROGRESS TOWARDS GLOBAL NUTRITION TARGETS

KEY MESSAGES

- Low birthweight estimates, included for the first time in this year's edition of the report following the release of new global estimates, indicate that one in seven live births – 20.5 million babies globally – suffered from low birthweight in 2015. If current trends continue, the 2025 World Health Assembly target of a 30 percent reduction in the prevalence of low birthweight will not be met.
- Globally, the prevalence of stunting among children under five years is decreasing. The number of stunted children has also declined by 10 percent over the past six years, but with 149 million children still stunted, progress needs to be accelerated to achieve the 2030 target of halving the number of stunted children.
- A closer look at the SDG indicators of wasting, stunting, and childhood overweight reveal striking regional differences. In 2018, Africa and Asia bear the greatest share of all forms of malnutrition, accounting for more than nine out of ten of all stunted children, over nine out of ten of all wasted children, and nearly three-quarters of all overweight children worldwide.
- Malnutrition is linked across the life cycle, with undernutrition in foetal and early life contributing to both immediate and long-term health problems such as stunted physical growth, coronary heart disease, stroke, diabetes, and abdominal obesity, as well as economic costs due to loss of human capital.
- Globally, the prevalence of overweight is increasing in all age groups, with particularly steep increases among school-age children and adults. The increase in prevalence of obesity between 2000 and 2016 has been even faster than that of overweight.

→ Both overweight and obesity are significant health problems, but obesity in particular is linked to higher mortality and morbidity risks.

→ Throughout the world, most school-age children do not eat enough fruit or vegetables, regularly consume fast food and carbonated soft drinks, and are not physically active on a daily basis.

→ Tackling all forms of malnutrition will require bold multisectoral action, involving the health, food, education, social protection, planning and economic policy sectors. Food environments must be transformed to make nutritious foods more available and affordable. Relevant actions that countries can implement as outlined in the ICN2 Framework for Action are encouraged under the UN Decade of Action on Nutrition.

This section assesses global and regional trends and patterns to track progress towards seven nutrition indicators used to monitor global World Health Assembly targets for nutrition. This year the report takes a closer look at data on overweight and obesity, a serious public health challenge affecting people of all ages. For the first time, data on overweight and obesity among school-age children and adolescents are included and the section highlights some of the dietary and physical activity behaviours that contribute to overweight and obesity in this age group. The trends described emphasize the urgent need for actions aimed at improving access to nutritious and sufficient food for all.

Malnutrition exists in multiple forms. Maternal and child undernutrition contributes to 45 percent of deaths in children under five.²⁰ Overweight and obesity are on the rise in almost all countries, contributing to 4 million deaths globally.²¹ The economic costs of malnutrition are staggering – obesity is projected to cost USD 2 trillion annually, largely driven by the value placed on lost economic productivity plus direct health care costs worldwide,²² while it is projected that undernutrition will reduce GDP by up to 11 percent in Africa and Asia.²³ The various forms of malnutrition are intertwined throughout the life cycle, with maternal undernutrition, low birthweight and child stunting giving rise to increased risk of overweight later in life.

Global trends

This year, also for the first time, low birthweight estimates are included in the report. These indicate that one in seven live births, or 20.5 million babies globally, suffered from low birthweight in 2015.²⁴ Low birthweight newborns have a higher risk of dying in the first 28 days of life; those who survive are more likely to suffer from stunted growth and lower intelligence quotient IQ, and face increased risk of adult-onset chronic conditions including obesity and diabetes.²⁵ Data show that little progress has been made since 2012, with an estimated 14.6 percent of all babies worldwide born with low birthweight in 2015 (Figure 15). If current trends continue, the goal to achieve a 30 percent reduction in the prevalence of low birthweight infants by 2025 will not be met.

Estimates of exclusive breastfeeding reveal some progress at the global level, with 41.6 percent of infants under six months being exclusively breastfed in 2018 (based on the most recent data for each country between 2013 and 2018) compared with 37 percent of infants in 2012 (based on the most recent data for countries between 2005 and 2012).

Globally, the prevalence of stunting among children under five years is decreasing, with 21.9 percent affected in 2018. The number of stunted children has also decreased from 165.8 million in 2012 to 148.9 million in 2018. Although this represents a 10.1 percent decline over this six-year period, it falls short of the 20 percent decline required over the same period to be on track for the 2030 target of reducing the number of children by one-half with reference to the 2012 baseline.

Globally, 7.3 percent (49.5 million) children under five years of age are wasted, which falls short of the target of reducing and maintaining childhood wasting to less than 5 percent for 2025 and 3 percent for 2030. In 2018, childhood overweight affected 40.1 million children under five worldwide. The global prevalence of overweight among children under five has not improved, increasing from 5.5 percent in 2012 (the baseline year of the WHA targets) to 5.9 percent in 2018.

As of 2016, one in three (32.8 percent) women of reproductive age (15–49 years) across the globe was still affected by anaemia. Since 2012, the global prevalence of anaemia has remained unchanged, making it extremely challenging to achieve the 2025 target of a 50 percent reduction. At the same time, adult obesity continues to rise, from 11.7 percent in 2012 to 13.2 percent in 2016. As a result, we are not on track to meet the global target to halt the rise in adult obesity.

Regional patterns

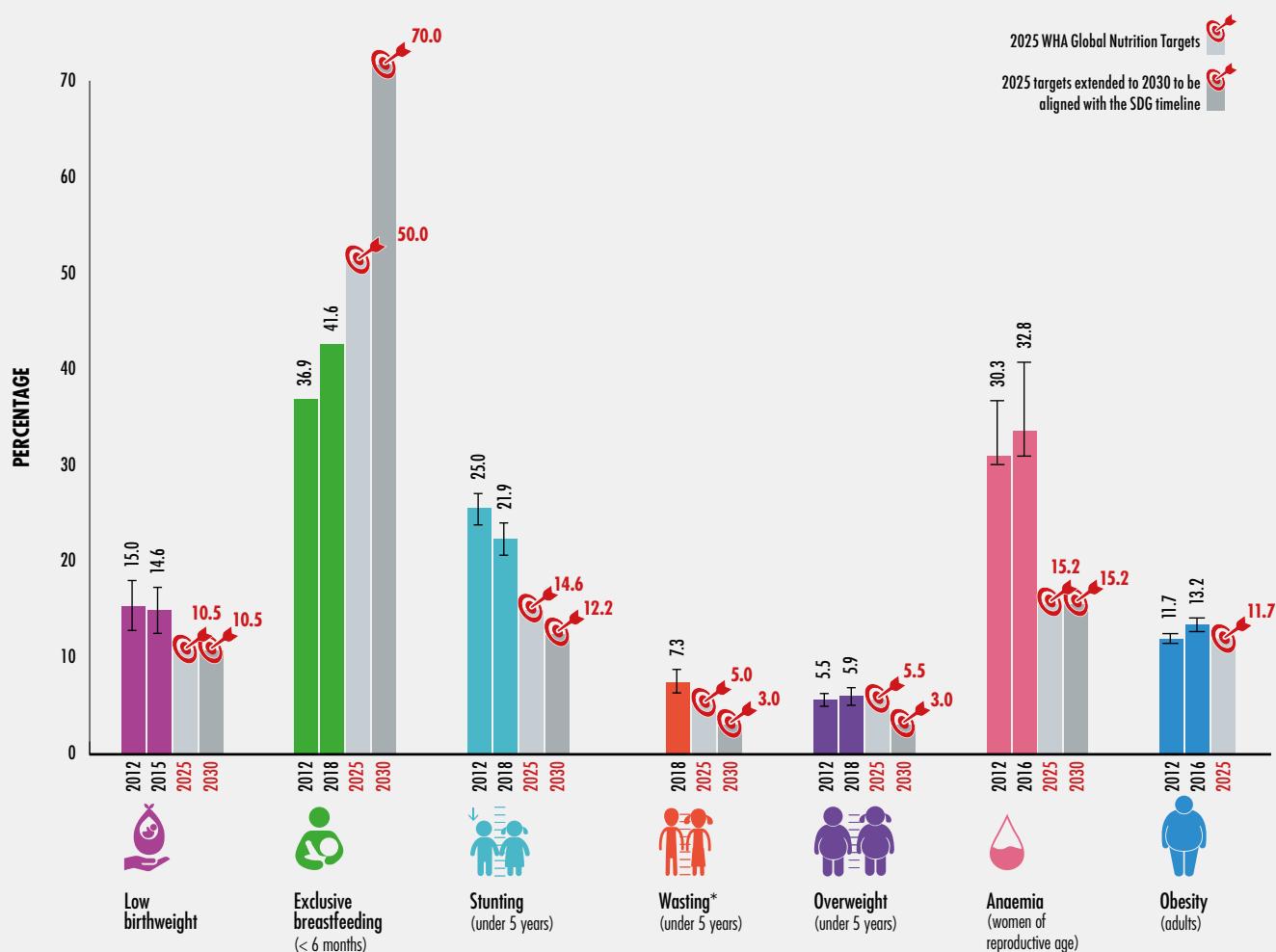
Global estimates of various nutrition indicators do not reveal the wide variations that exist between regions. For instance, in 2015, an estimated 14.6 percent of babies born globally were low birthweight, with wide variations across regions – from 7.0 percent in Northern America and Europe to 17.3 percent in Asia.²⁶

A closer look at the SDG indicators of wasting, stunting, and childhood overweight reveals striking regional differences as well (Figure 16). While the prevalence of stunting is decreasing in almost every region, the extent of progress varies considerably, with Africa seeing the least progress in reducing stunting prevalence since 2012. In 2018, Africa and Asia accounted for more than nine out of ten of all stunted children globally, representing 39.5 percent and 54.9 percent respectively (bottom of Figure 16). No clear conclusions can be made for Oceania, as the confidence limits around the estimates are very wide for this region.

In 2018, 49.5 million children under five were affected by acute malnutrition or wasting. All regions had prevalence levels considered “medium” (between 5 and 9 percent) for childhood wasting except Latin America and the Caribbean, which had a very low prevalence (1.3 percent). In Asia and Oceania, nearly one in ten (9.4 percent) children were wasted. Overall in 2018, more than two-thirds of all wasted children under five lived in Asia.

Globally, overweight affected 40.1 million children under five years of age in 2018. While Asia and Africa had the lowest overweight prevalence (5.2 percent and 4.9 percent respectively), together they accounted for »

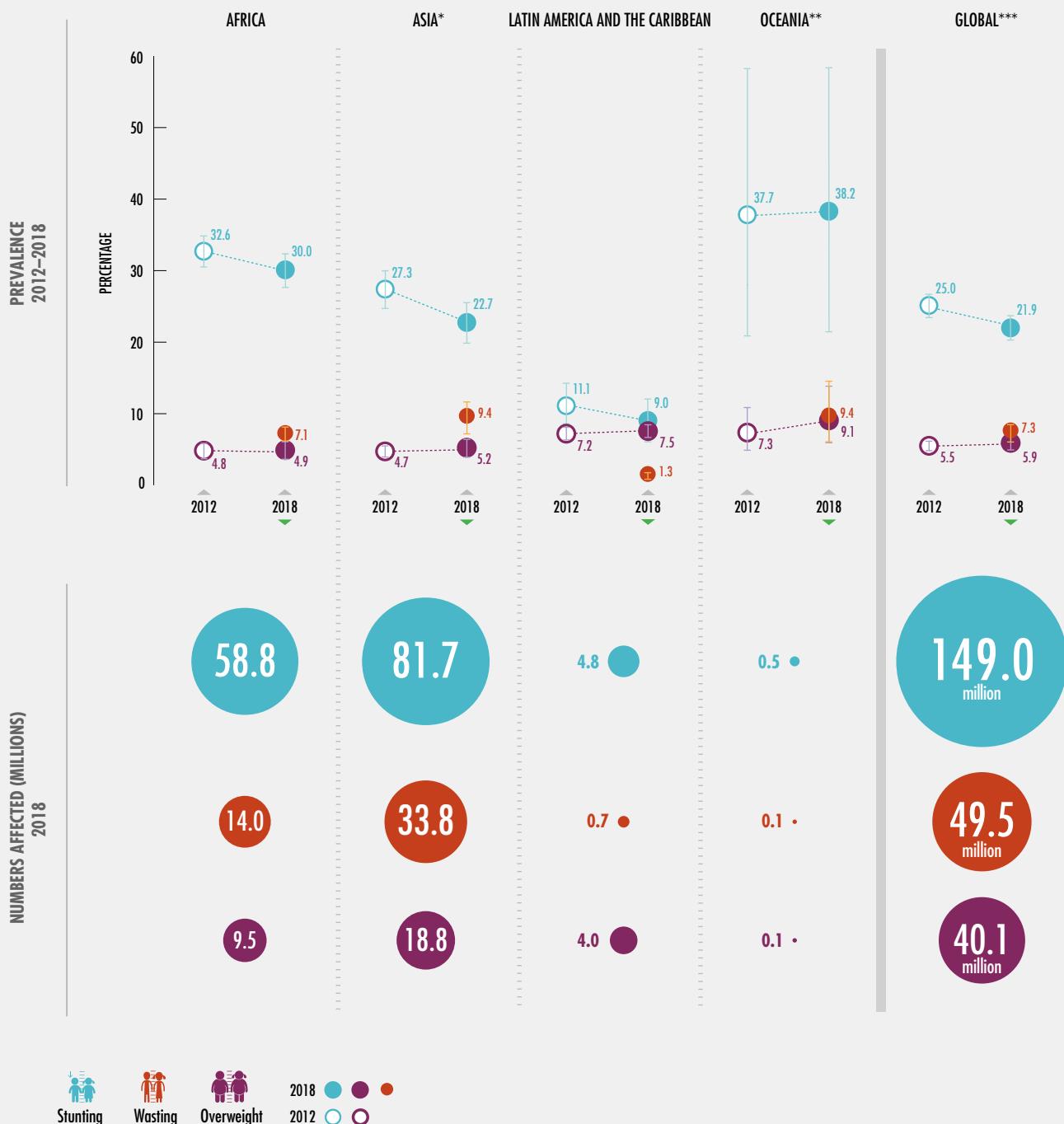
FIGURE 15
PROGRESS ON MALNUTRITION IS TOO SLOW TO ACHIEVE THE 2025 AND 2030 GLOBAL NUTRITION TARGETS



NOTES: * Wasting is an acute condition that can change frequently and rapidly over the course of a calendar year. This makes it difficult to generate reliable trends over time with the input data available and, as such, this report provides only the most recent global and regional estimates.

SOURCES: Data for stunting, wasting and overweight are based on UNICEF, WHO and International Bank for Reconstruction and Development/World Bank. 2019. *UNICEF-WHO-The World Bank: Joint child malnutrition estimates – Levels and trends* (March 2019 edition) [online]. <https://data.unicef.org/topic/nutrition/www.who.int/nutgrowthdb/estimates>, <https://data.worldbank.org>; data for exclusive breastfeeding are based on UNICEF. 2019. *Infant and Young Child Feeding: Exclusive breastfeeding, Predominant breastfeeding*. In: *UNICEF Data: Monitoring the Situation of Children and Women* [online]. <https://data.unicef.org/topic/nutrition/infant-and-young-child-feeding>; data for anaemia are based on WHO. 2017. *Global Health Observatory (GHO)*. In: *World Health Organization* [online]. Geneva, Switzerland. [Cited 2 May 2019] <http://apps.who.int/gho/data/node.imr.PREVANEMIA?lang=en>; data for adult obesity are based on WHO. 2017. *Global Health Observatory (GHO)*. In: *World Health Organization* [online]. Geneva, Switzerland. [Cited 2 May 2019] <http://apps.who.int/gho/data/node.main.A900A?lang=en>; and data for low birthweight are based on UNICEF and WHO. 2019. *UNICEF-WHO Low Birthweight Estimates: levels and trends 2000–2015*, May 2019. In: *UNICEF data* [online]. New York, USA, UNICEF [Cited 16 May 2019]. <https://data.unicef.org/resources/unicef-who-low-birthweight-estimates-levels-and-trends-2000-2015>

FIGURE 16
STUNTING, WASTING** AND OVERWEIGHT STILL IMPACT THE LIVES OF FAR TOO MANY CHILDREN UNDER 5 YEARS**



NOTES: * Asia excluding Japan; ** Oceania excluding Australia and New Zealand; *** the Global total factors in estimates for “more developed regions” (includes Australia, New Zealand, Northern America and Europe) but estimates for these regions are not displayed due to low population coverage.

**** Wasting is an acute condition that can change frequently and rapidly over the course of a calendar year. This makes it difficult to generate reliable trends over time with the input data available – as such, this report provides only the most recent global and regional estimates.

SOURCES: UNICEF, WHO and International Bank for Reconstruction and Development/World Bank. 2019. UNICEF-WHO-The World Bank: Joint child malnutrition estimates – Levels and trends (March 2019 edition) [online]. <https://data.unicef.org/topic/nutrition>; www.who.int/nutgrowthdb/estimates; <https://data.worldbank.org>

- » nearly three-quarters of all overweight under-fives in the world (46.9 percent in Asia and 23.8 percent in Africa). Oceania has the highest prevalence of overweight, with almost one in ten (9.1 percent) affected. This region is an example of a population affected by the multiple burden of malnutrition, with prevalence of both acute malnutrition (wasting) and overweight approaching the 10 percent cut-off for being classified at “high” levels in 2018. There has not been a significant change in prevalence or numbers of children under five affected by overweight for any region between 2012 and 2018.

In 2018, Africa and Asia had the highest prevalence of exclusive breastfeeding with more than two in five infants under six months benefiting from this life-saving practice. Conversely, however, these two regions have the highest prevalence of anaemia among women of reproductive age. In 2016, the prevalence of anaemia among women of reproductive age in Africa and Asia was more than double the rate in Northern America and Europe, with no region showing a decline in anaemia among women of reproductive age since 2012. (Regional patterns for adult overweight are discussed in the next section).

Spotlight on overweight and obesity

Overweight and obesity pose health problems throughout the life cycle. Among adults, obese people have higher rates of mortality due to an increased risk of cardiovascular disease, cancer and diabetes. Children who are overweight are at a higher risk of type 2 diabetes, high blood pressure, asthma and other respiratory problems, sleep disorders, and liver disease.²⁷ They may also suffer from the psychological effects of low self-esteem, depression, and social isolation.²⁸ Overweight and obesity during childhood often persist into adulthood, leading to lifelong health problems. The national economic costs, resulting from increased healthcare costs and lost economic productivity, are tremendous.²⁹

The definitions of overweight and obesity are somewhat different depending on the age group, making comparisons between them difficult. For children under five, overweight is defined

as weight-for-height greater than 2 standard deviations above the WHO growth reference standard median. The term “obesity” is generally not used for children under five. For school-age children and adolescents (aged 5–19 years), being overweight indicates having a body mass index (BMI)-for-age greater than 1 standard deviation above the WHO growth reference standard median, whereas obesity is defined as having a BMI-for-age of more than 2 standard deviations above the median. In the case of adults, overweight is defined as having a BMI greater than or equal to 25; likewise, obesity is defined as a BMI greater than or equal to 30. For this report, the term overweight is used to be inclusive of obesity among school-age children, adolescents and adults unless otherwise noted.

At its most basic level, overweight results from a persistent condition of dietary energy consumption exceeding energy expenditure. While genetics can increase an individual’s susceptibility to overweight, it cannot explain population-level increases over time. Intrauterine growth, infant feeding, and eating habits during preschool are significant determinants of overweight and obesity during adulthood. There is increasing evidence indicating the importance of good nutrition and physical activity in early life as a determinant of long-term energy balance. Unfortunately, modernization and economic development have led to an increased availability of energy-dense foods and to poor dietary practices, while at the same time reducing levels of physical activity, a major determinant of energy expenditure. Food security, i.e. access to nutritious and sufficient food, is also known to be a key factor. Box 6 provides a more in-depth description of the links between maternal nutrition, malnutrition in early life and overweight later in life, illustrating life-cycle and intergenerational effects.

In 2018, an estimated 5.9 percent (40 million) children under five were affected by overweight. Globally in 2016, one in five school-age children (20.6 percent) and adolescents (17.3 percent) were overweight, or 131 million children aged 5–9 years and 207 million adolescents. In the same year, nearly two in five adults (38.9 percent) were overweight, representing 2 billion adults worldwide (Figure 17).

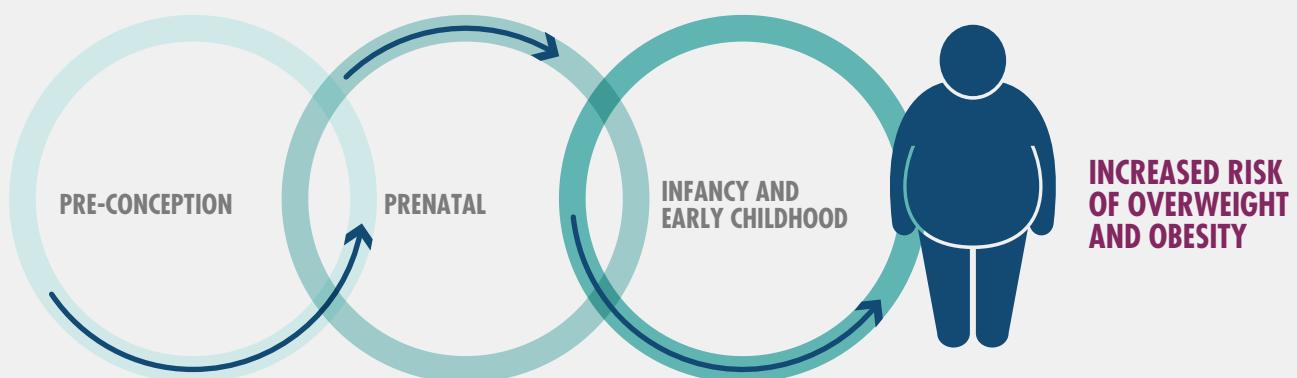
BOX 6 OVERWEIGHT AND OBESITY AND THE EFFECT OF MALNUTRITION THROUGHOUT THE LIFE CYCLE

An increased risk for overweight and obesity can be imprinted early in life through intergenerational and early life influences; such influences have contributed to a growing crisis in overweight since 2000, as shown in Figure 18. During foetal and early life, undernutrition, potentially due to food insecurity, leads to changes in physiology and metabolism that not only stunt physical growth and negatively impact human capital, but also increase the risk of non-communicable diseases (NCDs) later in life.¹ To illustrate, there is ample evidence linking low birthweight to increased risks of coronary heart disease, stroke, diabetes, and abdominal obesity.² The adverse effect of poor foetal growth on NCD risk can be amplified by growth failure in the first years after birth and rapid weight gain later in life.¹ Girls who experienced poor foetal growth, especially when coupled with poor catch-up growth during infancy, are more likely to become stunted as adults and consequently more likely to give

birth to low-birthweight babies, thus projecting poor nutrition alongside increased NCD risk to the next generation.³

In addition to the link between early undernutrition and subsequent risk of NCDs, another mechanism that increases NCD and obesity risk along the life cycle is that overweight or excess weight gain during pregnancy increases the risk of gestational diabetes and large size at birth, which in turn is linked to increased risk of overweight and obesity later in life.⁴ Irrespective of birthweight, excessive weight gain in early childhood is predictive of overweight and obesity in adolescence⁵ and adulthood.⁶ To effectively address the growing problem of overweight and obesity and to prevent its perpetuation across generations, it is clear that a life-cycle approach is required that promotes access to nutritious foods, optimal infant feeding and nutrition as well as healthy growth along the entire life course, from foetal life to adulthood.

AN INCREASED RISK OF OVERWEIGHT AND OBESITY CAN BE IMPRINTED EARLY IN LIFE THROUGH INTERGENERATIONAL AND EARLY LIFE INFLUENCES



SOURCE: UNICEF.

¹ C.G. Victora, L. Adair, C. Fall, P.C. Hallal, R. Martorell, L. Richter and H.S. Sachdev. 2008. Maternal and child undernutrition: consequences for adult health and human capital. *The Lancet*, 371(9609): 340–357.

² D. Barker and C. Osmond. 1986. Infant mortality, childhood nutrition, and ischaemic heart disease in England and Wales. *The Lancet*, 327(8489): 1077–1081; C. Osmond, D.J. Barker, P.D. Winter, C.H. Fall and S.J. Simmonds. 1993. Early growth and death from cardiovascular disease in women. *BMJ (Clinical research ed.)*, 307(6918): 1519–1524; I. Darnton-Hill, C. Nishida and W. James. 2004. A life course approach to diet, nutrition and the prevention of chronic diseases. *Public Health Nutrition*, 7(1a): 101–121; A.C. Ravelli, J.H. van der Meulen, C. Osmond, D.J. Barker and O.P. Bleker. 1999. Obesity at the age of 50 y in men and women exposed to famine prenatally. *The American Journal of Clinical Nutrition*, 70(5): 811–816.

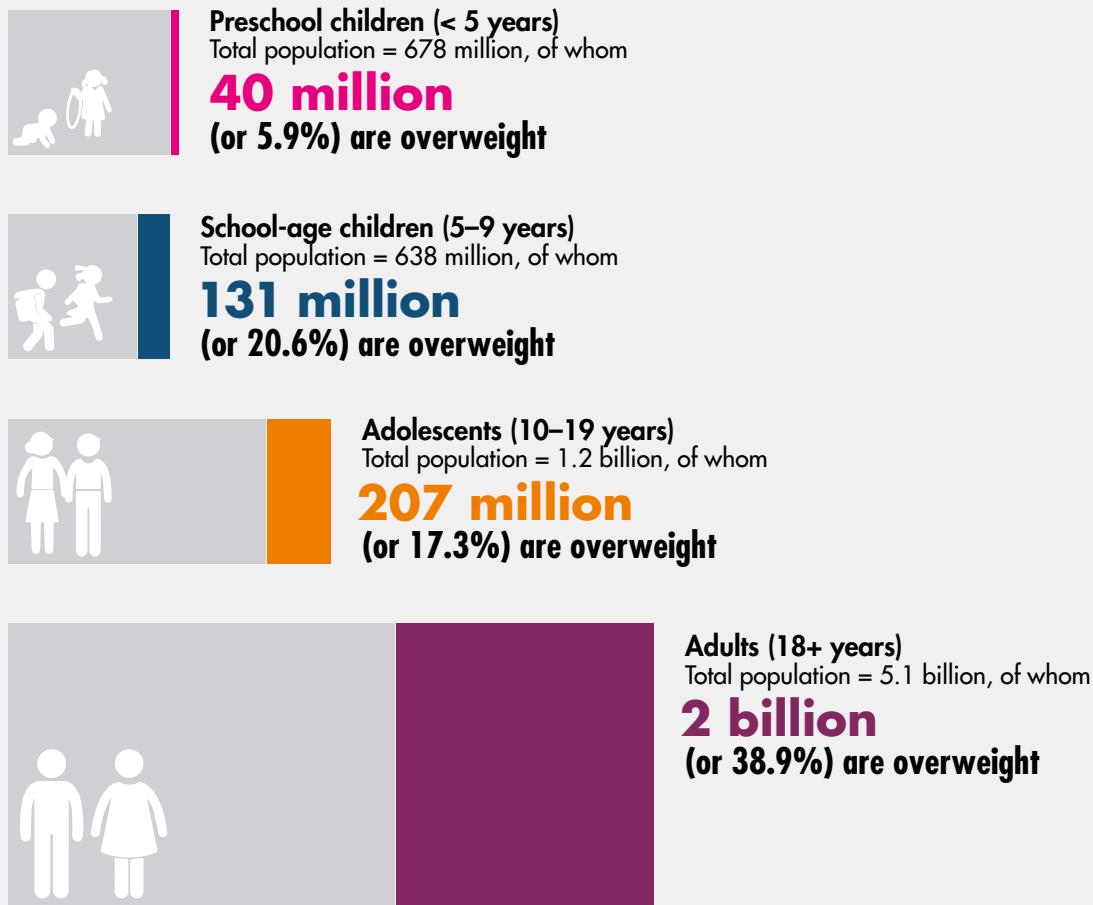
³ I. Darnton-Hill, C. Nishida and W. James. 2004. A life course approach to diet, nutrition and the prevention of chronic diseases. *Public Health Nutrition*, 7(1a): 101–121.

⁴ R.C.W. Ma and B.M. Popkin. 2017. Intergenerational diabetes and obesity – A cycle to break? *PLoS Medicine*, 14(10): e1002415.

⁵ M. Geserick, M. Vogel, R. Gausche, T. Lipek, U. Spielau, E. Keller, R. Pfäffle, W. Kiess and A. Körner. 2018. Acceleration of BMI in early childhood and risk of sustained obesity. *New England Journal of Medicine*, 379(14): 1303–1312.

⁶ Z.J. Ward, M.W. Long, S.C. Resch, C.M. Giles, A.L. Cradock and S.L. Gortmaker. 2017. Simulation of growth trajectories of childhood obesity into adulthood. *New England Journal of Medicine*, 377(22): 2145–2153.

FIGURE 17 OVERWEIGHT PREVALENCE INCREASES OVER THE LIFE COURSE AND IS HIGHEST IN ADULTHOOD



SOURCES: Data for overweight in preschool children are based on UNICEF, WHO and International Bank for Reconstruction and Development/World Bank. 2019. *UNICEF-WHO-The World Bank: Joint child malnutrition estimates – Levels and trends* (March 2019 edition) [online]. <https://data.unicef.org/topic/nutrition>, www.who.int/nutgrowthdb/estimates, <https://data.worldbank.org>; data for overweight in school-age children, adolescents and adults are based on NCD Risk Factor Collaboration (NCD-RisC). 2017. Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: a pooled analysis of 2416 population-based measurement studies in 128.9 million children, adolescents, and adults. *The Lancet*, 390(10113): 2627–2642.

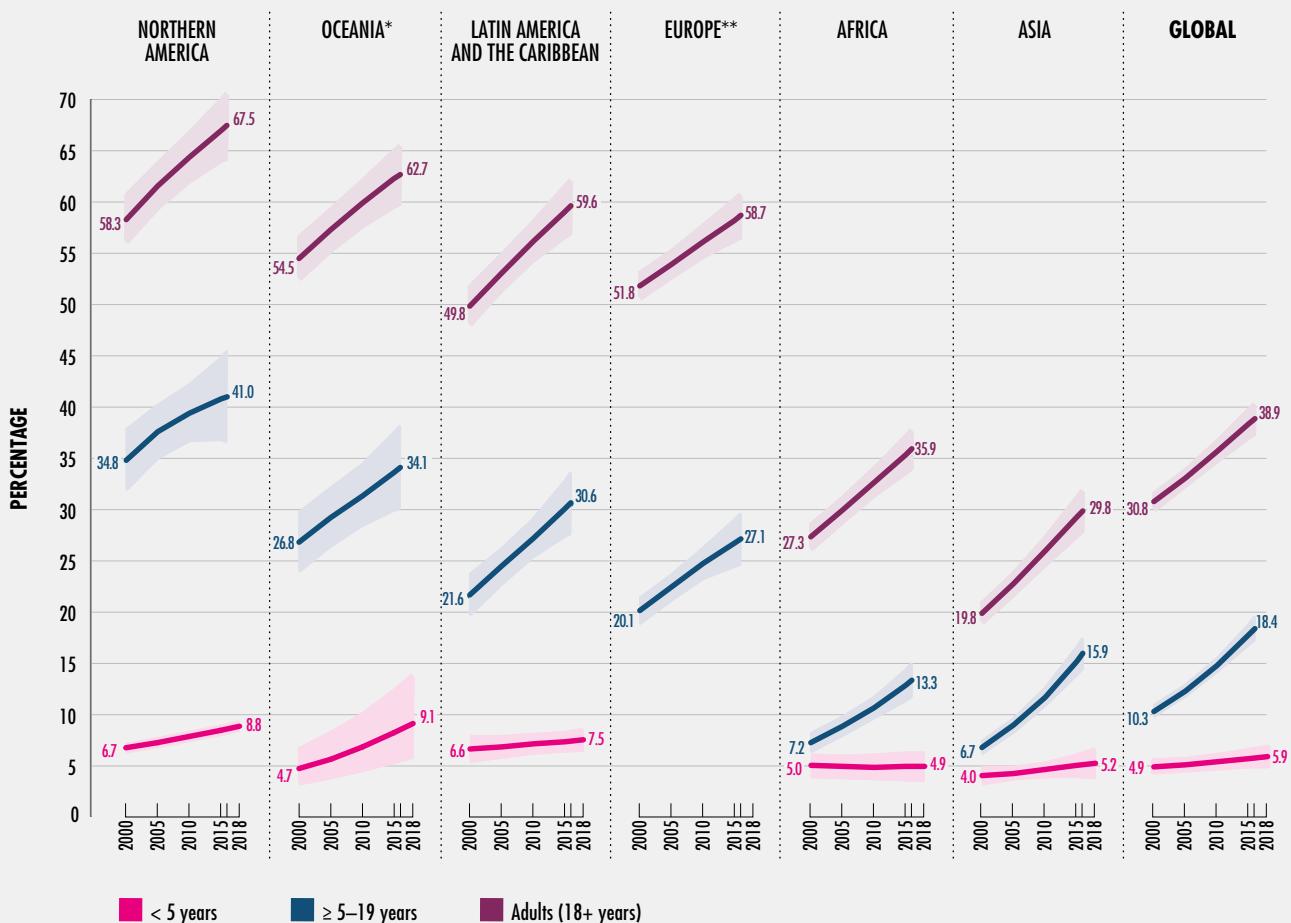
The prevalence of overweight is increasing in all age groups, with particularly steep trends among school-age children and adults (Figure 18). Among school-age children, the prevalence has nearly doubled since 2000. Over half of adults and over a quarter of school-age children in Northern America, Oceania, Latin America and the Caribbean, and Europe were overweight in 2016.

No region is exempt from this overweight crisis. All have experienced an increase of roughly ten percentage points in the prevalence of overweight among adults since 2000. Among school-age children, the upward trend is particularly

steep in Asia and appears to be accelerating. In Northern America, on the other hand, while the prevalence of overweight is higher than in any other region, the trend shows some sign of levelling off in recent years. Among preschool children (under five years old), however, the prevalence of overweight is much lower and trends are less dramatic – only in Northern America and Oceania has overweight increased in this age group by more than a percentage point since 2000.

While the rise in the prevalence of overweight in children and adults is alarming, of even greater concern is the high proportion of

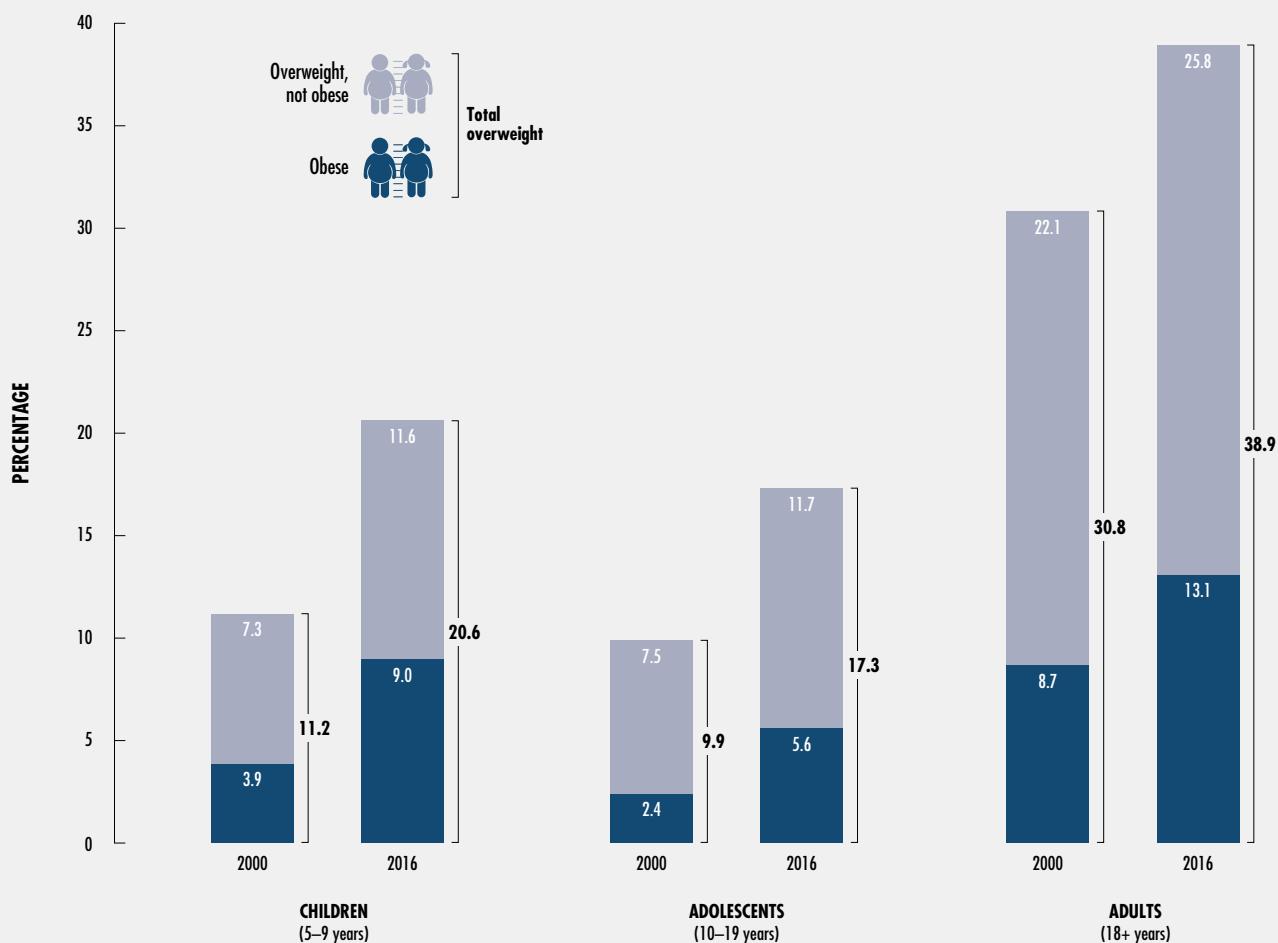
FIGURE 18
ACROSS ALL REGIONS, THE PREVALENCE OF OVERWEIGHT IS INCREASING IN ALL AGE GROUPS, WITH PARTICULARLY STEEP TRENDS AMONG ADULTS AND SCHOOL-AGE CHILDREN, INCLUDING ADOLESCENTS



NOTES: * Estimates for children under five for Oceania exclude Australia and New Zealand. ** Estimates for children under five for Europe are not displayed due to insufficient population coverage. Trends in prevalence of overweight for children under five are based on data between 2000 and 2018. Trends for school-age children and adolescents (5–19 years) and adults are based on data between 2000 and 2016.

SOURCES: Data for overweight in preschool children are based on UNICEF, WHO and International Bank for Reconstruction and Development/World Bank. 2019. *UNICEF-WHO-The World Bank: Joint child malnutrition estimates – Levels and trends* (March 2019 edition) [online]. <https://data.unicef.org/topic/nutrition/www.who.int/nutgrowthdb/estimates>, <https://data.worldbank.org>; data for overweight in school-age children, adolescents and adults are based on NCD Risk Factor Collaboration (NCD-RisC). 2017. Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: a pooled analysis of 2416 population-based measurement studies in 128.9 million children, adolescents, and adults. *The Lancet*, 390(10113): 2627–2642.

FIGURE 19
THE INCREASE IN PREVALENCE OF OBESITY BETWEEN 2000 AND 2016 HAS BEEN EVEN LARGER THAN THAT OF OVERWEIGHT

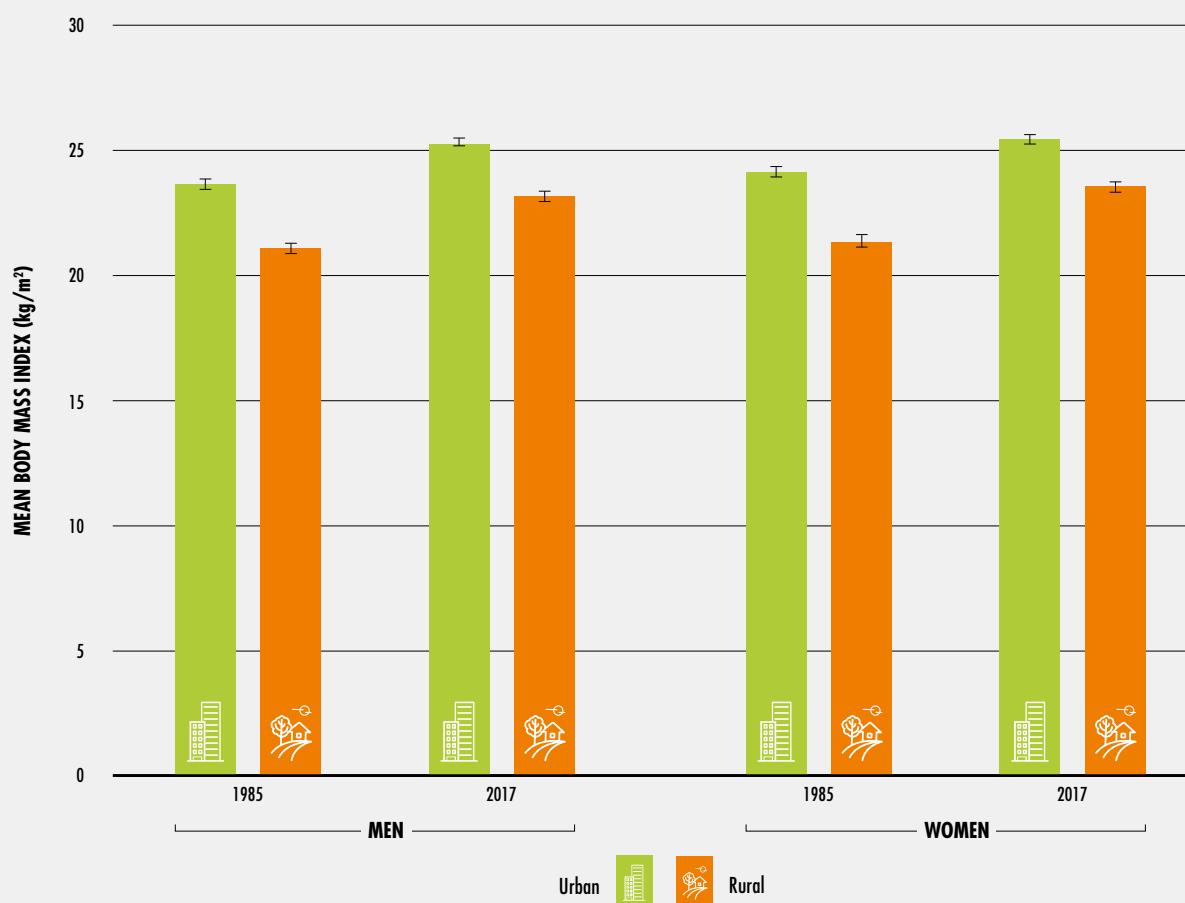


SOURCE: NCD Risk Factor Collaboration (NCD-RisC). 2017. Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: a pooled analysis of 2416 population-based measurement studies in 128.9 million children, adolescents, and adults. *The Lancet*, 390(10113): 2627–2642.

prevalence represented by obesity, as obese people face far more severe health consequences and higher mortality risks compared with non-obese people. As of 2016, about a third of overweight adolescents and adults, and 44 percent of overweight children aged 5–9,

were obese (Figure 19). In addition, the relative rate of increase in the prevalence of obesity between 2000 and 2016 has been even faster than that of overweight: the prevalence of obesity more than doubled among children and adolescents over this time period.

FIGURE 20
THE GAP BETWEEN URBAN AND RURAL AREAS IN MEAN BODY MASS INDEX IS CLOSING



SOURCE: NCD Risk Factor Collaboration (NCD-RisC). 2019. Rising rural body-mass index is the main driver of the global obesity epidemic in adults. *Nature*, 569: 260–264.

Globally, mean BMI among adults is higher in urban areas than in rural areas. However, this gap has been closing as BMI has been increasing more rapidly in rural areas than in urban areas (Figure 20). This pattern is seen worldwide, but particularly in low- and middle-income countries.³⁰ The problem of malnutrition in rural areas is clearly shifting

from one dominated by undernutrition to a significant problem of the multiple burden of malnutrition. Among children under five, differences in the prevalence of overweight by areas of urban or rural residence are quite small. Additionally, there is no notable difference in the prevalence of overweight by sex for any age group.

Taking action to promote better nutrition and reverse obesity trends

Several global initiatives provide roadmaps to halt and reverse the obesity epidemic. The creation of an environment that enables and promotes healthy diets is central to all of these, referring to a balanced, diverse and appropriate selection of foods eaten over time to ensure that the needs for essential nutrients are met, and that consumption of harmful fats, salt and sugars is limited.³¹ Unhealthy diet is now the leading risk factor for deaths worldwide. To counter this, the Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020 outlines policy options for promoting physical activity and healthy diets.³² Another initiative, the WHO Commission on Ending Childhood Obesity proposes strategies to end childhood obesity that focus on healthy diets, physical activity, preconceptional and prenatal care, school health, and weight management.³³ It includes actions that are urgently needed to address the problems of unhealthy diets and inadequate physical activity found to be prevalent among school-age children around the world (Box 7). Finally, the Comprehensive Implementation Plan for Maternal, Infant and Young Child Nutrition, endorsed by the World Health Assembly in 2012, has challenged the world to prevent any increase in preschool overweight over the next decade.³⁴

These initiatives highlight the need for a multifaceted, multisectoral approach to address the burden of overweight and obesity globally. In light of this, in 2016, the United Nations endorsed the ICN2 Framework for Action³⁵ and declared a Decade of Action on Nutrition.³⁶ Tackling all forms of malnutrition is not the domain of any one sector alone: the health, education, agriculture, social protection, planning and economic policy sectors all have a role to play, as well as legislators and other political leaders. A range of actions is needed, aimed at the individual, household, community, national and even global levels.

Healthcare systems must provide appropriate support, education and counselling for individuals and families to promote breastfeeding (starting with supportive policies in hospital)

and prevent and treat overweight and obesity. Schools can play an influential role by providing environments that shape and enable healthier food choices through exposure to nutritious foods, combined with nutrition education and limiting exposure to foods or beverages high in fats, sugars or salt and to marketing communication for such foods in or around schools. More broadly, transformation of food systems is essential in delivering safe, affordable and sustainable diets. Social protection programmes can also support access to nutritious food especially for disadvantaged populations.

Poorer communities often face physical and economic barriers to obtaining nutritious foods, putting them at higher risk of food insecurity and malnutrition. There is growing recognition of the need for actions that address factors at the community and national levels.³⁷ Governments have a range of policy options to choose from to improve access to affordable healthy diets. These range from “hard” policies such as standards and regulations to “soft” policies such as the provision of information and education. Figure 21 presents examples of policies and programmes being implemented by countries and cities with the aim of preventing or reducing overweight and obesity. Some of these actions are described below.

Nutritious foods that contribute to a healthy diet must be readily available and affordable. In order to foster greater physical access to nutritious foods, local governments can take several measures, such as providing fiscal or non-fiscal incentives to increase the number of food outlets that offer fresh and nutritious food in neighbourhoods and communities³⁸ (including open-air markets), discouraging the sale of fast food near schools through zoning,³⁹ and improving the availability of nutritious foods in restaurants through the use of non-fiscal incentives such as voluntary certification schemes.⁴⁰

Nutritious foods have become relatively more expensive than foods high in fat, sugar and/or salt, in high-income countries as well as emerging economies such as Brazil, China, Mexico and South Africa.⁴¹ The affordability of highly processed, energy-dense foods (as well as spatial-temporal access to nutritious food) »

BOX 7**RISK FACTORS FOR OVERWEIGHT AND OBESITY IN SCHOOL-AGE CHILDREN**

The Global School-Based Student Health Survey (GSHS) provides a standard methodology to enable countries to collect comparable information on health status, risk behaviours and protective factors related to the leading causes of morbidity and mortality among 13–15 year old students.¹ The survey includes information on a number of risk factors for overweight and obesity in school-age children, including low intake of fruits and vegetables, eating at fast food restaurants, consumption of soft drinks, low physical activity, and sedentary behaviour.² The data provide insights on prevalence and behavioural trends and can be used for advocacy, programme planning, targeting and evaluation. The data presented here include results from 73 countries that have carried out surveys in the past ten years.

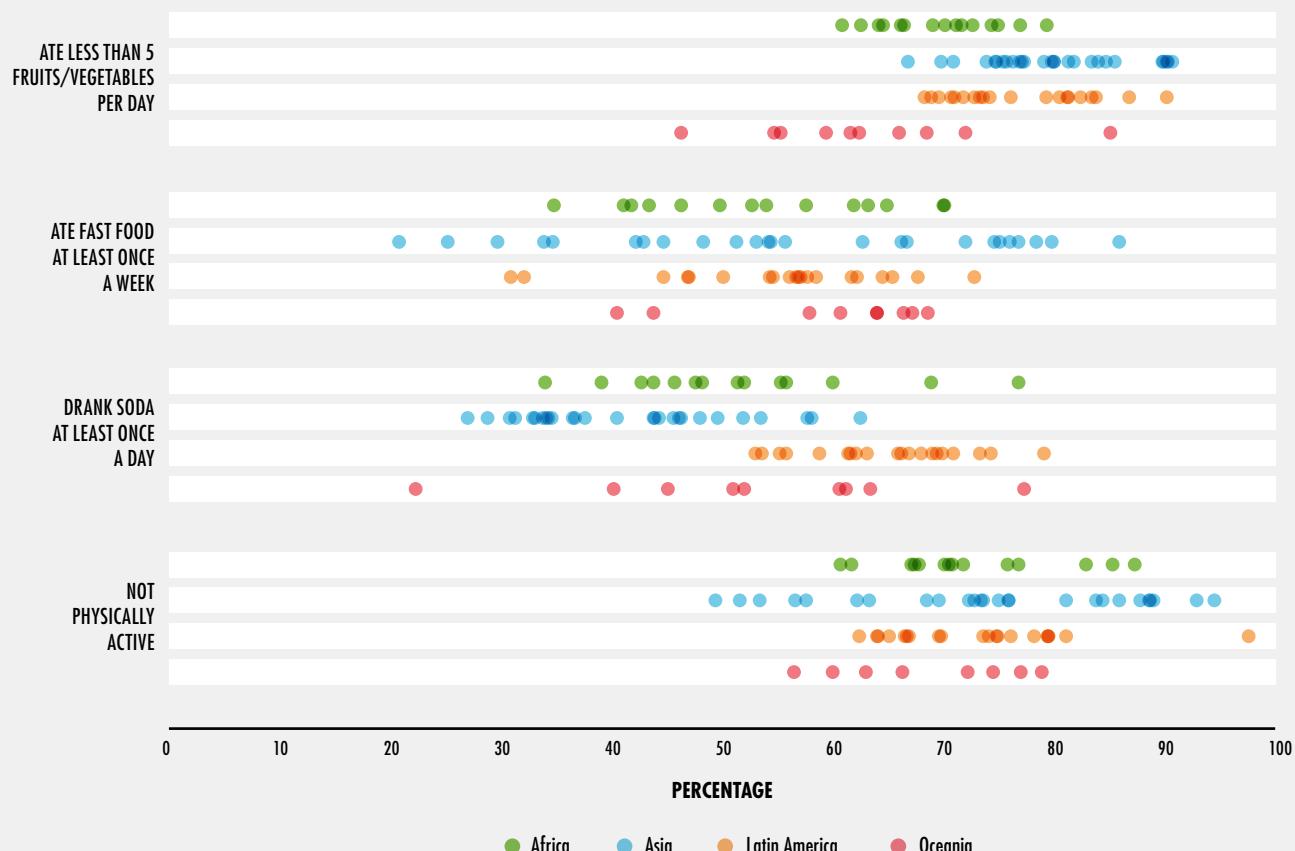
The GSHS asks students to report on their fruit and vegetable consumption in the past 30 days.

Roughly half of the countries reported that between 10 and 30 percent of students do not eat any fruit at all, and a quarter reported that between 10 and 30 percent of their students do not eat any vegetables at all. All but one of the countries found that the majority of their students ate less than five or more servings of fruit or vegetables per day, and in all but 15 of these countries over two-thirds of students did not eat this recommended amount (see figure below). Fruit and vegetable consumption is highest among the countries of Oceania.

Nearly 70 percent of countries reported that at least half of their students eat fast food on a weekly basis. Furthermore, 27 countries reported that at least two in every ten students eat fast food at least three times per week.

All countries found that one out of five students consumed carbonated soft drinks at least once a

THROUGHOUT THE WORLD, BEHAVIOURS OF SCHOOL-AGE CHILDREN INCREASE THEIR RISK OF BECOMING OVERWEIGHT OR OBESE



NOTES: Each point represents data from each country in the region.

SOURCE: WHO. 2019. NCDs | Global school-based student health survey (GSHS). In: *World Health Organization* [online] Geneva, Switzerland. [Cited 25 April 2019]. <https://www.who.int/ncds/surveillance/gshs/en>

**BOX 7
(CONTINUED)**

day, with more than half reporting that at least one out of every two students consumed soft drinks daily. Soda consumption was found to be highest in Latin America.

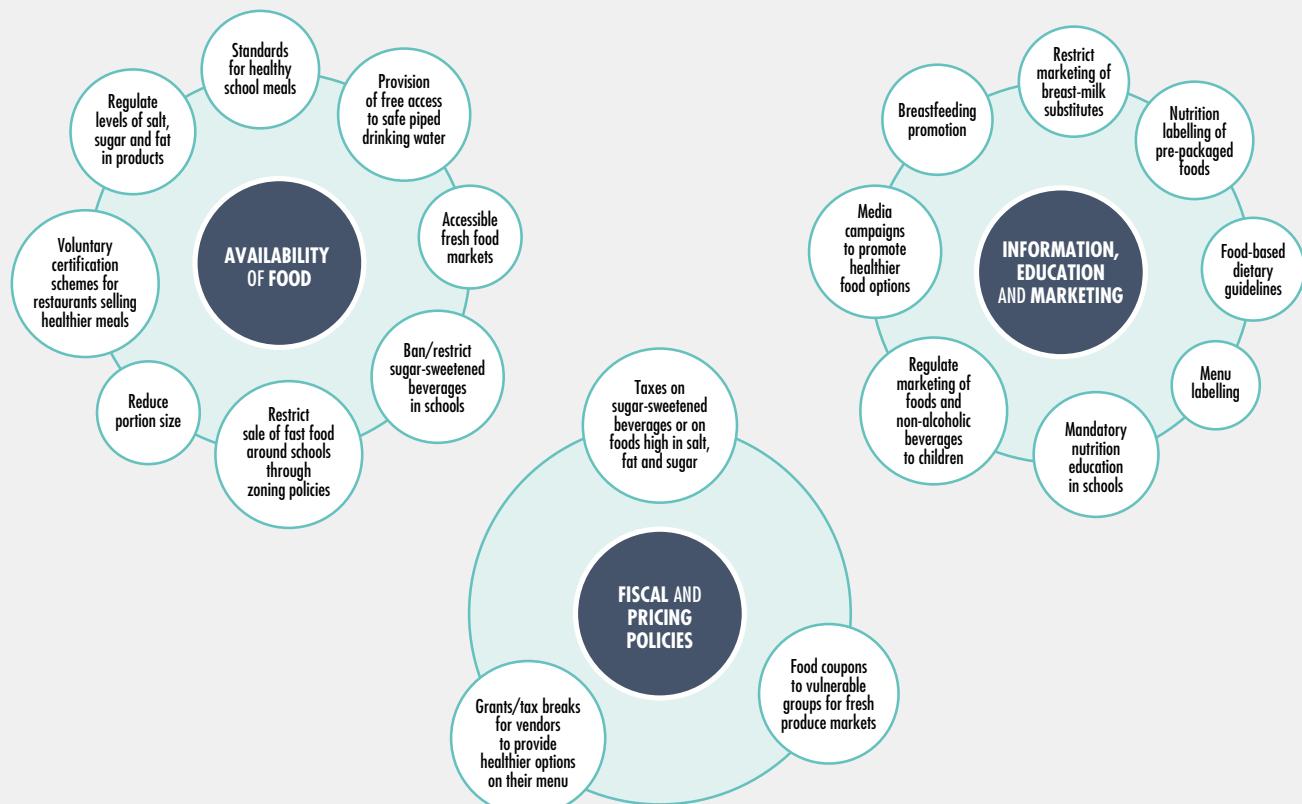
Regarding physical activity and sedentary behaviour, students were asked how many days in the past seven days they had been physically active for at least 60 minutes per day – the recommended level of activity for this age group – as well as how much time per day they had spent

in sedentary activities. None of the countries reported that a majority of their students had attained the recommended level of physical activity, and all but one reported having fewer than one in three students who had attained the recommended level. More than half of the countries reported that at least one in three students were spending three or more hours in sedentary activities every day.

¹ WHO. 2019. NCDs | Global school-based student health survey (GSHS). In: *World Health Organization* [online]. Geneva, Switzerland. [Cited 25 April 2019]. <https://www.who.int/ncds/surveillance/gshs/en>

² WHO. 2013. *Global School-Based Student Health Survey (GSHS) 2013 Core Questionnaire Modules* [online]. Geneva, Switzerland. https://www.who.int/ncds/surveillance/gshs/GSHS_Core_Modules_2013_English.pdf

**FIGURE 21
EXAMPLES OF POLICIES AND PROGRAMMES AIMED AT PREVENTING OR REDUCING
OVERWEIGHT AND OBESITY**



SOURCE: Developed by WHO and FAO for this publication based on: World Cancer Research Fund International. 2019. NOURISHING database. In: *World Cancer Research Fund International database* [online]. London. [Cited 25 April 2019]. <https://www.wcrf.org/int/policy/nourishing-database>; WHO. 2019. Global database on the Implementation of Nutrition Action (GINA). <https://www.who.int/nutrition/gina/en>

» has been identified as a main determinant of whether food insecurity is associated with obesity in low- and middle-income countries; such foods tend to be widely available in upper-middle- and high-income countries, and are often cheaper than fresh and nutritious foods.⁴² To increase economic access to healthy diets, effective options are available to local and national governments, such as food assistance programmes that provide low-income families and individuals with supplemental funds to purchase fruit and vegetables or promotion of healthy food retail development through fiscal incentives. Some studies have shown that consumption of subsidized fruits and vegetables can be increased in the range of 10 to 30 percent.⁴³ Policymakers can also use economic incentives such as taxes aimed at decreasing the demand for foods high in fat, sugar and/or salt and subsidies to make nutritious foods more affordable.⁴⁴ Taxes on sugar-sweetened beverages in particular have been found to reduce purchases and/or consumption of these products, not only due to the price increase, but also by raising awareness about the resulting health benefits.⁴⁵ There is some evidence that the effects of food taxes are stronger on low-income groups because they are more price-responsive, and may therefore gain the most health benefits – especially if taxes are complemented with targeted subsidies for more nutritious foods.⁴⁶ Furthermore, such taxes can also prompt manufacturers to reformulate their products (e.g. by reducing sugar content).⁴⁷

There are a number of other policy tools available to national governments to promote healthy eating and prevent overweight and obesity. These include incentives to encourage fruit and vegetable production, regulatory instruments that shape nutrition labelling,⁴⁸ food standards and appropriate procurement rules for schools and other public institutions, and national food-based dietary guidelines. Provision of free access to safe and affordable piped drinking water is crucial to promoting health everywhere; easy accessibility to safe piped drinking water in schools provides a healthy alternative to the consumption of sugar-sweetened beverages. Other important policy measures include restrictions on marketing of breast-milk substitutes, regulation of the marketing of foods and non-alcoholic

beverages to children, and regulatory standards for maximum levels of salt, sugar and fat in specific products. Government-led reformulation programmes can lead to reductions in the levels of salt, sugar and fat across the spectrum of processed food and drink products, including the elimination of industrially produced trans fats.⁴⁹

Importantly, no single measure alone can reverse the overweight and obesity trends; rather, there must be a multifaceted approach that combines different types of policies and interventions.

This section of the report has documented the persistent challenge of undernutrition coupled with rising overweight and obesity, known as the “multiple burden of malnutrition”. Recognizing that both the drivers and solutions to the multiple facets of this burden are intricately linked, “double-duty actions” have been identified that can address the problems of undernutrition and obesity simultaneously.⁵⁰ The potential impact for double-duty actions emerges from addressing the shared drivers underlying different forms of malnutrition, and from shared platforms that can be used to address them. Many of the policies outlined above are examples of such actions. For example, initiatives to promote and protect breastfeeding can protect against stunting and wasting in childhood, reduce the risk of overweight and obesity later in life, and regulate maternal weight in the postpartum period. School food and nutrition programmes can include the provision of meals to children who are food insecure while also ensuring that they are exposed to nutritious foods. Social protection programmes aimed at ensuring food security for vulnerable populations can be designed in a manner which supports healthy eating habits and promotes dietary diversity.

Double-duty actions thus offer integrated solutions that address the shared drivers of different forms of malnutrition in many different contexts, including the context of humanitarian emergencies and protracted crises, where physical access to and affordability of nutritious foods is often severely compromised. Even in such contexts, where the priority is often to treat and prevent undernutrition, these actions are needed to combat the multiple burden of malnutrition by promoting healthy diets (**Box 8**). »

BOX 8

DOUBLE-DUTY ACTIONS TO ADDRESS ALL FORMS OF MALNUTRITION IN THE CONTEXT OF HUMANITARIAN ASSISTANCE

Approximately two billion people live in countries affected by fragility, conflict and violence.¹ Although humanitarian programmes must focus on saving lives and providing food in sufficient quantities to protect and promote food security, there is increasing recognition of the existence of multiple forms of malnutrition in crisis situations that must also be addressed.²

The reality of the global distribution of different types of malnutrition is complex.³ Wasting and stunting occur in both crisis and stable contexts, and there is significant overlap in the risk factors for and consequences of these forms of malnutrition.³ Simultaneously, there is growing awareness of the shared drivers of obesity and undernutrition,⁴ and the existence of diet-related non-communicable diseases in humanitarian contexts.⁵

This complexity demands an increase in focus on all forms of malnutrition in both humanitarian and development contexts. Double-duty actions are needed, with a dual focus on meeting immediate needs and reducing future risk and vulnerability. In order to design context-specific programmes able to respond to the multiple burden of malnutrition, programme designers and policymakers also need to make better use of data, with a focus on certain key questions: Is there an enabling environment for good nutrition in a given context? Is nutritious food available? Can people afford it? Do they choose it?

Humanitarian actors currently use a variety of approaches to protect food security, promote good nutrition and ultimately save lives. Conditional cash-based assistance, for example, can improve access to and affordability of nutritious foods, thus enabling vulnerable people, including those affected by crises, to improve their diets by purchasing food through retail outlets. Both the

amount of cash relative to people's needs, and people's choices on how to use it, affect the potential impact that this cash can have on nutrition. In many contexts, a strong strategy for social and behavioural change communication may be required to ensure that cash is used to purchase nutritious food and does not contribute to an increased risk of overweight and obesity.

In Bangladesh for instance, e-vouchers distributed to refugees for use in designated food outlets in camps allow individuals to improve their diets through the purchase of nutritious, fresh foods. E-vouchers provide access to 20 different food items, 12 of which are mandatory (i.e. e-voucher recipients are required to purchase these specific items) while the remaining 8 can be chosen from other food items that are available in the store. This approach helps to ensure the quality of the foods purchased while still respecting individual choices. Guidelines set for retailers aim at selling at least three items of fresh food including fruits and vegetables. The financial support provided through e-vouchers combined with nutrition education and awareness-raising (e.g. on healthy diets and cooking methods) is a strong example of a package of double-duty interventions that can simultaneously address multiple forms of malnutrition.

Although progress has been made in improving the affordability and accessibility of high-quality, nutritious foods for vulnerable people, challenges persist related to supply and demand. Ongoing work to strengthen local markets, improve efficiencies in the retail sector, reduce the price of food while maintaining or increasing profitability, and utilize point-of-sale data to understand purchasing patterns, are all double-duty actions that can help address the growing problem of the multiple burden of malnutrition in humanitarian contexts.

¹ International Development Association (IDA). 2019. Conflict and Fragility. In: IDA – World Bank Group [online]. Washington, DC. [Cited 25 April 2019]. <http://ida.worldbank.org/theme/conflict-and-fragility>

² Development Initiatives. 2018. *Global Nutrition Report 2018. Shining a light to spur action on nutrition*. Bristol, UK.

³ Emergency Nutrition Network (ENN). 2018. *Child wasting and stunting: Time to overcome the separation. A Briefing Note for policy makers and programme implementers* [online]. [Cited 25 April 2019]. <https://www.ennonline.net/attachments/2912/WaSt-policy-brief.pdf>

⁴ WHO. 2017. *Double-duty actions for nutrition*. Policy Brief [online]. Geneva, Switzerland. [Cited 24 April 2019]. <https://apps.who.int/iris/bitstream/handle/10665/255414/WHO-NMH-NHD-17.2-eng.pdf?ua=1>

⁵ S. Aeblischer Perone, E. Martinez, S. du Mortier, R. Rossi, M. Pahud, V. Urbaniak, F. Chappuis, O. Hagon, F. Jacquérioz Bausch and D. Beran. 2017. Non-communicable diseases in humanitarian settings: ten essential questions. *Conflict and Health*, 11(17).

- » In summary, many of the policies discussed here aim to increase access to nutritious and sufficient food – an objective embedded in SDG Target 2.1 to “end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round”. In the section that follows, the focus will be on how restricted access to food, i.e. food insecurity as measured by the FIES, is linked to different forms of malnutrition. ■

1.3 TOWARDS AN INTEGRATED UNDERSTANDING OF FOOD SECURITY AND NUTRITION FOR HEALTH AND WELL-BEING

KEY MESSAGES

- ➔ Countries with higher prevalence of moderate or severe food insecurity based on the FIES tend to have higher rates of adult obesity, when controlling for national rates of undernourishment and poverty.
- ➔ A closer look at household and individual level data from selected countries across all regions, reveals that food insecurity plays an important role as a determinant of different forms of malnutrition.
- ➔ In upper-middle- and high-income countries, living in a food-insecure household is a predictor of obesity in school-age children, adolescents and adults.
- ➔ In low- and lower-middle-income countries, household food insecurity tends to be negatively associated with overweight and obesity, or is not associated at all.
- ➔ Children living in households classified as moderately or severely food insecure in a number of countries in Latin America and Africa are more likely to be stunted compared with those living in food-secure households.

To accelerate progress towards ending hunger and achieving food security and improved nutrition, as required by SDG 2, it is important to fully grasp the connections between food insecurity and malnutrition, and the drivers underlying both. A better understanding of these links can lead to more effective policies aimed at addressing the specific challenges faced by countries and the international community. As discussed in the preceding section, forms of undernutrition such as child stunting and anaemia in women are persistent problems in many countries, and countries of all income levels are seeing a rise in overweight and obesity. The total number of obese people in the world (roughly 822 million, including overweight children under five, for whom obesity data are not available) surpassed the total number of undernourished people (796.5 million, derived from the PoU) in 2016.⁵¹

Moderate levels of food insecurity – defined as uncertain access to food of sufficient quality and/or quantity, but not so extreme that it causes insufficient dietary energy consumption (undernourishment) – can increase the risk of seemingly divergent forms of malnutrition. The 2018 edition of the report⁵² described multiple pathways whereby food insecurity may contribute to different forms of malnutrition, including overweight and obesity. Household food insecurity can affect the quantity and quality of dietary intake, hence impacting on maternal nutrition, child growth and development and potentially increasing vulnerability to infectious diseases, as well as the risk of anaemia in women. Mothers who are food insecure are also more stressed and likely to be depressed, which can negatively affect breastfeeding and care practices. Other factors that help to explain the link between food insecurity and overweight and obesity include the higher cost of nutritious foods (and their substitution with cheaper foods that are high in fats and sugar), the stress of living with uncertain access to food, and physiological adaptations to periodic food restrictions.

This section presents new evidence on the links between moderate or severe food

insecurity and various forms of malnutrition. The analytic approach is two-pronged, but conditioned by data availability. First, as measures of the prevalence of food insecurity and of the various forms of malnutrition in the national population exist for many countries, the analysis looks at whether the prevalence of moderate food insecurity helps to explain differences between countries in the prevalence of adult obesity, overweight among school-age children and adolescents, child stunting and wasting, and anaemia in women. Next, there is a more in-depth study of the role of household food insecurity in predicting malnutrition outcomes in individuals using data at the micro level from a limited number of countries in Africa, Asia and the Americas.

Links between food insecurity and various forms of malnutrition at the country level

The top panel of [Table 5](#) reports the results of the Spearman rank correlation coefficient between the prevalence of moderate or severe food insecurity and that of each of the five forms of malnutrition, across all countries for which both indicators are available at the national level.⁵³

The correlations between the prevalence of moderate or severe food insecurity and all nutrition outcomes are statistically significant (p -values < 0.01). The exception is child wasting, where significance is only marginally below the 10 percent p -value. The correlation is negative for adult obesity, overweight among both children and adolescents, and positive for child stunting and anaemia in women of reproductive age ([Table 5](#), top panel).

In other words, it appears that countries with a higher prevalence of moderate or severe food insecurity (combined) tend to have a lower prevalence of child and adolescent overweight and adult obesity and a higher prevalence of anaemia and child stunting. Such correlations, however, could be spurious – for example, they could be due to a correlation that exists, across countries, between the prevalence of moderate or severe food insecurity and other aspects,

such as the incidence of poverty. To explore whether the detected link exists because moderate or severe food insecurity is relevant *per se*, and not simply a reflection of other structural indicators, a cross-country regression analysis was conducted for each of the nutrition outcome indicators, against the prevalence of moderate or severe food insecurity, introducing national measures of undernourishment (as a proxy for severe food insecurity) and extreme poverty as controls.⁵⁴

The results ([Table 5](#), bottom panel) show that when controls are included, the correlation with moderate or severe food insecurity remains significant only for adult obesity – but in reverse direction – and for anaemia in women.

The reversal of the sign of the association between moderate or severe food insecurity and adult obesity, which becomes positive, means that moderate food insecurity can indeed contribute to obesity, in certain conditions. If one focuses attention on countries of similar levels of undernourishment and poverty, obesity rates are higher in those where moderate food insecurity is also higher. This result is in line with the preliminary findings described in the 2017 report which showed how national rates of food insecurity were positively associated with adult obesity in high- and upper-middle-income countries.⁵⁵ Combined with the negative correlation that is found for extreme poverty, this provides additional evidence of the fact that, as national economies grow, people facing difficulties in accessing food, as captured by an experience-based indicator of food insecurity, have a higher risk of obesity.⁵⁶

This analysis presents a number of limitations due to the nature of the data used, i.e. global data at the macro level. It is clearly insufficient to fully account for the reasons for the differential impact of food insecurity on adult obesity and other forms of malnutrition in different conditions. More insights can be gained from analysis of data at the household and individual levels that combine measures of food insecurity and of nutritional outcome, as explored in the next section.

TABLE 5

ASSOCIATION BETWEEN FOOD INSECURITY AND VARIOUS FORMS OF MALNUTRITION: CROSS-COUNTRY ANALYSIS BASED ON NATIONAL DATA

	Obesity	Overweight		Stunting	Wasting	Anaemia
	Adults	School-age children and adolescents	Children < 5 years	Children < 5 years	Children < 5 years	Women 15–49 years
Spearman rank correlations	Correlation coefficients (p-values)					
Prevalence of moderate or severe food insecurity	-0.442*** (0.000)	-0.525*** (0.000)	-0.543*** (0.000)	0.632*** (0.000)	0.292* (0.057)	0.577*** (0.000)
Regression analyses	Coefficients (p-values)					
Prevalence of moderate or severe food insecurity	0.308** (0.031)	-0.033 (0.813)	-0.132 (0.503)	0.001 (0.995)	-0.035 (0.885)	0.404** (0.011)
Prevalence of undernourishment	-0.379*** (0.002)	-0.279** (0.016)	-0.064 (0.675)	0.222* (0.077)	0.305* (0.096)	0.161 (0.214)
Prevalence of extreme poverty	-0.635*** (0.000)	-0.470*** (0.000)	-0.438** (0.041)	0.638*** (0.001)	0.211 (0.404)	0.090 (0.542)
Number of countries	86	86	47	43	43	87

NOTES: The Spearman rank correlation between two variables is the linear correlation between the ranked values of those two variables – i.e. in the analysis presented in the first row above, the correlation between country rankings based on the two variables. p-values in parentheses. * p < 0.1; ** p < 0.05; *** p < 0.01. Adults are ≥ 18 years old; school-age children and adolescents are 5–19 years old. For a description of the variables and details of the regression model, see the technical note in Annex 2.

SOURCE: M. Del Grossi, A. Sattar, C. Alvarez-Sánchez, A. Ishaq, S. Viviani, J. Feng, F. Yassin and C. Cafiero. forthcoming. *The relevance of food security for nutrition: an empirical analysis at country level*. Technical Paper. Rome, FAO.

Links between food insecurity and various forms of malnutrition at the household and individual levels

This section presents the results of a statistical analysis of micro-level data obtained from nationally representative surveys that included measures of household food insecurity and also of nutritional outcomes of their members. The ultimate objective of the analysis was to determine if living in a food-insecure household increases the probability of being affected by one of the various forms of malnutrition.

To ensure consistent measurement of food insecurity, one of the criteria used to select the surveys was that they should include either the FIES or a similar experience-based tool to measure household food insecurity, along with the nutritional outcome measures of individuals in the household. Although the number of such surveys covering both food security at the household level and nutrition at the individual level has increased, there are still too few

to be able to provide a global assessment. Nevertheless, the study provides useful evidence from eight countries of diverse income levels from three main regions of the world.

As a preliminary step, the food-insecurity measure in each survey was calibrated to the global reference scale following the FIES methodology. This resulted in a measure that permitted classification of each household as being food secure or food insecure in a consistent way across the countries covered (Box 3). Then, logistic regressions of the nutrition outcome condition were run at the individual level for each of the relevant population groups, as a function of the household food-insecurity status, controlling for age, sex, socio-economic status, household size/dependency ratio, and urban/rural residence. For child malnutrition outcomes, the analyses also controlled for maternal education and for access to clean drinking water and basic sanitation facilities (see Annex 2 and Ishaq *et al.*⁵⁷ for a full description of the methodology and results).

TABLE 6
ASSOCIATION BETWEEN FOOD INSECURITY AND OVERWEIGHT OR OBESITY IN DIFFERENT AGE GROUPS:
MICRO-LEVEL DATA ANALYSIS FROM SELECTED COUNTRIES

Population group	Malnutrition outcome	Country							
		United States of America	Mexico	Brazil	Pakistan	Nepal	Kenya	Nigeria	Malawi
Odd-ratios (p-values)									
Children < 5 years	Overweight	0.893 (0.731)	0.927 (0.522)	1.422* (0.061)	n.a.	n.a.	0.848 (0.152)	0.818 (0.279)	0.735* (0.099)
School-age children and adolescents	Overweight	0.905 (0.407)	0.933 (0.260)	1.698** (0.042)	0.684*** (0.009)	0.951 (0.924)	0.774*** (0.000)	n.a.	n.a.
	Obesity	1.487* (0.055)	1.098 (0.117)	2.866** (0.015)	0.573** (0.027)	n.a.	n.a.	n.a.	n.a.
Adults	Obesity	1.499*** (0.001)	1.170*** (0.006)	1.223** (0.018)	0.564** (0.031)	0.999 (0.995)	0.708*** (0.000)	n.a.	n.a.

NOTES: Coefficient estimates are standardized and transformed to represent odd-ratios. Values less than one indicate negative associations. p-values in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. All p-values are based on robust standard errors taking into account clustering of individuals by household. "n.a." data not available or insufficient number of observations to run the regression. Adults are ≥ 18 years old; school-age children and adolescents are 5–19 years old. Control variables differ by country, depending on each outcome. See the technical note in Annex 2 for details and Ishaq *et al.* for more detailed results.

SOURCE: A. Ishaq, C. Alvarez-Sánchez, M. Del Grossi, S. Viviani, J. Feng, F. Yassin, A. Kepple, A. Sattar and C. Cafiero. forthcoming. *The relevance of household food security for nutrition: an empirical analysis based on survey data*. Technical Paper. Rome, FAO.

The analysis (full results not shown here) reveals that living in a household classified as food insecure contributes to explain the status of being affected by one or another form of malnutrition in different population groups, in seven of the eight countries studied. Indeed, in five of them, household food insecurity is found to be associated with more than one form of malnutrition. Table 6 summarizes the results of regressions of overweight and obesity on household food insecurity only, not showing the coefficient estimates of other covariates.⁵⁸

The table shows how the association of food insecurity with overweight and obesity (across different age groups) varies depending on the income level of the country. In the low- and lower-middle-income countries considered, living in a food-insecure household either decreases the likelihood of being overweight or obese (Kenya and Pakistan) or has a very weak (Malawi) or no association (Nepal and Nigeria). In upper-middle- and high-income countries (Brazil, Mexico and the United States of America), food insecurity increases the likelihood of being overweight or obese,

at least in some age groups. In Brazil, food insecurity is statistically correlated with obesity in the two age groups considered (p -value < 0.05), while in the United States of America and Mexico the statistical significance of the association is strong (p -value < 0.01) for adults. The association for obesity in school-age children and adolescents is less strong for the United States and not statistically significant at the conventional significance levels for Mexico (p -value = 0.117). Although this analysis was not designed to prove the hypothesis, the different direction of the association of food insecurity with adult obesity depending on the income level of the country is consistent with other evidence that a positive relationship is more likely in settings where highly processed, energy-dense foods are low-cost.⁵⁹ As mentioned in Section 1.2, in upper-middle- and high-income countries, such foods are ubiquitously available and cheap, while fresh, nutritious foods are often out of reach for those living on lower incomes. But in many low- and lower-middle-income countries, highly-processed, energy-dense foods are not readily available or affordable.

TABLE 7

ASSOCIATION BETWEEN HOUSEHOLD FOOD INSECURITY, CHILD STUNTING AND WASTING, AND ANAEMIA IN WOMEN OF REPRODUCTIVE AGE: MICRO-LEVEL DATA ANALYSIS FROM SELECTED COUNTRIES

Population group	Malnutrition outcome	Country						
		United States of America	Mexico	Brazil	Nepal	Kenya	Nigeria	Malawi
Odd-ratios (p-values)								
Children	Stunting	n.a.	1.215** (0.045)	1.665* (0.097)	1.029 (0.814)	1.224* (0.099)	0.906 (0.705)	1.373** (0.022)
	Wasting	n.a.	n.a.	n.a.	1.291 (0.127)	0.727 (0.125)	2.791** (0.010)	1.019 (0.947)
Women, 15–49 years	Anaemia	0.709 (0.207)	1.132** (0.035)	1.410** (0.035)	1.069 (0.597)	n.a.	n.a.	n.a.

NOTES: Coefficient estimates are standardized and transformed to represent odd-ratios. Values less than one indicate negative associations. p-values in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. All p-values are based on robust standard errors, taking into account clustering of individuals by household. "n.a." data not available or insufficient number of observations to run the regression. Adults are ≥ 18 years old; school-age children and adolescents are 5–19 years old. Control variables differ by country, depending on each outcome. See the technical note in Annex 2 for details and Ishaq et al. for more detailed results.

SOURCE: A. Ishaq, C. Alvarez-Sánchez, M. Del Grossi, S. Viviani, J. Feng, F. Yassin, A. Kepple, A. Sattar and C. Cafiero. forthcoming. *The relevance of household food security for nutrition: an empirical analysis based on survey data*. Technical Paper. Rome, FAO.

Table 7 summarizes the results of the analysis of association between household food insecurity and child undernutrition and anaemia in women of reproductive age, when controlling for other factors (see Annex 2 for details). Household food insecurity is associated with indicators of child undernutrition in most of the countries studied. Children living in food-insecure households in Brazil, Kenya, Malawi and Mexico are more likely to be stunted compared with those living in food-secure households. In Nigeria they are more likely to be wasted. No association is found in Nepal.

The association between food insecurity and anaemia in women of reproductive age could only be analysed in four of the eight countries due to data availability. In Brazil and Mexico, living in a food-insecure household was found to increase the likelihood of women being anaemic. In Nepal the prevalence of anaemia is similar among food-secure and food-insecure women. No association between food insecurity and anaemia is found in the United States of America.

As the analysis was conducted by controlling for income levels,⁶⁰ it shows that, in general, the experience of food insecurity has implications for malnutrition regardless of the socio-economic status of the household. This points to the need for policies to go beyond merely addressing poverty and specifically improve access to food. ■

1.4 CONCLUSIONS

The trends in food insecurity and malnutrition in all its forms described in Part 1 pose a significant challenge to achieving SDG 2. The numbers of people suffering from hunger and food insecurity are no longer declining – on the contrary, they have been slowly on the rise in the last few years. While progress in bringing down the prevalence of stunting in children and increasing the rate of exclusive breastfeeding is to be commended, the rapid increase in obesity is alarming, and no region or income group is exempt from this problem. The global number of obese people surpassed the number of undernourished people already in 2016. Children facing hunger

and food insecurity may have a higher risk of overweight, obesity and NCDs later in life, and unhealthy diets are now the leading risk factor for deaths worldwide. Therefore, it is imperative to continue addressing the urgent needs of those who are hungry, while at the same time going beyond hunger and ensuring access not only to sufficient food, but also to nutritious foods that constitute a healthy diet. In the search for a better understanding of how to achieve this, the new FIES-based indicator of moderate or severe food insecurity represents a valuable tool.

Trends of the past several decades, as well as persistent socio-economic and geographic inequalities in food insecurity and malnutrition, highlight the need to address factors operating at the community, national and international levels that contribute to such inequalities. The second part of this report delves deeper into some of the fundamental determinants of food insecurity and malnutrition related to underlying economic structures and inequalities. ■

**AFGHANISTAN**

A shopkeeper taking part in an FAO irrigation project spraying water onto vegetables at a grocery market.

©FAO/Shah Marai

PART 2

**SUSTAINED
ESCAPES
FROM FOOD
INSECURITY AND
MALNUTRITION
IN THE FACE
OF ECONOMIC
SLOWDOWNS AND
DOWNTURNS**



SUSTAINED ESCAPES FROM FOOD INSECURITY AND MALNUTRITION IN THE FACE OF ECONOMIC SLOWDOWNS AND DOWNTURNS

As shown in Part 1 of this report, almost one out of every nine people in the world suffers from hunger, and the number of hungry people is growing, albeit slowly. At the same time, reductions in child stunting are insufficient to meet global goals, and obesity and overweight are on the rise.

Previous editions of this report have identified three drivers behind these problematic trends: conflict, climate and economic slowdowns. These drivers are complex and often interact with compounding effects that challenge food security and nutrition in multiple ways. Unless greater and more targeted efforts are made to address these drivers and the underlying causes of hunger and malnutrition, it is increasingly clear that the goal of ending hunger and all forms of malnutrition by 2030 will not be achieved.

In 2017, this report made it clear that efforts to fight hunger and malnutrition in conflict-affected situations must go hand in hand with actions for immediate humanitarian assistance and long-term development that builds resilience and helps sustain peace. In 2018, the report called for urgent action to scale up and accelerate policies and programmes to build climate resilience.

This year, this second part of the report looks more closely at how the third key driver, economic slowdowns – and, more specifically, also economic downturns – has contributed to the recent rise in hunger with possible implications for nutrition. This is critical to understanding future trends in hunger and malnutrition, especially given the dark predictions of the latest global economic prospects, with slowing and stalled economic growth in many countries, including emerging and developing economies.

Indeed, episodes of financial stress, elevated trade tensions and tightening financial conditions are all contributing to bleaker global economic prospects.¹

Importantly, the impact of economic slowdowns and downturns on food security and nutrition cannot be separated from the root causes of hunger and malnutrition: poverty, inequality and marginalization. Part 2 therefore looks closely at the relationship between poverty and food security and nutrition, and how they interact with inequality and marginalization to threaten food security and nutrition.

The purpose of the analysis is to provide guidance on how these challenges can be overcome to end hunger and malnutrition in all its forms. The last section thus presents policies and programmes that can protect the most vulnerable from the impact of economic slowdowns and downturns, while fostering food security and nutrition from a perspective of more inclusive economic growth. Ending hunger and malnutrition by 2030 (SDG Targets 2.1 and 2.2) will require greater efforts and integrated approaches to eradicate extreme poverty (SDG 1), ensure decent work and inclusive economic growth (SDG 8), and reduce inequalities (SDG 10). ■

2.1 ECONOMIC SLOWDOWNS AND DOWNTURNS AND THEIR IMPACT ON FOOD SECURITY AND NUTRITION

KEY MESSAGES

- ➔ The outlook for the global economy has darkened, reflecting risks of increasing trade tensions and rising global borrowing costs.
- ➔ Hunger has been on the rise in countries where the economy has slowed down or contracted. The uneven pace of global economic recovery raises concerns regarding prospects for ending hunger and malnutrition in all its forms.
- ➔ Most countries (84 percent) that experienced a rise in undernourishment between 2011 and 2017 simultaneously suffered an economic slowdown or downturn – and the majority of these are middle-income countries.
- ➔ While conflict and climate shocks were the key drivers of food crises in 2018, economic shocks were significant secondary and tertiary drivers in more than half of the countries affected by food crises and worsened the severity of these food crises for 96 million people.

➔ Rises in the prevalence of undernourishment in countries that faced economic downturns tend to be higher (5.1 percentage points) than countries vulnerable to climate extremes (2.3 percentage points higher) and countries that experienced conflict (2.2 percentage points higher).

How are economic slowdowns and downturns relevant to the quest to eradicate hunger and malnutrition?

Hunger has been on the rise in many countries where the economy has slowed down or contracted. Between 2011 and 2017, this increase coincided with an economic slowdown or downturn in 65 out of 77 countries.

Economic shocks that typically result in economic slowdowns or downturns tend to be significant secondary and tertiary drivers that prolong and worsen the severity of food crises, especially in countries experiencing acute food insecurity requiring urgent humanitarian assistance.² In 2018, economic shocks featured prominently in 33 out of the 53 countries that suffered from food crises, affecting more than 96 million people (Table 8).

An economic slowdown generally means economic activity is sluggish, although it continues to grow. When there is no growth, the economy has reached a downturn (Box 9). These economic phenomena often lead to a rise in unemployment and decline in wages and incomes, challenging access to food and essential social services for the poor. People's access to high-quality, nutritious food, which tends to be less affordable – especially for poor people who spend a large portion of their income on food – can be affected, as can access to basic services such as health care.

BOX 9

WHAT ARE ECONOMIC SLOWDOWNS AND DOWNTURNS?

One of the primary measures used to gauge the health of a country's economy is gross domestic product (GDP). Often referred to as the size of the economy, it is the total value of economic activity within a country measured as the total value of goods and services produced during a given period of time. The economic growth rate is the percentage increase or decrease of GDP from one period to another.

An **economic slowdown** is when economic activity is growing at a slower pace. In other words, there still is growth in economic activity, but at a slower rate than before. An economic slowdown occurs when real GDP growth declines from one period of time to another but is still positive, usually measured in quarters of a year.

An **economic downturn** is when there is no growth, but rather a period of decline in economic activity. It refers to a period of **economic contraction** or negative economic growth as measured by the growth rate in real GDP. An **economic recession**,¹ often used synonymously with *economic downturn*, is a temporary

or short-term downturn in economic growth, usually occurring over at least two consecutive quarters of decline. **Stagnation** is period where an economy grows at an extremely low rate without actually entering a recession.

An **economic shock** is an unexpected or unpredictable event that is external to the specific economy and can either harm or boost it. A global financial crisis causing bank lending or credit to fall, or an economic downturn in a major trading partner of a country, reflect demand-side shocks that can have multiple effects on spending and investment. A steep rise in oil and gas prices, natural disasters that result in sharp falls in production, or conflict that disrupts trade and production, are examples of supply-side shocks.

See Annex 3 for the full definitions used in the analysis of this report, as well as the methodology applied in the measuring of economic slowdowns and downturns.

¹ S. Claessens and M. Ayhan Kose. 2009. What is a recession? *Finance & Development*, March 2009, 46(1). (also available at <https://www.imf.org/external/pubs/ft/fandd/2009/03/basics.htm>).

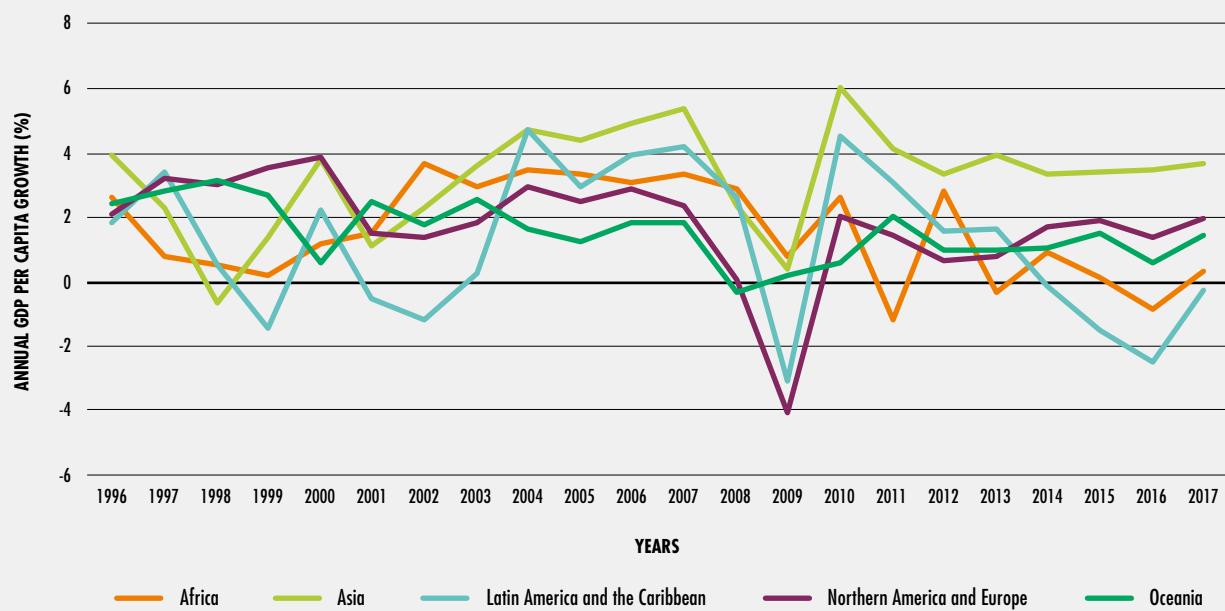
The uneven pace of global economic recovery from slowdowns further raises concerns regarding prospects for ending hunger and malnutrition in all its forms. Recent world economic reports highlight that slowdowns, stagnation and outright recessions are evident in several economies and already leading to increased unemployment and declines in income.³ There may soon be yet another global economic downturn. Early this year, the IMF revised its forecast for global growth to the lowest level since the global financial crisis a decade ago, as the outlook dimmed in most major economies.⁴

This dark outlook reflects increasing risks related to rising trade tensions, weakening investments, increasing government and corporate debt, and rising borrowing costs. According to the World Bank, further escalation of trade tensions and the associated uncertainty

could weaken growth even further.⁵ Moreover, the outlook for commodity prices, especially oil, is vulnerable to policy-related risks and the collective intervention of many countries – particular through trade policies – may amplify international price movements, and may not be effective in protecting the most vulnerable populations groups.⁶

Trade tensions, which are increasingly taking a toll on business confidence, are a particular concern. After strong growth in 2017 and 2018, the global economy's slowdown reflects a confluence of factors, including US–China trade tensions. Global trade has also slowed considerably. Moreover, escalation and tariff hikes between the two largest economies of the world could further weaken growth and put pressure on the price of commodities. This is because higher tariffs will increase the price of imported goods, disrupt global value chains,

FIGURE 22
REAL GDP PER CAPITA GROWTH HAS BEEN UNEVEN SINCE THE 2008–2009 SHARP GLOBAL DOWNTURN



NOTES: Annual rate of per capita GDP growth at constant 2010 prices that occurred in the five regions during the period 1996–2017.

SOURCES: UN. 2019. National Accounts – Analysis of Main Aggregates. In: *UNSTATS* [online]. New York, USA. [Cited 6 May 2019] <https://unstats.un.org/unsd/snaama>; and for North America and Europe UNCTAD. 2019. Gross domestic product: Total and per capita, growth rates, annual. In: *UNCTADSTAT* [online]. New York, USA. [Cited 14 May 2019]. <https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=109>

reduce productivity, increase uncertainty and weaken investment.⁷

Global demand for commodities could slow down by one-third over the next decade,⁸ especially for agriculture and metals, and countries dependent on commodity exports may struggle to adjust. Rising risks combined with high vulnerabilities will challenge emerging and developing economies' ability to manage economic shocks.

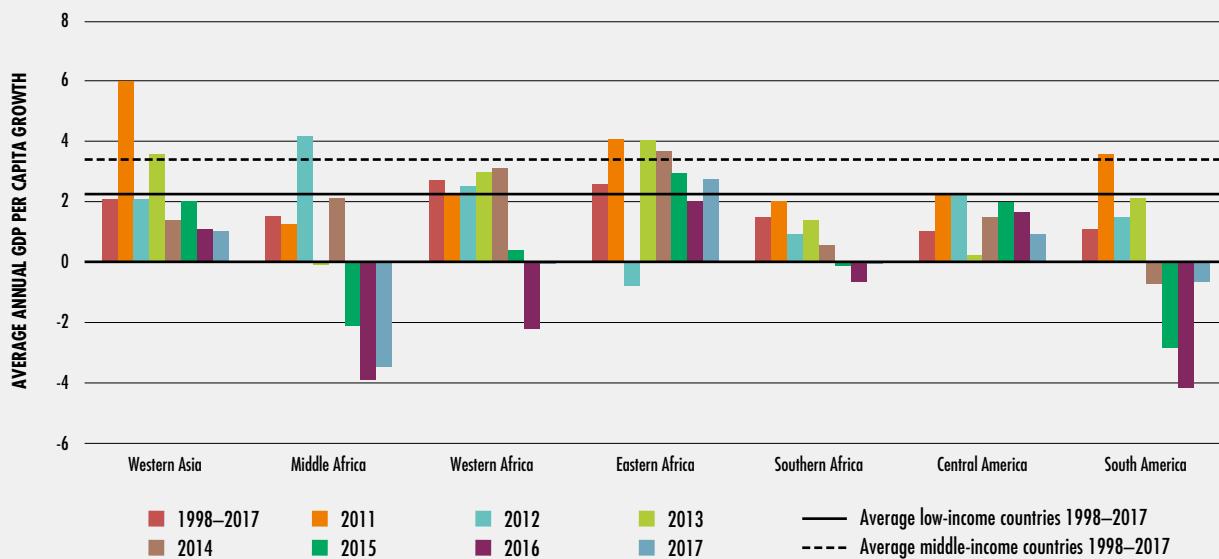
A bleak economic outlook may translate into more poverty and inequality, hindering efforts to eradicate hunger and malnutrition in all its forms. While extreme poverty rates have declined from 54 percent in 1990 to 41 percent in 2015 in sub-Saharan Africa, the number of extreme poor increased by 136 million people during this period, i.e. from 277 to 413 million. Even more worrying, inequality is rising in nearly half of the

countries around the world, including in several low- and middle-income countries.⁹

Trends in economic slowdowns and downturns

The percentage variation of real GDP per capita growth from one period to another, or economic growth rate, is typically used to gauge whether an economy is slowing down or contracting. In most regions, this rate rebounded after the sharp 2008–2009 global economic downturn. But the recovery was uneven and short lived, as many countries experienced generally declining trends in growth since 2011 (Figure 22). Real GDP per capita growth is also being challenged particularly in countries with rapidly growing populations, like those in Africa and South Asia, regions with some of the highest levels of food insecurity and malnutrition in the world (Table 1).

FIGURE 23
CONSECUTIVE YEARS OF ECONOMIC SLOWDOWNS AND DOWNTURNS SINCE 2011
IN MANY SUBREGIONS



NOTES: Annual rate of per capita GDP growth at constant 2010 prices for seven subregions during the period 1998–2017.

SOURCE: UN. 2019. National Accounts – Analysis of Main Aggregates. In: *UNSTATS* [online]. New York, USA. [Cited 6 May 2019] <https://unstats.un.org/unsd/snaama>

Within subregions, the situation is worse. In the last few years, real GDP per capita growth on average declined in seven subregions, five of which experienced negative growth in different years (Figure 23). In 2018, these five subregions combined were home to almost 263 million undernourished people and more than 56 million stunted children under the age of five. Further setbacks are expected to continue in many of these regions, including in Middle, Southern and West Africa; Western Asia; and Latin America and the Caribbean.¹⁰

Economic slowdowns and downturns can be triggered by myriad factors. International factors can negatively affect economic growth for specific countries through trade flows, world prices, foreign direct investment (FDI) and other foreign exchange flows (remittances, foreign borrowing, aid and so forth). National factors, notably monetary, fiscal and trade policies, as well as investment and sectoral policies can also drive economic slowdowns and downturns. But there may also be non-economic factors driving economic deceleration, including political factors, conflict and climate shocks. Some of these factors can be felt across borders. For example, widespread civil insecurity can

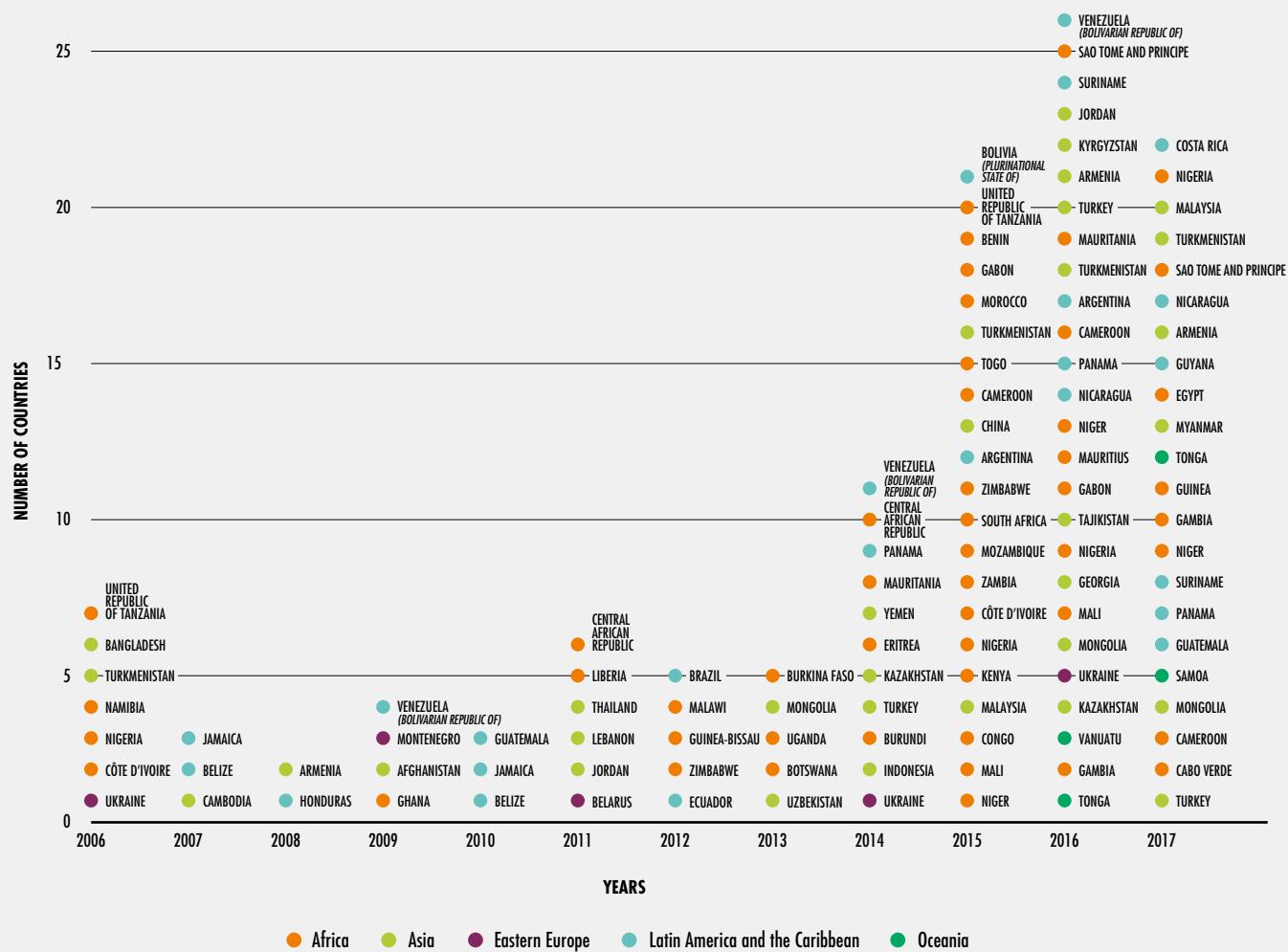
disrupt production and trade flows and lead to migration.

Rises in undernourishment in places where the economy slowed down or contracted

As seen from Part 1, both the prevalence of undernourishment and the number of undernourished people in the world began to increase in 2016. For many countries, especially low- and lower-middle-income countries, as well as countries affected by conflict and adverse climate events, undernourishment was on the rise as early as 2011. It was only in 2016 that the number of countries with rising undernourishment became sufficient for the increase to be reflected in the global aggregate of world hunger.¹¹

Establishing a direct causal relationship between economic growth and undernourishment is complicated, given how the PoU is computed and smoothed over time.¹² On the other hand, examining whether increasing change points in the prevalence of undernourishment is inversely associated with the real GDP per capita growth rate is straightforward.¹³ An increasing change

FIGURE 24
PoU INCREASING CHANGE POINTS ASSOCIATED WITH THE OCCURRENCE OF ECONOMIC SLOWDOWNS AND DOWNTURNS



NOTES: The number of countries with an increasing change point in the prevalence of undernourishment (PoU) which occurs in correspondence with an economic slowdown or downturn by year, between 2006 and 2017, where each year is the middle year for the PoU three-year average; that is, for example, 2017 for 2016–2018. See Annex 3 for the methodology and list of countries with PoU increasing change points related to economic slowdowns or downturns. The analysis includes some countries with imputed PoU, see Annex 3 for methodology and list of countries.

SOURCES: FAO for PoU; for economic slowdowns and downturns, UN. 2019. National Accounts – Analysis of Main Aggregates. In: *UNSTATS* [online]. New York, USA. [Cited 6 May 2019]. <https://unstats.un.org/unsd/snaama>

point refers to the statistically significant increase in the prevalence of undernourishment for two consecutive years (see Annex 3 for the methodology).

During the period 2011–2017, out of the 120 increasing change points in the PoU of 77 countries (out of a sample of 134 low- and middle-income countries), 96 increasing change points in 65 countries corresponded with the occurrence of an economic slowdown or downturn (Figure 24, see Annex 3 for the list of countries). This means that for 84 percent of the

countries, the rise in undernourishment since 2011 coincided with the occurrence of economic slowdowns or downturns. Moreover, many of these countries saw increasing change points in PoU coinciding with an economic slowdown or downturn in more than one year: 17 countries saw them in two years, and seven countries saw them in three out of the seven years. The period 2014–2015 is particularly striking as it corresponds to the years in which many regions and countries had experienced three or more years of economic slowdown, often culminating in economic downturn. Interestingly, the PoU

BOX 10**WHY DID WORLD HUNGER NOT RISE DURING THE GLOBAL FOOD AND FINANCIAL CRISES?**

As seen from Part 1 of this report, the number of people undernourished in the world as a whole declined steadily from 2005 to 2015 (Figure 1). The global food crisis of 2007–2008 and the global financial crisis of 2008–2009 occurred in between. So how was this possible?

These crises were preceded by a period of sustained economic growth in the world (Figure 22), including in different developing regions, which are home to millions of undernourished people and people affected by malnutrition. Subsequently, the global economic downturn in Latin America and the Caribbean, North America and Europe, and slowdown in other regions during 2008–2009 was short lived and the world economy started to grow again in 2010. While this refers to aggregate trends for the world and across regions, it is still interesting to see that only nine countries witnessed the simultaneous occurrence of an economic slowdown or downturn and an increase in the PoU during these crises (Figure 24).

In addition to growth, other factors came into play to prevent an increase in the number of undernourished people during these crises. During the global food crisis, for example, international food prices increased sharply between 2007 and early 2008, reaching their highest level in the summer of 2008.¹ Many countries responded to the food price surge with policies softening the pass-through of international prices on markets and households² – a transmission mechanism explained later in this report. There is evidence that the increase in domestic prices was significantly lower and that domestic prices were also less volatile than world prices.³ Furthermore, FAOSTAT data show that the production of cereals increased in low- and middle-income countries during the global food crisis. This may also have been an important factor mediating the increase in domestic prices and contributing to employment creation and improvements in food security.

An additional explanation would be the coping mechanisms of net food-consuming households. A cross-country analysis of how families coped with the high food price crisis shows relatively large increases in dietary energy consumption among the highest income quintiles in urban areas in Guatemala, Honduras and Nicaragua. This indicates that households were consuming more energy-dense foods

such as street foods or fast foods instead of more nutritious, diversified but costly diets. While these coping mechanisms of households help maintain overall dietary energy reduction, they may affect nutrition with long-term and potentially intergenerational negative effects on health and productivity.⁴

The global financial crisis, on the other hand, originated as a result of a financial “meltdown” in developed countries with serious implications for the real economy, affecting several parts of the world. However, with the exception of transition countries in Central and Eastern Europe, financial institutions in developing countries were not affected by “financial contagion”. Developing countries’ banks did not hold “contaminated” assets (i.e. those including sub-prime mortgages). Therefore, the major channels of transmission were through trade and financial flows between developed and developing countries. The effects were short lived considering the resumption of economic growth in 2010 (Figure 22).

Many developing countries took advantage of the period of sustained economic growth preceding the crisis to implement fiscal and economic reforms. Following the Latin American and Asian crises of the 1990s, several countries had carried out macroeconomic reforms to make their economies more resilient to shocks, including closer bank supervision and reserve accumulation. Many countries were also able to implement policies aimed at reducing or neutralizing antisocial effects of economic cycles, such as policies encouraging spending during downturns – also known as countercyclical policies. Using a sample of 33 low- and middle-income countries, a study shows that the majority of these (20 countries) increased public social expenditure relative to total public expenditure during the global financial crisis.⁵

Although hunger declined steadily during both the global food crisis and financial crisis, not only for the world but also across developing regions (see Table 1 in Part 1 for changes in the PoU between 2005 and 2010), it is likely that the state of food security and nutrition did change in some countries⁶ and some population groups may have experienced increased hunger or malnutrition. The variation may not have been reflected in the numbers at the national level, however, as probably only the

BOX 10 (CONTINUED)

most vulnerable households before the two crises, experienced food insecurity during these crises, as studies for some countries show.⁶ Some national reports also point to increased prevalence of

different forms of malnutrition in certain population groups: in China, for example, the prevalence of stunting among infants⁷ in poorer rural areas increased between 2008 and 2010.⁸

¹ For more details on the factors behind rising food prices during this period, see: C.L. Gilbert. 2010. How to understand high food prices. *Journal of Agricultural Economics*, 61(2): 398–425.

² M. Demeke, G. Pangrazio and M. Maetz. 2011. Country responses to turmoil in global food markets. In A. Prakash, ed. 2011. *Safeguarding food security in volatile global markets*, pp. 183–209. Rome, FAO.

³ D. Dawe, C. Morales-Opazo, J. Balié and G. Pierre. 2015. How much have domestic food prices increased in the new era of higher food prices? *Global Food Security*, 5: 1–10.

⁴ M. Robles and M. Torero. 2009. Understanding the impact of high food prices in Latin America. *Economía*, 10(2): 117–164.

⁵ UN. 2016. *World Economic and Social Survey 2014/15. Learning from national policies supporting MDG implementation*. New York, USA.

⁶ M. Vilar-Compte, S. Sandoval-Olascoaga, A. Bernal-Stuart, S. Shimoga and A. Vargas-Bustamante. 2015. The impact of the 2008 financial crisis on food security and food expenditures in Mexico: a disproportionate effect on the vulnerable. *Public Health Nutrition*, 18(16): 2934–2942.

⁷ Children under 2 years of age.

⁸ C. Chen, W. He, Y. Wang, L. Deng and F. Jia. 2011. Nutritional status of children during and post-global economic crisis in China. *Biomedical and Environmental Sciences*, 24(4): 321–328.

only increased in a handful of countries during two consecutive crises: the global food crisis and the global financial crisis (for explanations of this, see Box 10).

The greatest number of countries where rising undernourishment occurred while the economy slowed down or stagnated are in Africa (32). Several are in Asia (17), followed by Latin America and the Caribbean (11), Oceania (3) and Eastern Europe (2). The majority of them (44 out of 65) are middle-income countries; 19 (out of 65) are low-income countries, of which 17 are located in Africa with the exception of Tajikistan and Yemen.

Notably, 80 percent of the countries (52 out of 65) that experienced an increase in undernourishment while their economy slowed down or contracted depend highly on food and fuel commodity imports and/or oil and other primary commodity exports for foreign exchange and tax revenue generation (see Annex 6 for list of countries by commodity dependence).¹⁴ As noted above, world prices are one of the international factors that can contribute to the deterioration of a country's economic state.

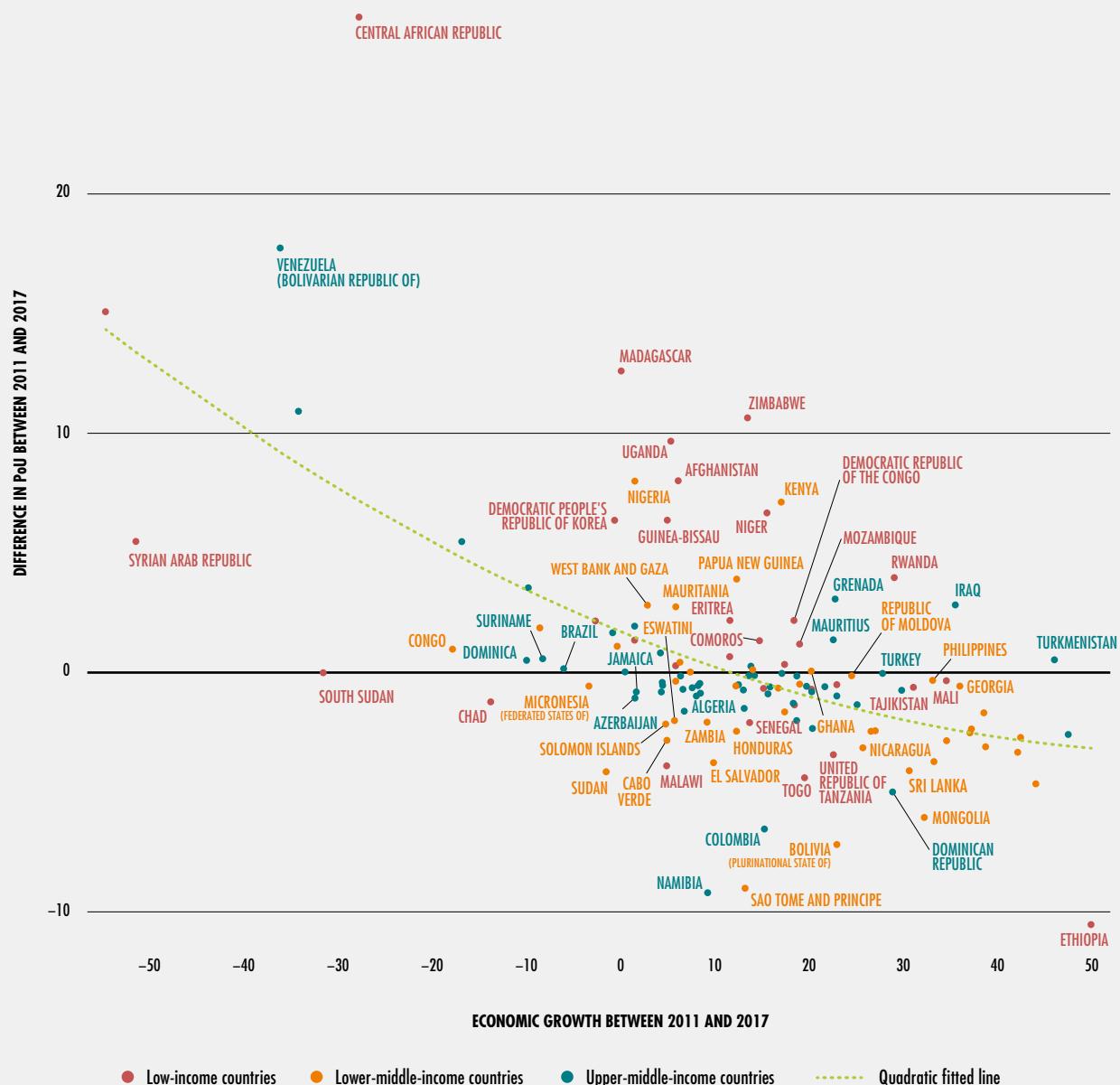
A sharp and persistent reduction of commodity prices affects commodity-dependent countries, triggering a number of economy-wide effects, including reductions in foreign exchange and tax revenue, with potentially adverse impacts on food security and nutrition.

To provide statistical evidence that the relationship between changes in undernourishment and economic slowdowns and downturns is more than a simple corresponding occurrence, a regression analysis comparing the difference in the PoU and the real GDP per capita growth between 2011 and 2017¹⁵ was carried out. It points to a statistically significant correlation between the two (see Annex 4 for model and results). On average, a ten percent decrease in economic growth between 2011 and 2017 corresponds to a 1.5 percentage point increase in the PoU between 2011 and 2017. Furthermore, countries that have experienced economic downturns show significant increases in the PoU between 2011 and 2017, equal to 5.1 percentage points higher than countries with economies that have not contracted.

The correlation, as expected, varies from country to country. On average, low-income countries

FIGURE 25
LOW-INCOME COUNTRIES FACE HIGHER INCREASES IN HUNGER AS A RESULT OF DECREASES IN ECONOMIC GROWTH (BETWEEN 2011 AND 2017)

30



NOTES: Difference in the level of the PoU between the years 2011 and 2017 (y-axis) is plotted against the economic growth (expressed in percentage) between the years 2011 and 2017 (x-axis). Economic growth is computed using GDP per capita at constant 2010 prices, comparing the level of GDP per capita in 2011 and 2017. The three categories of countries are defined based on the level of country income that follows the World Bank classification in 2017. Country names are not reported for countries falling inside the 95 percent confidence interval (close to the fitted line), but a list of these countries is provided in Annex 3. West Bank and Gaza is a territory and follows the World Bank classification. The analysis includes some countries with imputed PoU, see Annex 3 for methodology and list of countries.

SOURCES: FAO for PoU; UN. 2019. National Accounts – Analysis of Main Aggregates. In: *UNSTATS* [online]. New York, USA. [Cited 6 May 2019] <https://unstats.un.org/unsd/snaoma> for GDP per capita growth at constant 2010 prices used to compute economic growth.

had higher increases in the PoU between 2011 and 2017 when compared with middle-income countries (Figure 25 and Table A4.2 in Annex 4).

It is also important to explore the interaction between economic downturns with the two other drivers of the rising trend in hunger: conflict and climate. Economic downturns show the highest correlation with increases in PoU in terms of magnitude of the estimated coefficient, almost double that of vulnerability to climate and conflict. In fact, countries with economic downturns have a 5.1 percentage point higher PoU than countries without, whereas countries with vulnerability to climate and conflict have a 2.3 and 2.2 percentage point higher PoU, respectively (see Table A4.3 in Annex 4).

When PoU increases are estimated within income groups, upper-middle-income countries with economic downturns show the highest PoU increase, i.e. a 6.3 percentage point higher PoU increase between 2011 and 2017 than upper-middle-income countries without economic downturns. On the contrary, low-income countries are those with the highest PoU increase associated with climate vulnerability and conflict. These countries experience a 4.8 percentage point higher PoU increase in the presence of climate vulnerability compared to low-income countries without and, when affected by conflict, they report a 5.5 percentage point higher PoU (see Tables A4.4a and b in Annex 4). First, this is in line with studies suggesting that conflicts are more likely to erupt in low-income economies, leading to the most dangerous increases in hunger.¹⁶ Second, low-income countries are the only countries that experience a significant PoU increase associated with vulnerability to climate (see Tables A4.4a and b in Annex 4). Quite importantly, this result deriving from a macro-level analysis, confirms extensive findings from the microeconomic literature – that climate extremes have a disproportionately negative effect on the poorest populations living in remote areas in terms of consumption and food security.¹⁷ Although a correlation analysis describes the association between the three drivers and the change in PoU, it is difficult to disentangle the contribution of each of the three drivers, given that conflict and climate shocks can also affect economic growth, and therefore indirectly affect undernourishment.

Economic slowdowns and downturns worsen global food crises

Countries experiencing crisis levels of acute food insecurity also typically experience economic disarray. In the last three years (2016–2018), more than 100 million people every year have faced periods of acute food insecurity.¹⁸ In 2018, 113 million people across 53 countries and territories faced *crisis* levels of acute food insecurity or worse (IPC Phase 3 and above or equivalent)¹⁹ where urgent humanitarian actions were needed to save lives and livelihoods, as well as to address high or above-average acute malnutrition.

Analysis of acute food insecurity, including the drivers behind the food crisis, carried out at the country level, sheds light on how economic slowdowns and downturns worsen food crises.²⁰ It shows that, in 2018, conflict remained the key driver of food crises, affecting around 74 million people, two-thirds of whom faced acute food insecurity. Climate and natural disasters were the primary driver of acute food insecurity for another 29 million people. Economic shocks were the primary driver of acute food insecurity for 10.2 million people.

While economic shocks are rarely the primary drivers of food crises, they are significant secondary or tertiary drivers of them. In many instances, significant economic shocks – or even not-so-significant shocks that occur in fragile economies – can undermine economic activity, worsen the severity of acute food insecurity, and prolong the duration of the crisis. In fact, more than 96 million people in 33 countries who suffered from acute food insecurity in 2018 lived in places where the economy was undergoing economic shocks of rising unemployment, lack of regular work, currency depreciation and high food prices (Table 8 and Annex 5 for the list of countries by economic shock).²¹ The economy of most of these countries (27 out of 33) was contracting, according to their real GDP per capita growth for 2015–2017.

In food crisis contexts, the interaction between conflict and economic slowdowns and downturns is particularly important. Not only is conflict the main driver behind food crises,

TABLE 8
ECONOMIC SHOCKS WERE SIGNIFICANT SECONDARY AND TERTIARY DRIVERS OF FOOD CRISES IN 2018

Economic shocks	DRIVERS OF FOOD CRISES					NUMBER (millions) people in IPC/CH Phase 3 and 4	
	Economic slowdown or downturn	Conflict	Climate	Conflict and climate	IPC/CH Phase 3 (Crisis)	IPC/CH Phase 4 (Emergency)	
	Slowdown	Central African Republic, Jordan,* Lebanon*	Madagascar, El Salvador, Guatemala, Honduras	Cameroon, Djibouti, Kenya, Myanmar	8.3	1.2	
	Downturn		Mozambique	Nigeria, Uganda	7.6	0.6	
	Slowdown	Ukraine*	Eswatini,* Pakistan*	Niger, Syrian Arab Republic*	10.5	0.1	
	Downturn		Malawi	Chad, Afghanistan	11.6	3.3	
	Slowdown	Palestine	Zambia	Sudan	8.2	0.9	
	Downturn	Iraq, Turkey	Zimbabwe	Burundi, Democratic Republic of the Congo, South Sudan, Yemen, Haiti	33.2	10.5	
						79.4	16.6
						96.0	
		High food price		Currency depreciation and worse terms of trade		Unemployment, loss of income	

NOTES: Countries affected by food crises in 2018 where economic shocks are a driver of acute food insecurity as identified by the *Global Report on Food Crises 2019* (GRFC). Information on economic shocks as drivers of food crises was not available in the GRFC 2019 for Jordan, Lebanon, Myanmar and Turkey. For these countries the information is obtained from the FAO Global Information and Early Warning System (GIEWS) Country briefs referring to the year 2018. When the main driver of a food crisis is conflict, countries are highlighted in red; when the main driver is climate shocks, countries are highlighted in blue; when the main driver is economic shocks, countries are highlighted in green. Countries denoted by the asterisk (*) do not experience economic slowdowns or downturns. Economic slowdowns and downturns are identified when they either occur in years 2015–2016 or 2016–2017 and are computed using the annual rate of per capita growth at constant prices. See Annex 5 for the list of food crisis countries with a full description of economic shocks.

SOURCES: FAO elaboration based on FSIN. 2019. *Global Report on Food Crises 2019* [online]. [Cited 24 April 2019]. http://www.fsinplatform.org/sites/default/files/resources/files/GRFC_2019-Full_Report.pdf and for economic slowdowns and downturns, UN. 2019. *National Accounts – Analysis of Main Aggregates*. In: *UNSTATS* [online]. New York, USA. [Cited 6 May 2019]. <https://unstats.un.org/unsd/snaama> and for additional information on economic shocks, FAO. 2019. GIEWS - Global Information and Early Warning System. In: *FAO* [online]. Rome. [Cited 19 June 2019]. <http://www.fao.org/giews/en/>

but it also often triggers economic slowdowns, downturns and deep economic recessions that compound the severity and duration of the food crisis.²² In 2018, conflict and civil insecurity were the major driver of food crises in 21 countries – 14 of them experienced deep economic recessions with an average negative

difference of 2.4 percentage points in economic growth between years 2014 and 2017.²³

Economic slowdowns and downturns often lead to increased levels of unemployment and limited income opportunities, which erode household purchasing power, exacerbating food insecurity

and malnutrition.²⁴ The loss of income and unemployment in turn feature as key contributing factors in several of the food crises, especially in countries facing economic downturns (Table 8).

As the next section shows, persistent slowdowns and sharp downturns in the economy can drain foreign currency reserves, potentially triggering national currency depreciations with a number of knock-on effects detrimental to food security and nutrition, including food price inflation. This is especially the case for countries dependent on food imports. Seventy-five percent of the countries with food crises that also suffered from economic shocks are net food importers (25 out of 33) with the value of food imports outweighing the country's value of food exports.

Economic slowdowns and downturns can constrain national financial capacities to provide essential services, protect the poor and respond effectively to crises. Furthermore, political instability limits the capacity of governments to support their populations during food crises, and therefore economic downturns, especially if they are severe, can further compound the impacts of this instability on food crises.

Economic slowdowns and downturns can also lower the resilience capacity of households to respond to other shocks – including climate shocks. For example, the climatic impact of El Niño in Southern Africa in 2016 led to more than 12 million food-insecure people in need of urgent humanitarian action in six countries. The impact of this phenomenon was intensified by already ongoing economic slowdowns and downturns in several countries, which weakened households' capacity to respond effectively to the climate shock and contributed to lowering the resilience of households already debilitated by a poor agricultural season in 2015. This was the case for Eswatini (formerly Swaziland), Mozambique and Zimbabwe. While households may be able to cope with and recover from transitory shocks, multiple and recurring shocks are increasingly the norm, adding to the vulnerability of the poor. Aggregate and recurring shocks tend to result in poverty traps or slips back into poverty, generating harmful effects on present food security and nutrition, and on future generations.²⁵

2.2 COMMODITY DEPENDENCE AND ITS RELEVANCE FOR FOOD SECURITY AND NUTRITION

KEY MESSAGES

- Eighty percent of the countries (52 out of 65) with a rise in hunger during recent economic slowdowns and downturns are countries whose economies are highly dependent on primary commodities for export and/or import.
- In 2018, 807 million undernourished people and 154 million stunted children under the age of five lived in low- and middle-income countries: of these, respectively, around 381 million and 73 million lived in high commodity-dependent countries. The latter also were home to almost 109 million out of the 113 million people facing crisis levels of acute food insecurity requiring urgent humanitarian actions.
- Changes in commodity prices affect the relative value of exports and imports in these countries. Foreign exchange drains, depreciation and devaluation of currencies may pass through the economic system, resulting in rising domestic prices, unemployment, loss of wages, and consequently loss of incomes.
- These events pose macroeconomic aggregate shocks affecting multiple households, rather than idiosyncratic shocks that only affect a single household. Many vulnerable households see their purchasing power reduced, while coping strategies they use during idiosyncratic once-off shocks are not effective.
- The need to change consumption patterns can lead vulnerable households to cut spending on a range of basic services for health and disease prevention or shift away from nutrient-rich foods towards more energy-dense but nutrient-poor foods. Households may also see the supply of basic services compromised if the fiscal space to provide essential social public expenditure becomes more limited.

Commodity price trends and booms

International, regional and national factors can harm economic activity in ways that challenge food security and nutrition. Understanding the mechanisms through which economic slowdowns and downturns contribute to the recent, unwelcoming trends in food security and nutrition can be approached from different angles as it is ultimately country-specific. However, there is a steady trend affecting many of the countries where hunger is lately on the rise.

Low- and middle-income countries are, by and large, well integrated with the world economy, though to different degrees and in different ways. They trade goods and services with other countries, invest in them or receive investors from them, and exchange different types of flows, including financial capital, foreign aid, foreign borrowing, remittances and others. This integration, of course, exposes them to external vulnerabilities depending on the structural features of their economies.

In this regard, a key vulnerability arises relating to what these countries produce and what they trade with the rest of the world: essentially, primary commodities. The trend in rising commodity prices that started in 2003 and the period of extreme price volatility in 2008 have been followed by largely declining global commodity prices for five consecutive years from 2011 to 2016 ([Figure 26](#)). As a result, commodity prices fell by more than nine percent in this period. As indicated earlier, global commodity demand is also in decline and the outlook is that its growth could slow over the next decade, especially for agriculture and metals.

Although global commodity price levels are still higher than during the pre-commodity price boom in 2007–2008, most countries that are highly dependent on exporting commodities to generate revenues have not been able to use their commodity windfalls during commodity price booms to diversify their economies and reduce their vulnerability to price shocks. Today many are as commodity dependent as before, if not more so, with few exceptions such as Argentina, China and Mexico.²⁶ There are many reasons

for this. Diversification and upgrading of the productive structures and capabilities from which wealth is created and distributed are not easy tasks and take years to achieve.²⁷ Effective policies, effective collaboration between public and private sectors, and high levels of investment are also needed.

Furthermore, benefits during boom periods are by far outweighed by the negative impacts caused by price volatility and low-price periods, which tend to be longer than boom periods.²⁸ Moreover, the negative impacts on net food importers during periods of high food prices can be extremely severe, as witnessed during the food price crises of 2007–2008 and 2010–2012.

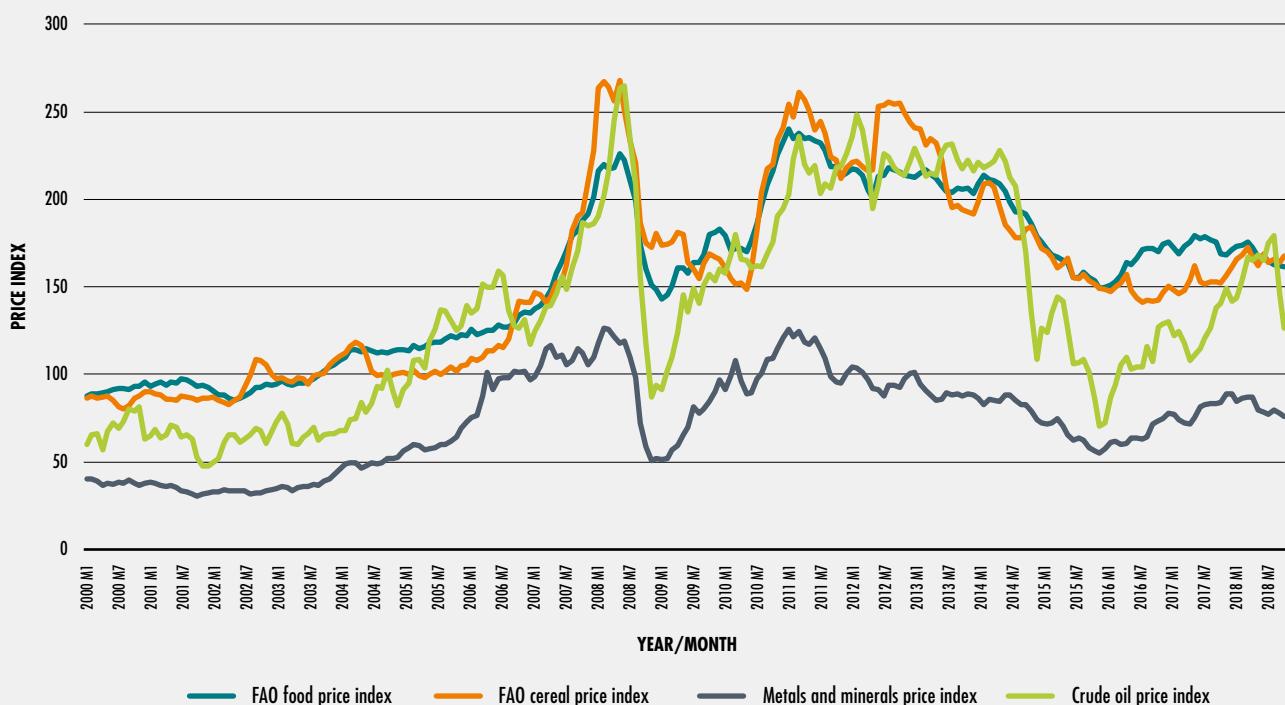
Why does commodity dependence matter?

Commodity dependence matters because it increases the vulnerability of countries to world price swings. The vulnerability to changing commodity prices arises as countries produce and trade commodities and, in most cases, low- and middle-income countries are world price-takers that cannot affect them. They may not be in a position to influence these prices alone. They may also not be in a position to undergo the structural transformation to move them away from commodity dependence.

The association between economic performance and commodity prices in commodity-dependent countries is strong and therefore makes them especially vulnerable to the volatility of global commodity prices.²⁹ Recent slowdowns and downturns in economic growth in many regions are largely explained by marked declines in commodity prices. This is mainly affecting countries dependent on primary commodity exports, particularly in South America, but also other regions including Asia and some countries in Africa.³⁰

Countries from these regions are commodity-export-dependent as they derive the bulk of their export earnings from primary commodities. This report not only focuses on this type of countries, but also on countries showing commodity-import dependence and net food-import dependence (see [Box 11](#) for

**FIGURE 26
COMMODITY PRICES (THOUGH HIGH) FELL YEAR ON YEAR FROM 2011 TO 2016**



NOTES: The plot shows the trend of FAO monthly food and cereal price indices (composite measures of food prices) expressed as a percentage of 2002–2004 averages, the crude oil price index expressed as a percentage of 2016 (the average of three spot prices: Dated Brent, West Texas Intermediate, and the Dubai Fateh), and the metals and minerals price index expressed as a percentage of 2010. Monthly food prices are plotted for years 2000–2018.

SOURCES: FAO. 2019. FAO Food Price Index. In: FAO – *World Food Situation* [online]. Rome. [Cited 5 May 2019]. <http://www.fao.org/worldfoodsituation/foodpricesindex> for food and cereal food price indices; IMF. 2019. IMF Primary Commodity Prices. In: IMF [online]. Washington, DC. [Cited 6 May 2019]. <https://www.imf.org/en/Research/commodity-prices> for the crude oil index; World Bank. 2019. Commodity Markets. In: *World Bank* [online]. Washington, DC. [Cited 6 May 2019] <http://www.worldbank.org/en/research/commodity-markets> for metals and minerals index

definitions). Commodity-import-dependent countries have a high ratio of food and fuel imports to total merchandise trade, while commodity-export-dependent countries derive the bulk of their export earnings from primary commodities. Net food importers are countries where the value of imports of basic foodstuffs outweighs the value of food exports. Out of a total of 134 low- and middle-income countries studied for the period 1995–2017, 102 countries are classified according to the three types of high

commodity dependence, whereas the remaining 32 are low commodity dependent.

High commodity-dependent countries exhibit combinations of commodity-import and -export dependence, which entail different vulnerabilities to commodity prices and links with food security and nutrition. For example, out of 134 low- and middle-income countries in the period 1995–2017, 34 are high commodity-export-dependent but low commodity-import-dependent, 25 are

BOX 11

WHAT IS COMMODITY DEPENDENCE AND HOW IS IT MEASURED?

Commodity-export-dependent countries or territories derive the bulk of their export earnings from primary commodities, such as minerals, ores, metals, fuels, agriculture raw materials and food. This report defines **high commodity-export-dependent** countries as those who generate more than 60 percent of their merchandise export revenues from food, agriculture and raw materials; minerals, ores, and metals; and/or energy commodities. Following UNCTAD and FAO,¹ this threshold corresponds to the minimum threshold denoting the most negative association between commodity-export dependence and human development.

Commodity-import-dependent countries or territories have a high ratio of commodity imports to

total import merchandise traded. This includes essential goods, such as food items and fuel. The report defines **high commodity-import-dependent** countries as those where the share of the value of food and fuel imports is more than 30 percent of the total merchandise. This threshold is the average for developing countries in 1995–2014 and the one applied in the UNCTAD and FAO¹ analysis.

Net food importers are countries or territories where the value of imports of basic foodstuffs outweighs the value of exports of basic foodstuffs. This report defines **high net food importers** as those countries having a negative average food trade balance in the years from 2013 to 2015, following the UNCTAD and FAO definition.²

¹ UNCTAD and FAO. 2017. *Commodities and Development Report 2017. Commodity markets, economic growth and development*. New York, USA, UNCTAD.

² See Annex 6 for the methodology and list of countries by different categories.

high commodity-import-dependent but low commodity-export-dependent, and 43 are both high commodity-export- and commodity-import-dependent (Figure 27).

Out of the 134 low- and middle-income countries, 97 are net food importers. Of these, 80 also show some degree of commodity dependence: 23 high commodity-export dependence, 20 high commodity-import dependence, and 37 have both types of dependence (Figure 27, see Annex 6 for the list of countries by type of commodity dependency and income level).

International commodity price shocks and volatility can potentially create harmful impacts for food security and nutrition in all combinations of high commodity dependence. For example, as highlighted above, most of the countries (52 out of 65) that experienced rising undernourishment in correspondence with economic deceleration during 2011–2017 are highly dependent on primary commodity exports and/or imports, of which many (42 out of 65) rely heavily on oil and other primary commodity export revenues. For several of the countries affected by food crises considered above, most of

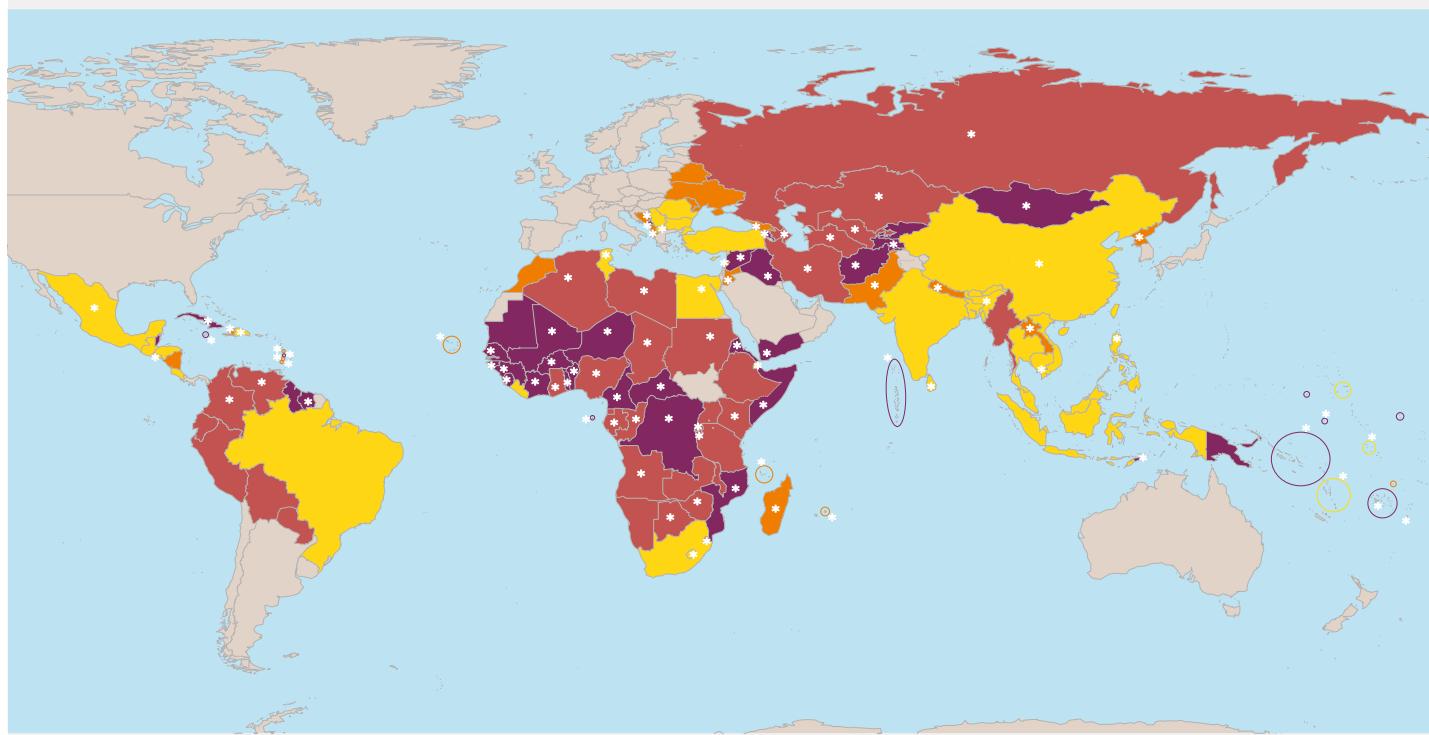
which are net food-import dependent (25 out of 33), inflationary pressure stemming from the depreciation of national currencies against the US dollar was a key factor that contributed to an escalation in food prices. In 2018 most (27 out of 33 or 81 percent) of the food crisis countries where economic shocks worsened the severity of acute food insecurity were high primary commodity-dependent countries.

In 2018, 807 million undernourished people and 154 million stunted children under the age of five lived in low- and middle-income countries: of these, respectively, around 381 million and 73 million lived in high commodity-dependent countries. For countries facing food crises, the 2018 situation was even worse: almost 109 million out of the 113 million people facing crisis levels of acute food insecurity requiring urgent humanitarian actions³¹ also lived in low- and middle-income, high commodity-dependent countries.

A close examination of real GDP per capita growth in low- and middle-income countries during the recent period of commodity price declines between 2011 and 2017 exposes a staggering difference in economic growth

FIGURE 27

MANY LOW- AND MIDDLE-INCOME COUNTRIES ARE HIGH COMMODITY-DEPENDENT COUNTRIES



- Low commodity-dependent (low import and low export) countries
- High commodity-import- and low commodity-export-dependent countries
- Net food importers
- High commodity-export- and low commodity-import-dependent countries
- High commodity-dependent (high import and high export) countries

NOTES: The map shows low- and middle-income countries by the four categories of export (CXD) and import (CMD) commodity dependence: i) low commodity-import- and low commodity-export-dependent; ii) low commodity-export- and high commodity-import-dependent; iii) high commodity-export- and low commodity-import-dependent; iv) high commodity-export- and high commodity-import-dependent. High commodity-export (-import) dependence is identified when CXD > 0.6 (CMD > 0.3). Net food importers are those countries with a negative average food trade balance during the years 2013–2015. For further information see Annex 6. Areas with insufficient data coverage are denoted in grey.

The final boundary between the Republic of the Sudan and the Republic of South Sudan has not yet been determined. Final status of the Abyei area has not yet been determined.

SOURCES: Typology of commodity dependence is an FAO elaboration based on UNCTAD. 2019. UNCTADStat. In: UNCTAD [online]. New York, USA. [Cited 13 May 2019]

<https://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx>; UNCTAD. 2019. *Economic groups and composition* [online]. New York, USA. [Cited 29 May 2019].

https://unctadstat.unctad.org/EN/Classifications/DimCountries_EconomicsGroupings_Hierarchy.pdf

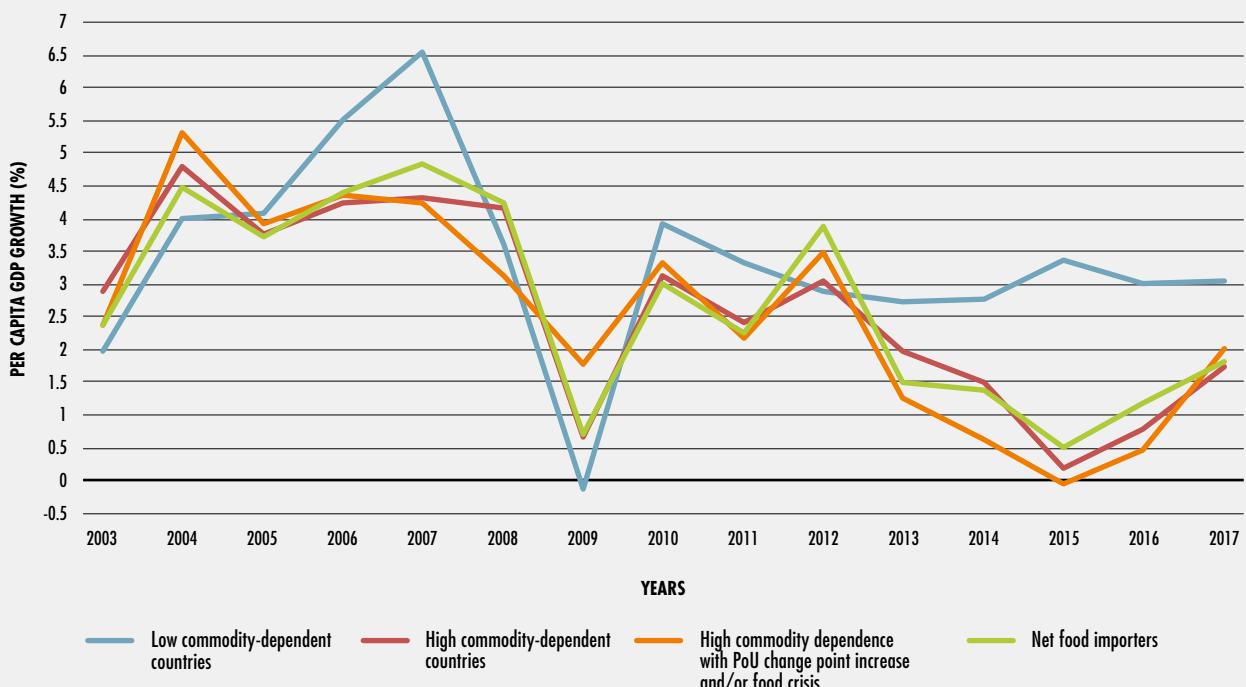
between countries with high commodity dependence and those without this characteristic during this period. Average real GDP per capita growth for high commodity-dependent countries declined sharply and steadily between 2012 and 2015, followed by some improvement in economic growth but still significantly lower than that of low commodity-dependent countries (Figure 28). Moreover, many of the high commodity-dependent countries (67 out of 102) also witnessed a rise in hunger or a worsening

food crisis situation during the same period. For these countries, economic slowdowns were sharper and economic downturns were deeper and longer lasting.

Many of the high commodity-dependent countries experienced deep economic recessions with negative economic growth (downturns) occurring over several consecutive years between 2011 and 2017. Twenty-three high commodity-dependent countries underwent

FIGURE 28

BETWEEN 2003 AND 2017, HIGH COMMODITY-DEPENDENT COUNTRIES FACED STEEPER DECLINES IN ECONOMIC GROWTH COMPARED TO LOW COMMODITY-DEPENDENT COUNTRIES – FOR THOSE WITH RISING HUNGER THE SITUATION WAS EVEN WORSE



NOTES: Trends in real GDP per capita (2003–2017) plotted for high commodity-dependent countries denoted by the red line (either high commodity-export dependence, high commodity-import dependence, or both high commodity-export/commodity-import dependence); high commodity-dependent countries that also experience PoU change point increase and/or food crisis (orange line); net food importers (green line); low commodity-dependent countries (blue line). The trend of per capita GDP growth is shown for the four categories as an unweighted average.

SOURCES: FAO for PoU; FSIIN. 2019. *Global Report on Food Crises 2019* [online]. [Cited 24 April 2019]. http://www.fsinplatform.org/sites/default/files/resources/files/GRFC_2019-Full_Report.pdf for countries affected by food crises; and UN. 2019. National Accounts – Analysis of Main Aggregates. In: UNSTATS [online]. New York, USA. [Cited 6 May 2019] <https://unstats.un.org/unsd/snaama> for real GDP per capita growth.

two or more consecutive years of negative growth and most of these (15 countries) also saw rises in undernourishment in this period or a worsening food crisis situation in 2018 (see Table A6.3 in Annex 6 for the list of countries and the number of consecutive years of downturns).

Among high commodity-dependent countries, especially high commodity-export-dependent countries, increases in undernourishment associated with economic slowdowns or downturns depend on the main sector of country exports. Countries dependent on exports of fuel, minerals and metals have been the most exposed to downturns – even if these commodities come from very different sectors. Specifically,

35 percent (14 out of 40) of the countries with downturns in 2016–2017 were dependent on said exports.

A recent FAO study sampling 129 low- and middle-income countries during 1995–2017 finds that high levels of export and import dependence on primary commodities have a statistically significant and negative effect on food security (Table 9).³² In the period considered, an average increase of primary commodity-export dependence by 1 percent leads to a 2.2 percent increase in the PoU per year on average. For commodity-import dependence, the correlation is stronger, as it causes an average increase in undernourishment of 3.8 percent per year. This average effect is

TABLE 9**HIGH LEVELS OF COMMODITY-EXPORT AND -IMPORT DEPENDENCE NEGATIVELY AFFECT FOOD SECURITY**

Effect of commodity dependence on undernourishment (PoU)	Elasticities
Commodity-export dependence	2.2%***
Commodity-import dependence (food plus fuel dependence)	3.8%**
Food-import dependence	8%**
Fuel-import dependence	1.4%
Years of the commodity boom (2003–2011)	-0.01%**

NOTES: Elasticities show the response of the PoU to a one unit increase in each of the commodity dependence variables reported (the values of commodity-export and commodity-import dependence range from 0 to 1). Elasticities should be interpreted as an average percentage increase (where positive) or decrease (where negative) in PoU per year. Commodity-export and -import dependence are defined in Box 11. Food-import and fuel-import dependence refer to the two components of commodity-import dependence and are also considered separately. See Annex 5 for further details on the computation of these variables. The period of commodity price boom refers to years 2003–2011 (excluding years 2008–2009 of declining price trends). Statistical significance is reported for p-value < 0.01 (***), p-value < 0.05 (**). The estimated coefficient for fuel-import dependence is not statistically significant.

SOURCE: C. Holleman and V. Conti. forthcoming. *Commodity dependence and food insecurity*. FAO Agricultural Development Economics Working Papers 19-05. Rome, FAO.

shown to be even stronger for low-income countries, compared with middle-income countries, since they experience a higher level of the PoU in the presence of commodity dependence.

The same FAO study also finds that, when commodity-import dependence is unpacked, food-import dependence has a bigger and stronger effect on the PoU than fuel-import dependence. Food-import dependence is associated with an 8 percent increase in PoU per year on average, whereas fuel-import dependence does not report a statistically significant coefficient.

The two successive and sharp commodity price booms in 2007–2008 and 2010–2011 offered an economic bonanza to most commodity-export-dependent countries (Figure 26 and 28). Many registered a large increase in export revenues and generally saw increased economic growth. For net food importers and high commodity-import-dependent countries, however, such price booms can create additional challenges for food security and nutrition. This can particularly be the case for net buyers of food through imported food price inflation. On the other hand, high food prices, especially cereal prices, can be a strong incentive for increased agricultural production, whereby the positive effects of this outweigh the negative effects of high food prices (e.g. for net buyers of food) with overall positive net effects on food security and nutrition. This was the case in many

countries during the 2007–2008 global food crisis (Box 10).

New FAO evidence suggests that economic growth, even if strong during price booms for high commodity-export-dependent countries, does not necessarily translate into improved food security and nutrition.³³ This study finds that, during the period 1995–2017, both food-import dependence and export dependence on primary commodities have a negative effect on PoU, even when controlling for the price booms between 2003 and 2011 (excluding the sharp commodity price drop in 2008–2009, see Figure 26). The years of the commodity price booms seem to have a positive effect on hunger, although the effect is very small (Table 9). Economic growth in many of these cases is not fairly distributed and does not trickle down sufficiently, and in some cases not at all to the poorest and most food-insecure and malnourished populations – as further explained next in the report.

This is consistent with a recent comprehensive study of 202 countries over the period between 1995 and 2014, which finds that high levels of commodity dependence are statistically significant and negatively affect social (education and health) and human development in general and results are statistically significant. This effect was found to pass through several channels, including the negative secular terms of trade affecting commodity-dependent

developing countries, slow economic growth, high macroeconomic instability and political instability.³⁴ This finding is further supported by another study that finds “non-monetary” indicators of development (e.g. health and education) are negatively correlated with commodity dependence through macroeconomic volatility and distributional inequalities.³⁵

Commodity dependence and food security and nutrition: transmission channels

Designing policies to help offset the vulnerability that arises with high commodity dependence requires a thorough understanding of the potential effects. These effects are mediated through a number of direct and indirect channels that link global commodity markets with domestic economic, social and human development outcomes, including food security and nutrition. The transmission channels in such contexts are complex, and a given commodity price change does not affect all commodity-dependent countries in a uniform manner. Figure 29 presents a simplified overview of these transmission channels.

The transmission channels can be grouped into four broad areas, which are the main subject of analysis in this section. They are:

- ▶ **Direct impacts** emanating as the change in commodity prices affects terms of trade, exchange rate adjustments and the balance of payments.
- ▶ **Secondary indirect effects of these macroeconomic impacts on:**
 - ▶ domestic prices, including food;
 - ▶ unemployment, declining wages and loss of income; and
 - ▶ health and social services.

Ultimately, an important critical factor that determines whether the direct and indirect impacts affect food security and nutrition is the ability of individuals and households to cope with these economic-related shocks. The last part of this section takes a closer look at how people cope and when their coping capacities fail.

Terms of trade, exchange rate and balance of payments

Macroeconomic performance in commodity-dependent countries tends to move with commodity price cycles. Economic activity and growth and external and fiscal balances deteriorate/improve during commodity price downswings/upswings, whether the latter entail long periods of falling/rising commodity prices or shorter commodity price swings that last only few years.³⁶

From the perspective of low-income countries, especially those where the principal means of foreign exchange earnings come from the exports of primary commodities, unstable commodity prices create macroeconomic instabilities and complicate macroeconomic management (Figure 29).

Terms of trade shocks and volatility

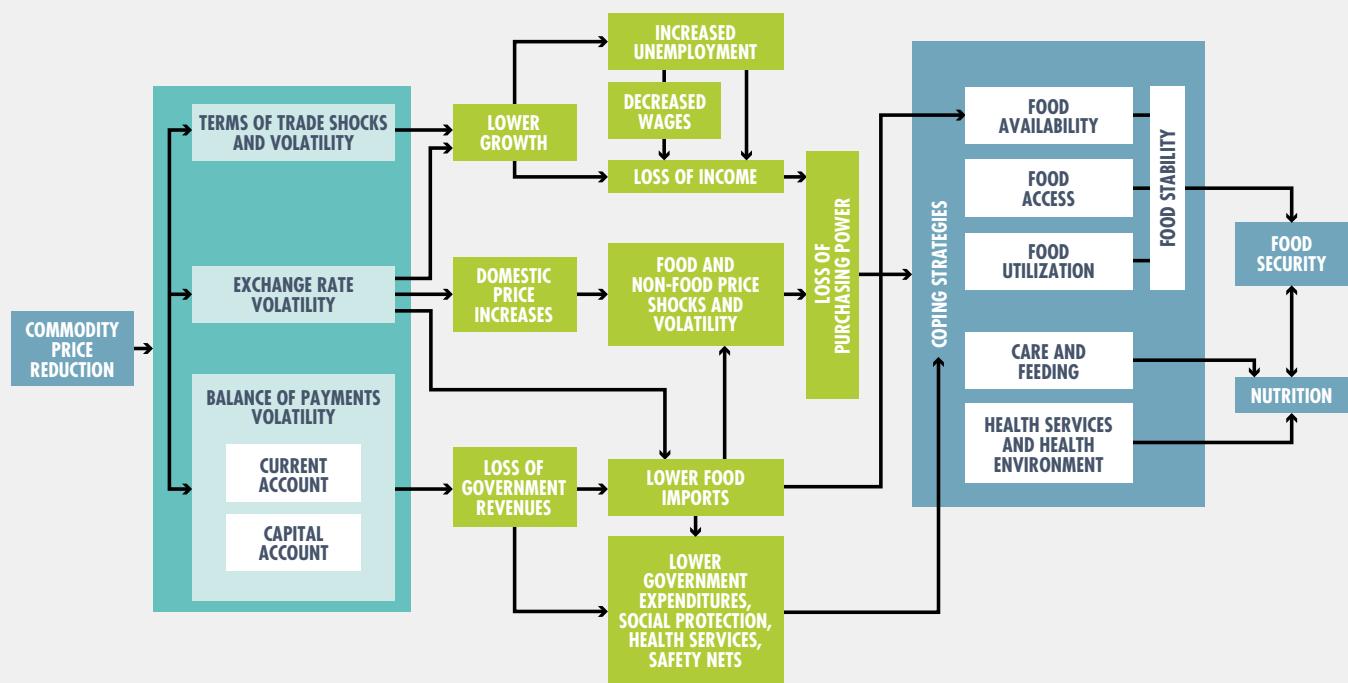
Sharp declines or increases in international primary commodity prices can lead to changes in the terms of trade (ToT) for commodity-dependent countries. That is to say, the ratio between the prices at which a country sells its exports and the prices it pays for its imports is affected. A reduction in this ratio reflects a deterioration in the ToT which can have implications on economic growth, with further economy-wide implications as both supply and demand factors respond to the shock.

In fact, ToT shocks have been shown to carry the highest economic output costs among a range of external shocks for a large number of developing countries.³⁷ Low-income countries are especially vulnerable. The IMF has found that low-income countries are almost six times more often affected by severe ToT fluctuations and changes than developed countries.³⁸

World economic reports confirm that sharp and continuous declines in international commodity prices from 2011 to 2016 led to substantial shifts in the ToT and a sharp deterioration of GDP growth in commodity-dependent countries.³⁹ Of course, the extent to which a variation in the export or import price of a commodity affects the ToT will depend on the relative share of the commodity in the country’s total exports and imports, as well as on the magnitude of the price shock. Similar variations in export and import prices may also offset one another.

FIGURE 29

POTENTIAL NEGATIVE IMPACTS OF INTERNATIONAL COMMODITY PRICE REDUCTIONS ON FOOD SECURITY AND NUTRITION IN COMMODITY-DEPENDENT ECONOMIES: TRANSMISSION CHANNELS



SOURCE: Based on diagram from UNCTAD and FAO. 2017. *Commodities and Development Report 2017. Commodity markets, economic growth and development*. New York, USA, UNCTAD, but modified for this report to focus on the specific transmission channels that affect food security and nutrition.

Most fuel and mineral exporters (e.g. Congo, Gabon, Nigeria, Zambia) witnessed a deterioration of their ToT as a result of the price declines between April 2011 and August 2015.⁴⁰ This, combined with the depreciation in their exchange rates and a loss of commodity revenue, led to deteriorations in the fiscal stance and stung GDP growth.

Studies also show that commodity price volatility can result in less economic growth, even over longer periods of time, especially in resource-rich, commodity-export-dependent countries.⁴¹ This is because the ToT of economies dependent on primary commodities tend to deteriorate in the long run due to

secular decline in primary commodities relative to prices of manufactured goods. Therefore, reliance on commodity exports that lose value over time is not such a viable strategy for boosting economic growth⁴² – let alone for eliminating external vulnerability through diversification.

Shocks transmitted from ToT through the economy are also challenging to government budgets. In many low-income commodity-dependent countries, especially commodity-export-dependent countries, sharp declines and persisting low prices in the main export commodities can drain not only export revenues but also fiscal revenues.

Recent declines in commodity prices since 2011 led to a deterioration in public finances for many commodity-export-dependent countries (oil and non-oil exporters) in Asia, Africa, North Africa and the Middle East, and in Latin America and the Caribbean. For example, public revenues of African commodity-dependent countries shrank from an average of 26 percent of GDP during 2004–2007 to 21 percent of GDP in 2011–2014. This partially explains why these countries' average primary budget balances went from a surplus of 3.6 percent of GDP to a deficit of 1.8 percent of GDP between the two periods. In response, many commodity-dependent countries increased their borrowing in order to shore up their finances.⁴³

Such deteriorations in the fiscal stance may threaten the continuity of social programmes, safety nets, and other components of economic and social development plans. Food access can be negatively affected owing to governments' more limited fiscal space to protect poor households against rising domestic prices. Generally, lower foreign exchange could also affect food availability through reduced food-import capacity. Contingency mechanisms and funds are critical to prevent these vulnerabilities from potentially harming food security, as further explained in Section 2.4.

Commodity-dependent countries that face such reductions in fiscal revenues in the wake of low or declining commodity prices may need to increase borrowing to cover shortfalls, thus leading to increasing public debt, which in turn can further compromise long-term growth and development, and lead to higher debt-repayment schedules. For instance, many South American commodity exporters have seen sharp increases in fiscal deficits that resulted in higher public debt-to-GDP ratios.⁴⁴

Exchange rate adjustment and balance of payments

Commodity prices affect the amount of foreign exchange in commodity-dependent countries, as they alter the value of exports and imports in foreign currency. The balance of payments records these economic transactions.

A change in the foreign exchange available to an economy will be reflected in the price of foreign goods relative to the price of domestic goods, or real exchange rate. A net inflow/net outflow of foreign exchange will thus result in an appreciation/depreciation of the real exchange rate – other things being equal. By this definition, both the ToT and the real exchange rate may be affected simultaneously.

When countries' reserves of foreign exchange are insufficient to prevent unfavourable exchange rate adjustments, they may adjust the number of units of their currency that are needed to purchase a unit of a given foreign currency or nominal exchange rate, so as to restore the balance of payments. Lower commodity prices, for example, may lead to a decrease of foreign exchange in the markets of the commodity-exporting countries as their export revenues fall, thus causing a real exchange rate depreciation. Countries that possess a domestic currency may devalue it to restore the income of their exporters in local currency. Depreciation and devaluation of currencies may pass through the system resulting in domestic price increases.

In Colombia and Chile, for example, falling international prices for the countries' export commodities – respectively crude oil and copper – led to reduced export earnings and declining reserves in United States dollars (USD), triggering a devaluation of the local currency against USD ([Figure 30](#)). Conditional on international price developments for agricultural commodities, this can imply more expensive food imports, reduced domestic food availability, and rising food prices.

For many commodity-dependent countries that experienced an increase in undernourishment or worsening food crises, the decline in commodity prices from 2011 to 2016 is associated with significant depreciations. This was especially the case for many commodity-dependent countries in Africa. For example, in 2015 many currencies including the Zambian kwacha, the Angolan kwanza and the Nigerian naira, recorded some of their strongest depreciations against USD in several years.⁴⁵ This pushed up the prices of non-commodity imports, further amplifying the sharp deterioration in their terms of trade.

FIGURE 30
FALLING COMMODITY PRICES TRIGGERED A DEVALUATION OF THE COLOMBIAN AND CHILEAN CURRENCIES

A) COLOMBIAN PESO AND CRUDE OIL PRICE



B) CHILEAN PESO AND COPPER PRICE



NOTES: The figure shows the relationship between Colombian exchange rates and crude oil price (graph A) and Chilean exchange rates and copper price (graph B) for years 2001–2018. Daily data are used to plot exchange rates and monthly data for commodity prices. COP (CHP) is Colombian peso (Chilean peso) and COP/USD (CHP/USD) refers to the amount of Colombian peso (Chilean peso) for 1 USD.

SOURCES: WFP elaboration based on Trading Economics. 2019. *Trading Economics* [online]. [Cited 25 April 2019]. <https://tradingeconomics.com> for exchange rate data; World Bank. 2019. Commodity Markets. In: *World Bank* [online]. Washington, DC. [Cited 6 May 2019]. <http://www.worldbank.org/en/research/commodity-markets> for commodity prices

Rising domestic prices, including food

International commodity price fluctuations can also transmit effects into the economy through exchange rate adjustments (Figure 29). Large depreciations are associated with domestic price increases and large devaluations tend to be associated with large declines in output, consumption and imports.⁴⁶ The pass-through of international commodity price developments to local domestic prices varies by commodity, country and over time.⁴⁷ Nonetheless, it can be particularly challenging for food security and nutrition, as it can affect people's access to food, care and feeding, as well as access to health services – unless exceptional conditions prevail to offset these effects, as seems to have been the case during the global food and financial crises (Box 10).

As highlighted above, declining commodity prices may result in depreciation and devaluation of currencies that may pass through the system resulting in domestic price

increases, including food prices. An alternative situation may be that food imports become more expensive owing to rising international commodity prices, with domestic food prices following suit. Both situations can be particularly challenging to net food importers. While the degree and speed of pass-through depends on the country in either of these two situations, the effect of higher food prices will flow through the food value chain from wholesale to retail prices. This poses a challenge to food security and nutrition if the country has limited capacity to substitute food imports with domestically produced food, and it is not obvious that all domestic food producers will benefit from higher food prices.

South Sudan's currency devaluations in 2015, for example, immediately triggered significant food price inflation and eroded purchasing power of a majority of the country's poor and vulnerable. In cases like this, devaluation usually raises imported food prices and shifts

the food parity price (the rural–urban terms of trade) in favour of agriculture/local produce. However, insignificant tradeable surplus by most farmers (due to low agricultural productivity), coupled with low levels of market integration and linkages, may exclude a number of farming populations from benefiting from rising prices of locally produced commodities. This was the chain of events in South Sudan, which led to increased levels of acute food insecurity and malnutrition levels, as populations struggled to access food – particularly troubling, given that 43 percent of the population of South Sudan are market dependent for their food needs.⁴⁸

In these situations, households that need to buy food are immediately affected by higher domestic retail prices as the cost of food relative to their incomes increases (Box 12). While this is clearly the case in urban areas, it holds in rural settings as well. Even farmers, labourers or rural landowners, who are involved in agricultural activities, can be net food buyers and negatively affected by higher prices. Moreover, when rural incomes are strongly interlinked through multiplier effects,⁴⁹ food price drawbacks might spill over to net food sellers and leave even them worse off.⁵⁰ However, once transmitted to producers, higher food prices also stimulate agricultural production. In the medium term, they can thus work to the benefit of the rural community by increasing agricultural employment and generating opportunities to earn an income up the value chain. However, the example of South Sudan shows that when agricultural productivity and market integration are low, a number of farming populations may not benefit from rising prices of locally produced food.

Food prices play a key role also for dietary diversity. Even for smallholder farmers who cover most of their dietary energy from subsistence production, purchased foods can critically contribute to the variety and quality of their diets.⁵¹ Costs tend to rise with dietary quality,⁵² and a common strategy for coping with reduced purchasing power is to shift dietary patterns towards cheaper food. As a result, nutrient intake is compromised in the wake of surging prices. This coping strategy seems to have been used during the global food crisis (Box 10).

A complex interplay between the nature and magnitude of food price changes, food availability, and the nutrient content of substitutes will determine the impact of rising prices on nutrition. The effect does not, however, take place uniformly. Households in low-income countries are prone to being disproportionately affected⁵³ as are urban households⁵⁴ and women and children.⁵⁵ Whereas the influence of food price increases on nutrition through quality substitution is immediate, less direct channels are seen in the long term. For example, limiting health expenditure to save money for food can lead to more frequent, prolonged or more severe illness. This has negative implications for the body's uptake of essential nutrients.⁵⁶

Unemployment and loss of income and wages

World and domestic price adjustments, such as those described so far, bring about complex responses in the real economy. These responses from the supply and aggregate-demand sides will generate a number of “quantity” adjustments, including in employment and other areas, that can in turn trigger additional economy-wide effects, including in domestic prices and income.

For commodity-dependent countries, sluggish economic activity as a result of falling commodity prices can lead to unemployment, loss of wages and, consequently, loss of incomes (Figure 29).⁵⁷ And unemployment and loss of income are significantly related to food insecurity for the general population.⁵⁸

For example, the declining economic and negative growth observed in Latin America and the Caribbean during 2012–2016 was largely associated with marked declines in commodity prices, mainly affecting South America.⁵⁹ The urban unemployment rate reached 8.9 percent in 2016, representing an increase of 1.6 percentage points from 2015. The declining GDP and the rise in unemployment resulted in lower wages or other forms of household incomes. After several years of marked reductions in poverty, the number of poor people rose from 166 million to 175 million between 2013 and 2015, increasing from 28.1 percent to 29.2 percent of the population. »

BOX 12

ECONOMIC SLOWDOWN AND THE COST OF BASIC FOOD IN COLOMBIA

The case of Colombia illustrates the effects of an economic slowdown on the affordability of food via the described transmission channels.

Falling international prices for Colombia's export commodities, particularly crude oil, led to reduced export earnings and declining reserves in United States dollars, triggering a devaluation of the Colombian peso (COP) against the United States dollar (USD) – see Figure 30.

Between 2012 and 2017, GDP per capita growth plummeted, along with significant current account imbalances and local currency depreciation. At the same time, household income stayed put when expressed in real terms, while inflation rose steadily up to 2016 (see table below).

To make the impact of this economic slowdown on the affordability of food more tangible, it is helpful to look at the cost of a basic plate of food; for example, through the "Counting the beans" index developed by WFP, which provides a cross-country comparison of a stew made of beans or other pulses, paired with a carbohydrate staple that matches local preferences.¹ The building block of the index is the meal-to-income ratio, which is the cost of a stew of beans as a share of daily earnings. The effect of the economic slowdown on the affordability of food is obvious in the Colombian case: in 2016, every Colombian had to allocate on average three percent of their daily income to afford such a basic plate of food, which is more than the yearly allocation in the 2012–2015 period.

MEAL-TO-INCOME IN COLOMBIA DURING AN ECONOMIC SLOWDOWN

Colombia			2012	2013	2014	2015	2016	2017
Slowdown	GDP per capita growth	(a) (annual %)	2.99	3.85	3.41	2.12	1.15	0.91
Transmission channels	Current account balance	(a) (million, in USD)	-11.366	-12.504	-19.768	-18.586	-12.129	-10.359
	Exchange rate COP/USD*	(a) Nominal	1.797	1.869	2.002	2.742	3.054	2.951
		Real	2.65	3.29	3.48	3.77	4.24	5.21
	Income (in COP*)	(b) Nominal	30.596	32.683	34.675	34.837	37.078	39.229
		Real	28.677	30.027	30.960	29.626	29.328	29.746
	Prices	Inflation (annual %)	3.17	2.02	2.9	4.99	7.51	4.31
Cost of basic food	Stew of beans (in COP)	(c) Nominal	892	756	792	1.009	1.117	965
		Real	836	694	707	858	883	731
		Meal-to-income (%)	2.91	2.31	2.28	2.9	3.01	2.46

NOTES: *COP is Colombian peso and COP/USD refers the amount of Colombian peso for 1 USD.

SOURCES: (a) World Bank. 2019. World Development Indicators. In: *World Bank DataBank* [online]. Washington, DC [Cited 10 February 2019]. <https://databank.worldbank.org>; (b) ILO. 2019. Data collection on wages and income. In: *International Labour Organization* [online]. Geneva, Switzerland. [Cited 6 May 2019] https://www.ilo.org/travail/areasofwork/wages-and-income/WCMS_142568/lang--en/index.htm; and (c) WFP calculations based on WFP. 2019. Economic Analysis. In: *VAM – Food security analysis* [online]. Rome. [Cited 13 May 2019]. http://dataviz.vam.wfp.org/economic_explorer/prices and FAO. 2019. GIEWS FPMA Tool - monitoring and analysis of food prices. In: *FAO* [online]. Rome. [Cited 13 May 2019]. <http://www.fao.org/giews/food-prices/tool/public/#/home> and NUMBE0. 2019. Prices by country. In: *NUMBE0* [online]. [Cited 13 May 2019]. https://www.numbeo.com/cost-of-living/prices_by_country.jsp

¹ WFP. 2017. *Counting the beans: the true cost of a plate of food around the world*. Rome.

» The pass-through effects on unemployment and income will vary from country to country depending on what sectors are producing the primary commodities upon which the country is dependent. For example, the oil and diamonds sectors typically create little employment and are weakly linked with the rest of the economy. On the other hand, in agriculture, particularly where export crops are grown by smallholder producers, the impacts can be more widely spread.

Sharp and declining commodity prices may, through reduced incomes, force households to adopt coping strategies that do not necessarily improve food security and nutrition.

Agricultural employment and smallholder food producers

The impacts of economic slowdowns and downturns can be felt particularly hard in agriculture, both because of what happens within the sector and because of urban–rural linkages. These impacts can be especially harmful to countries lagging behind in terms of economic development and transformation.

The levels of structural and rural transformation of the economies (i.e. the relative levels of dependence on agriculture, degree of agricultural and non-farm diversification, commercialization and productivity), will determine the extent to which economies are capable of coping with the challenges.

The extent to which rural–urban linkages weaken as the economy deteriorates will determine the impacts on agricultural and rural off-farm employment and the welfare of smallholder food producers.

The impacts on agriculture can be particularly significant in low-income countries.

The agricultural sector accounts for substantial shares of employment and output in these countries. In 2017, agricultural employment accounted for 68 percent of total employment, and agricultural output accounted for about 26 percent of GDP in low-income countries.⁶⁰

More generally, as employment, wages and household income fall, particularly in urban areas, there will likely be less demand for

agricultural production from rural areas.⁶¹ Shrinking employment opportunities, including those for rural migrants, result in lower remittances from urban areas and more limited farm investments in rural space.

Among the four dimensions of food security – availability, access, utilization and stability – access is the principal channel between economic shocks and food security and nutrition, mainly through two pillars of availability (supply through the market or home-production) and affordability (household income from farm and non-farm activities), both of which are directly related to agricultural income and non-farm employment.⁶²

Downturns and price volatility can significantly undermine the livelihoods and income of small-scale food producers, agricultural labourers and the rural poor, in particular those who are net food buyers, forcing them to reduce their consumption in quantity and quality.⁶³ Conversely, in some circumstances price spikes might be beneficial for farmers, as, due to increased prices, they have a higher incentive to produce crops. Often, food producers cope with the impacts of economic shocks by focusing their production and consumption of food on staple crops. While doing so allows them to sustain dietary energy intake, it might lead to a deterioration, in dietary diversity. In other words, improving their productivity and the availability of cash income along with nutrition-sensitive behavioural change are critical for them to access higher quality and more diversified diets. Broad-based income growth, grounded on a diversified set of economic activities, including off-farm activities, can bring shifts in nutrition towards balanced dietary patterns.

The impacts of economic slowdowns on food security and nutrition are demonstrated in Haiti, Nepal and the Niger. Amid a global financial crisis coupled with high food prices, households' food security, as measured by dietary diversity, reduced by 5 percent in Nepal, 8 percent in the Niger, and 23 percent in Haiti due to increased food prices.⁶⁴ In the Indian Himalayas, economic slowdown coupled with natural resource depletion and climate change

negatively impacted on food production and employment opportunities. This resulted in increased threats to food security due to lower purchasing power.⁶⁵

Recent research on the effects of export-led agricultural growth on agricultural labour shows that high-value export sectors create formal employment opportunities in rural areas and can transform the low-productivity smallholder based labour market into a high-productivity modern agro-industrial sector, thereby fostering rural transformation.⁶⁶ When the agro-industry and the smallholder sector are spatially close to each other, direct investment and consumption linkages can lead to increased incomes and non-farm employment,⁶⁷ which improve household capacity to deal with risks – including those caused by economic slowdowns and downturns. The ultimate effects of slowdowns and downturns on households depend on whether they are global, regional or national. Whereas a global downturn may stall the overall rural transformation process by setting back the direct and spillover effects of export sectors on labour markets (and hence livelihoods), a regional or national economic slowdown or downturn could potentially be weathered if countries are sufficiently open to international trade.⁶⁸

Health and social intersectoral effects

Cuts to health and social sector spending precipitated by economic slowdowns or downturns can have negative impacts on food security and nutrition, particularly in high commodity-dependent countries with potentially lifelong and intergenerational implications for health and development (Figure 29).

Social sector expenditure – comprising health, education and welfare/social protection spending – are core pillars for promoting health, well-being and health equity in current and future generations.⁶⁹ Within the health sector, the universal health coverage (UHC) approach has demonstrated positive impacts on population health and health equity.⁷⁰ Similarly, education and social welfare policies have demonstrable impacts on health and well-being

through nutrition pathways such as improved feeding practices.⁷¹

By ensuring universal health coverage and providing social safety nets, government spending on these essential services contribute to poverty reduction and improving population health, which in turn reinforce food security and nutrition.⁷² However, economic slowdowns and downturns caused by unfavourable commodity price shocks can drain fiscal revenues and have implications for public budgets in commodity-dependent countries, which are not all in a position to counteract these changes.

Cuts in health spending could affect nutrition through reduced provision of, or access to, quality essential services for infant, young child and maternal nutrition mainly delivered through the health system. Reductions in other areas of social spending could impact directly or indirectly on nutrition due to a deteriorating health environment, increasing the risk of infectious diseases that can exacerbate malnutrition, or due to reduced provisions for social protection such as school feeding, cash or food vouchers.

Despite the global recession and slow economic growth experienced over the past decade, it has been observed that government fiscal capacity, as measured by the share of overall government spending in GDP, had grown across all groups of countries.⁷³ However, allocations from fiscal space to essential social expenditure overall have been under pressure since 2010, after an initial period of expansion following the economic crisis of 2008–2009.⁷⁴

Public health expenditure as a percentage of total government expenditure, while increasing in some country groupings, has decreased in low-income countries overall from 7.9 percent in 2000 to 6.8 percent in 2016. In high commodity-dependent countries, the decrease has been even greater.⁷⁵ Health expenditure as a percentage of total government expenditure in high commodity-dependent countries during the 2008–2015 period contracted by 1.3 percent for low-income countries (compared with an increase for this specific period in other low-income countries), by 0.6 percentage

**TABLE 10
GOVERNMENT SPENDING ON SOCIAL AND HEALTH SECTORS AND UHC COVERAGE IN HIGH COMMODITY-DEPENDENT COUNTRIES**

Country income group	High commodity-dependent countries			All other countries			High commodity-dependent countries			All other countries			UHC essential service coverage (%)***					
	n	2008	2015	Change (%)	n	2008	2015	Change (%)	n	2008	2015	Change (%)						
Low	18	10.1	8.8	-1.3	16	15.9	17.1	1.2	14	16.0	15.7	-0.3	16	15.9	17.1	1.2	19	40
Lower-middle	11	9.7	9.1	-0.6	23	17.3	17.5	0.2	6	14.9	12.6	-2.3	22	17.3	17.5	0.2	10	49
Upper-middle	13	11.9	11.6	-0.3	32	15.3	15.4	0.1	7	16.3	15.0	-1.3	31	15.3	15.4	0.1	12	65
High*	2	10.9	13.9	3.0	45	12.9	13.0	0.1	1	11.0	10.4	-0.6	48	12.9	13.0	0.1	1	68
Total	44				116				28				117			42		

NOTES: * For the high-income country group, among high commodity-import- and commodity-export-dependent countries, two countries counted in food and fuel group (Seychelles and Palau) and one country counted in food group (Palau). UHC refers to universal health coverage.

SOURCES: ** WHO. 2017. Global Health Observatory (GHO). In: *World Health Organization* [online]. Geneva, Switzerland. [Cited 2 May 2019]. <http://apps.who.int/gho/data/node/imr.PREVANEMIA?lang=en>; *** UN. 2019. SDG Indicators. In: *United Nations – Sustainable Development Goals* [online]. New York, USA. [Cited 6 May 2019] <https://unstats.un.org/sdgs/indicators/>; **** WHO. 2018. *World health statistics 2018: monitoring health for the SDGs*. Geneva, Switzerland.

points for lower-middle-income countries, and by 0.3 percent percentage points for upper-middle-income countries ([Table 10](#)). Decreased public health expenditure coupled with low rates of expenditure and reductions in other essential social expenditure have health repercussions through impaired food security and nutrition and other impact pathways, in particular for poorer populations.

Reduced health spending affects the quality and effectiveness of health services, for example through less frequent service provision, shortages of medication and equipment or supplies, and reduced staff numbers and lower staff morale. This can impact nutrition directly through reduced micronutrient supplementation, breastfeeding support and other essential nutrition actions for mothers, infants and young children; and indirectly through reduced services affecting family planning, antenatal care and interventions to prevent or control infectious diseases or diet-related non-communicable diseases.⁷⁶ During economic crises, populations tend to switch from private to public services, when funding and services are already under pressure.⁷⁷ Moreover, user fees are often introduced or increased, which can lead to delays in seeking health care and ultimately to poorer health outcomes.⁷⁸ These user fees can also drive people into poverty,⁷⁹ limiting household budgets for needed food.

Similarly, reduced government budgets can affect other important social expenditures, including for education ([Table 10](#)). Education expenditures for high commodity-dependent countries decreased as a percentage of total government expenditure between 2008 and 2015 – by 0.3 percentage points and 2.0 percentage points in low-income and lower-middle-income countries, respectively. Reduced education expenditures is a problem in its own right, but it also means less investment in school infrastructure relevant to health, such as for safe water and sanitation, which affects the risk of infectious disease,⁸⁰ such as diarrhoea, and can exacerbate or be exacerbated by undernutrition.⁸¹ Governments also struggle to maintain social protection measures during economic slowdowns and downturns, including cash and food transfers, food vouchers and

school meals, which are particularly important for food security and nutrition.⁸²

In addition, the ways in which families have to cope with economic crises can impact infant and young childcare, including breastfeeding practices. Economic pressures on mothers to work soon after childbirth can reduce their ability to exclusively breastfeed for six months, while pressures on government budgets and private sector employers may undermine maternity provision. Resource constraints can also compromise caregivers' ability to provide optimal care to infants and young children due to increased workload, time pressures or poor health.⁸³

How households cope and when they fail

Households facing a reduction in purchasing power as a result of economic events have to look for ways to cope with these shocks to maintain food security and consumption to the extent possible ([Figure 29](#)).

Due to their economy-wide nature, economic slowdowns and downturns pose macroeconomic aggregate shocks affecting multiple households, which are different from idiosyncratic shocks that affect only a single household, such as the illness of a household member. This means that many coping strategies that are used during idiosyncratic shocks are ineffective in the face of such aggregate shocks.⁸⁴

During economic slowdowns and downturns, wages can decline and jobs might be more difficult to find, and consequently households losing their employment might have to take up lower paying jobs, often in the informal sector. In such circumstances, household members normally not involved in salaried activities – for example, women and younger members still in school – might need to look for employment. Households may also try to make use of any savings or insurance mechanism at their disposal ([Table 11](#)).

However, with increased prices, savings will buy less food than before. Households might find it more difficult to borrow from family members or access informal insurance groups such as village funds, if many households are facing economic

TABLE 11
COPING STRATEGIES, THEIR AVAILABILITY IN TIMES OF ECONOMIC SLOWDOWNS AND DOWNTURNS AND POSSIBLE NEGATIVE EFFECTS

Coping strategy	Availability in times of economic slowdowns and downturns	Possible negative effects of applying the coping strategy
Adjusting labour supply		
Changing employment	Lower availability and lower wages than in economically strong situations. Possibility of increased underemployment levels.	Lower wages leading to lower income and potential participation in the informal sector.
Taking up of additional employment (also former non-employed household members such as children and women), outmigration	Lower availability and lower wages than in economically strong situations. Internal and international migration to unaffected areas/countries might be an option, if household can afford it.	Reduction of other activities such as breastfeeding and care work, taking children out of school, with possible negative effects on human capital formation and the intergenerational cycle of malnutrition. Increased work burdens for family members left behind when other family members migrate out. Loss of labour if there is outmigration.
Return migration to the village, employment in agriculture	Effective only if labour productivity is high enough and there is significant labour demand. Increased food prices are an advantage if household can increase agricultural production.	Reduction of remittances and, potentially, unemployment when labour demand shrinks.
Adjusting disposable income		
Using savings	Less effective when purchasing power weakens.	Depletion of resources (which are the basis of livelihoods) and, as a result, weakened resilience against future shocks.
Selling (productive) assets, including land	Asset prices might be reduced if many people sell their assets.	Depletion of resources, reduction of future earnings potential.
Formal or informal borrowing	Informal networks might be weakened through aggregate shocks; interest rates might be high for vulnerable households.	Risk of indebtedness.
Formal public safety nets	Public spending on formal safety nets might be reduced.	Quality of safety net programmes could be affected. Increased food insecurity and malnutrition for the most vulnerable groups if food or cash transfers are reduced.
Formal private insurance schemes	Often no access for most vulnerable households.	None.
Involvement in criminal or socially unacceptable activities such as begging or prostitution	Less effective if applied by many members of the community.	Loss of human dignity and social status in the community, may face legal prosecution.
Adjusting consumption		
Reducing spending on other goods in order to maintain food consumption	Availability not affected. Costs of public-sector health services may increase if budgetary constraints lead to an increase in user fees.	Possible reduction of health and education expenditures might have negative long-term effects on health and human capital.
Shifting dietary patterns towards cheaper foods	Availability not affected.	Increased consumption of street foods and shifting towards more starchy foods and away from micronutrient rich vegetables, fruits, meat and dairy products can lead to various forms of malnutrition with negative long-term effects.
Reducing food consumption	Availability not affected.	Will lead to malnutrition with negative short and long-term effects.
Reducing number of household members, by sending away children, for example	Difficult, if most households of the social network are affected.	Splits up families.

SOURCE: WFP with inputs from FAO and WHO.

difficulties at the same time. Also, public spending on safety nets might decrease during economic slowdowns, thereby leaving behind many households in need.⁸⁵

One coping strategy which has been shown in some countries to work well in times of economic slowdowns and downturns is return migration to the village of origin. As food prices rise, farmers benefit from the labour supply of returned migrants and from increased agricultural production, enabling them to better cope with job losses and reduced remittances of affected migrants.⁸⁶ Alternatively, workers might seek job opportunities in other countries, thus increasing the inflow of remittances.

While the availability of coping strategies is restricted for households in general, coping is particularly challenging for vulnerable households, as they are endowed with fewer assets to deplete and often have weaker social networks for support. They are more often forced to take up coping strategies that help in the short term while jeopardizing future earning possibilities and the human capital of the household, such as taking children out of school, possibly leading them into an intergenerational poverty trap.⁸⁷

For example, they may have to sell assets that are essential for their livelihood, such as the last female animals in their livestock, productive tools or seeds, or they may be forced to incur too much debt. The need to change consumption patterns can lead to reduced spending on education and health, or shifts in nutrition away from nutrient-rich foods, such as vegetables or meat, towards more starchy foods. While securing access to sufficient dietary energy in the short term, this behaviour will have negative long-term effects on people's nutrition and health and human capital⁸⁸ as seen during the global food crisis (Box 10). ■

2.3 NEXUS BETWEEN ECONOMIC GROWTH, POVERTY, AND FOOD SECURITY AND NUTRITION: THE ROLE OF INEQUALITY

KEY MESSAGES

- ➔ Economic events will ultimately affect food security and nutrition, depending on extreme poverty levels and the extent to which the poor face exclusion due to different inequalities. However, outcomes may vary from country to country.
- ➔ While extreme poverty is one of the underlying causes of food insecurity and malnutrition, food-insecure and malnourished people are not always members of the poorest households. Most of the hungry and undernourished populations today live in middle-income countries.
- ➔ Inequalities are one of the myriad reasons why extreme poverty reduction does not necessarily translate into improved food security and nutrition. Socially excluded and marginalized groups are at increased risk of food insecurity, unhealthy diets, malnutrition in all its forms and poor health outcomes.
- ➔ Income inequality is rising in several low- and middle-income countries. Inequalities are also seen in accessing basic services and assets, between and within households. All of this is making it more difficult for poor and marginalized groups to benefit from economic growth.
- ➔ Inequalities not only prevent the most food-insecure and malnourished people from being helped by economic growth; they also make these people more vulnerable in the face of economic slowdowns and downturns.

Poverty and socio-economic inequalities also matter

Economic slowdowns and downturns generate a number of direct and indirect impacts that flow through different transmission channels and challenge food security and nutrition. Many of these impacts can be generalized. They are transmitted through prices and economy-wide responses that would behave in a similar manner in most low- and middle-income countries. Declining commodity prices trigger unambiguous economic effects in high commodity-dependent countries with implications for food security and nutrition.

The final impact on food security and nutrition, however, depends on how many poor people live in the country and the extent to which they face exclusion due to inequalities. On the one hand, economic slowdowns and downturns tend to be correlated with increases in poverty and inequality. On the other hand, poverty, inequalities and marginalization are some of the underlying causes of hunger and malnutrition in all its forms. But the relationships between these factors are not so simple, for a number of reasons.

First, it is not always true that robust economic growth helps to reduce poverty and improve food security and nutrition.⁸⁹ Economic growth, although necessary, may not be sufficient to ensure poverty reduction, food security and nutrition. Many countries have achieved economic growth, but show poor records in terms of poverty alleviation⁹⁰ and improvements in food security and nutrition.

Second, poverty, food security and nutrition do not always move in unison. Countries can achieve robust economic growth and poverty reduction, but this does not always translate into improved food security and nutrition. The disconnect has become even more apparent recently, as many countries have made significant progress in reducing poverty but not in improving food security and nutrition indicators.⁹¹

Third, when poverty reduction does result in increased food security, this does not necessarily mean nutritional status will be improved as well. Poverty and food insecurity is only weakly

linked with malnutrition, and there may be other factors at play. For example, stunting in children is not only related to the quality of diet, but also to hygiene, health care and maternal nutrition during pregnancy, among others. High-quality foods might not be evenly distributed among household members or households may not have access to adequate sanitation, safe drinking water and health care.

The next section explores the nexus between economic growth, poverty,⁹² and food security and nutrition. In doing so, it looks at the central role of inequality in shaping the outcomes of food security and nutrition in this nexus. Understanding the relationships is critical if countries are to design targeted policies and programmes to address food insecurity and malnutrition.

A key feature of the 2030 Agenda for Sustainable Development is the recognition of the interconnectedness between the SDGs. Ignoring the nexus between economic growth, poverty, food security and nutrition, and the role inequalities play within this nexus, could push policies and programmes designed to end hunger and malnutrition to miss their mark and fail. Rooting out hunger and malnutrition in all its forms will require an integrated understanding to inform solutions that are not exclusively relevant for SDG 2 (ending hunger and malnutrition in all its forms) but also other SDGs, particularly – albeit not exclusively – SDG 1 (ending poverty in all of its manifestations),⁹³ SDG 8 (promoting inclusive and sustainable economic growth), and SDG 10 (reducing inequalities).

Disentangling the nexus

To better understand the nexus between economic growth, poverty, and food security and nutrition, it is important to recognize that these are multidimensional concepts that are multidirectional in their relationship to one another (e.g. hunger is a result of poverty, but hunger itself is a cause of poverty). Evidence also indicates that stunting contributes to intergenerational transmission of poverty and deprivation, which often explains intergenerational effects on linear growth of children.⁹⁴

Poverty, food security and nutrition are interrelated, but they are also distinct from one another.⁹⁵ They often move together, but they are also different and have unique determinants, so they are not always correlated. For example, poverty can be on the decline, while progress in reducing food insecurity and malnutrition stagnates or even reverses course.

Unpacking the nexus between economic growth, poverty, food security and nutrition is complex. Therefore, this section will look at three separate linkages and relationships. First, evidence on the links between economic growth and poverty reduction will be reviewed, followed by the links between economic growth and food security and nutrition, and then the links between poverty and food security and nutrition.

Economic growth and poverty reduction

Sustained economic growth is one of the most critical factors in alleviating poverty. Numerous cross-country studies and statistical evidence confirm that the main determinant of poverty reduction is the pace of economic growth.⁹⁶ There is clear evidence for the positive association, but the magnitude or strength of the effect varies across countries.

For example, one study found that growth in average incomes as measured by GDP per capita explained approximately half of the variations in short-run changes of poverty level.⁹⁷ Another study on 14 countries between 1990 and 2003 found that a one percent increase in GDP per capita reduced poverty by 1.7 percent.⁹⁸ For some countries such as Viet Nam, the reduction was spectacular – a halving of the poverty rate from 58 percent to 29 percent, or almost 8 percent a year. Poverty rates have declined between 3 percent and 6 percent per year in El Salvador, Ghana, India, Tunisia and Uganda.

World price shocks and macroeconomic adjustments affecting economic growth directly, such as those described in Section 2.2, can potentially affect poverty. For countries with high primary commodity dependence, the degree of macroeconomic stability, in particular avoiding inflationary shocks, is a critical factor. The sectoral composition of economic growth can also explain in some cases why given rates

of economic growth can lead to different rates of poverty reduction.

The rate at which poverty shrinks as growth accelerates differs from country to country, given the initial level of income inequality in the country and changes in income inequality over time.⁹⁹ For example, Senegal and Burkina Faso had similar levels of economic growth – 2.2 percent per capita per year – over a similar timeframe.¹⁰⁰ But poverty declined by 2.5 percent annually in Senegal and by just 1.8 percent in Burkina Faso. Senegal made more progress because it had less inequality as a result of pro-poor growth policies introduced in the 1990s. Another study found that for countries where income inequality was very high, a 1 percent increase in average household income levels had a much lower impact on poverty (0.6 percent reduction) than it did in countries where inequality was low (4.3 percent).¹⁰¹

By comparison, between 2001 and 2017, Mali experienced limited economic growth with an average GDP per capita growth of 1.9 percent.¹⁰² However, the country still made significant strides in reducing poverty and improving social indicators. An important part of Mali's success in poverty reduction can be attributed to its remarkable performance in reducing inequality. The country's Gini coefficient has fallen from 39.9 in 2001 to 33 in 2011, making Mali's growth performance an inclusive one. More importantly, calculations by the World Bank¹⁰³ show that 82 percent of the poverty reduction performance of the country between 2001 and 2010 can be attributed to better distribution of consumption among households – the remaining 18 percent seems to be mostly explained by the average increase in consumption. Of course, these gains have been threatened by the conflict in the country that erupted in 2012.

In addition to the initial level of income inequality, the pattern of economic growth and different initial conditions in human development reflecting a number of other inequalities beyond income also factor in to determine whether economic growth translates into poverty reduction (**Box 13**).

Income inequality can also reduce the impact of future economic growth on poverty reduction.¹⁰⁴ »

BOX 13

EXPLAINING POVERTY AND FOOD SECURITY AND NUTRITION TRENDS IN CHINA AND INDIA: THE PATTERN OF GROWTH AND INITIAL INEQUALITIES

China and India have enjoyed significant economic growth in recent years. Between 1990 and 2017, the two countries had an average GDP per capita growth rate of 8.6 percent and 4.5 percent, respectively.¹ However, the effects of growth within each country have been different.

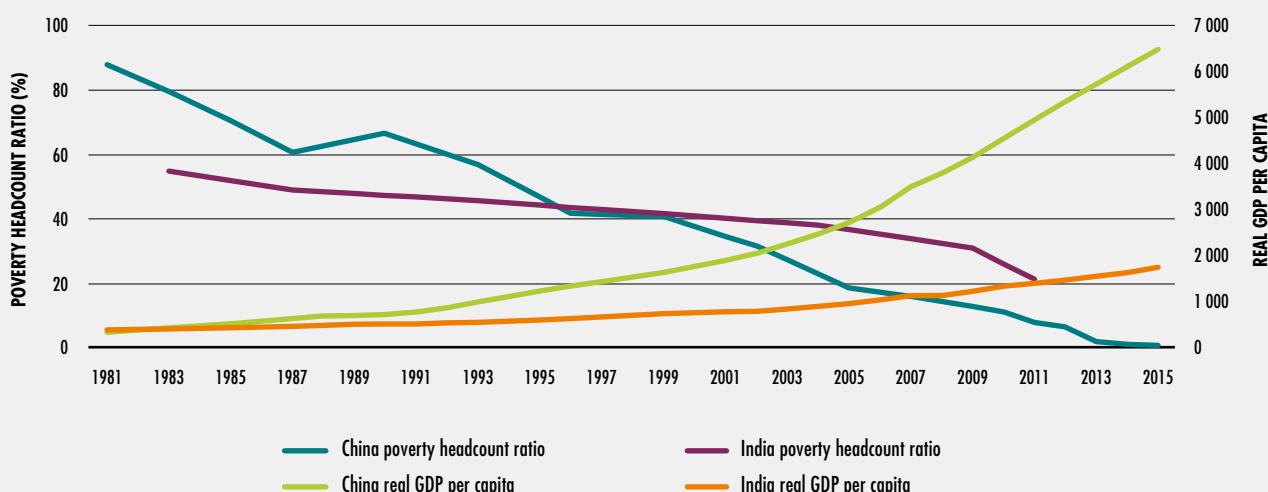
The figure below shows that in both countries the increase in GDP per capita has been accompanied by poverty reduction. China's poverty rate declined from 88 percent in 1981 to 0.7 percent in 2015. In comparison, India's poverty reduction seems relatively more modest¹ – moving from 48.9 percent in 1987 to 21.2 percent in 2011, or to 13.4 percent in 2015 if another World Bank source is used.² For the period 1999–2005, the income elasticity of poverty in China was estimated at 1.51. This means that a 1 percent increase in GDP per capita was associated

with poverty reduction rates of 1.51 percent. During the same period, India had an income elasticity of poverty of only 0.4.

Regarding hunger and malnutrition, the PoU decreased from 15.9 percent in 2002–2004 to 8.8 percent in 2015–2017 in China, compared with a decrease from 22.2 percent in 2002–2004 to 14.8 percent in 2015–2017 in India. Stunting in children under five years of age fell from 17.8 percent in 2000 to 8.1 percent in 2013 in China. In India, it fell from 54.2 percent to 38.4 percent between 2000 and 2015, which is still a high prevalence, compared with a global average of 23.2 percent in 2015.^{1,3}

The unique growth patterns and inequality levels in each country may help explain the differences observed in the countries in terms of poverty and food security and nutrition trends:

DECREASING POVERTY HEADCOUNT RATIO AND RAISING GDP PER CAPITA IN CHINA AND INDIA (1981–2015)



NOTES: Poverty headcount ratio in China and India (left axis) refers to USD 1.90 a day (2011 PPP); GDP per capita (right axis) is expressed in constant USD 2010. SOURCE: FAO elaboration based on World Bank. 2019. PovcalNet: an online analysis tool for global poverty monitoring. In: *World Bank* [online]. Washington, DC. [Cited 9 February 2019]. <http://iresearch.worldbank.org/PovcalNet/home.aspx>.

**BOX 13
(CONTINUED)**

- a. The pattern of economic growth in China, especially in the 1980s, shows that the primary sector, where most of the poor derive their livelihoods, was one of the most dynamic sectors behind GDP growth. On the other hand, in India the rate of growth has been higher in the industrial and services sectors than in agriculture.⁴
- b. The responsiveness of poverty reduction to growth is generally higher when initial inequality is lower. This seems to have been the case for income inequality in China, where in 1983 the Gini coefficient was 28.3. In India, the Gini coefficient that year was 31.5.⁵ At the same time, land was much more equally allocated in China than in India during the 1980s.⁶ Furthermore,

the Gini coefficient for urban and rural areas in 1983–84 was 24.7 and 18.5, respectively, in China, compared with 30.0 in urban areas and 33.3 in rural areas in India.⁷

- c. Finally, different initial conditions in human development also played an important role. Health and education standards were much better in China in the 1980s than they were in India.⁸ In 1980, China had 2.2 hospital beds per 1 000 people compared with 0.8 in India. This number increased to 3.8 in 2011, while it decreased to 0.7 in India. Differences in literacy rates were also important. Only in 2011 India was able to reach the levels of literacy that China had in 1982, amounting to more than 65 percent.⁹

¹ World Bank. 2019. World Development Indicators. In: *World Bank DataBank* [online]. Washington, DC. [Cited 10 February 2019]. <https://databank.worldbank.org>

² World Bank. 2019. *Poverty & Equity Brief – India. April 2019* [online]. Washington, DC. [Cited 16 May 2019]. https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_IND.pdf

³ FAO. 2019. FAOSTAT. In: *FAO* [online]. Rome. [Cited 8 February 2019]. www.fao.org/faostat/en/#home; FAO, IFAD, UNICEF, WFP and WHO. 2018. *The State of Food Security and Nutrition in the World 2018. Building climate resilience for food security and nutrition*. Rome, FAO.

⁴ Agricultural growth is three times as effective in reducing extreme poverty as growth in other sectors. L. Christiaensen, L. Demery and J. Kuhl. 2011. The (evolving) role of agriculture in poverty reduction—an empirical perspective. *Journal of Development Economics*, 96 (2): 239–254; M. Ravallion. 2009. A comparative perspective on poverty reduction in Brazil, China and India. Policy Research Working Paper 5080 [online]. Washington, DC, World Bank. [Cited 29 April 2019]. <http://documents.worldbank.org/curated/en/952341468218101551/pdf/WPS5080.pdf>; I.S. Gill, A. Revenga and C. Zeballos. 2016. *Grow, invest, insure: a game plan to end extreme poverty by 2030*. Policy Research Working Paper 7892 [online]. Washington, DC, World Bank. [Cited 29 April 2019]. <http://documents.worldbank.org/curated/en/924111479240600559/pdf/WPS7892.pdf>

⁵ United Nations University-World Institute for Development (UNU-WIDER). 2019. UNU-WIDER, World Income Inequality Database (WIID4). In: *UNU-WIDER* [online]. Helsinki [Cited 20 March 2019]. <https://www.wider.unu.edu/database/world-income-inequality-database-wiid4>

⁶ M. Ravallion. 2009. A comparative perspective on poverty reduction in Brazil, China and India. Policy Research Working Paper 5080 [online]. Washington, DC, World Bank. [Cited 29 April 2019]. <http://documents.worldbank.org/curated/en/952341468218101551/pdf/WPS5080.pdf>

⁷ World Bank. 2019. PovcalNet: an online analysis tool for global poverty monitoring. In: *The World Bank* [online]. Washington, DC. [Cited 9 February 2019]. <http://iresearch.worldbank.org/PovcalNet/home.aspx>

⁸ I.S. Gill, A. Revenga and C. Zeballos. 2016. *Grow, invest, insure: a game plan to end extreme poverty by 2030*. Policy Research Working Paper 7892 [online]. Washington, DC, World Bank. [Cited 29 April 2019]. <http://documents.worldbank.org/curated/en/924111479240600559/pdf/WPS7892.pdf>

⁹ World Bank. 2019. PovcalNet: an online analysis tool for global poverty monitoring. In *The World Bank* [online]. Washington, DC [Cited 9 February 2019]. <http://iresearch.worldbank.org/PovcalNet/home.aspx>

- » One study found that a fall in income inequality, as measured by the Gini coefficient from 0.55 to 0.45, would cause poverty to drop by more than 15 percentage points in ten years. However, it would take 30 years to achieve the same reduction in poverty if inequality remained unchanged.¹⁰⁵

Economic growth, food security and nutrition

The relationship between economic growth and food security and nutrition has important policy implications. These involve pro-poor growth strategies to reduce hunger and child malnutrition, as well as the need for direct food security and nutritional investments. By extension, the implications also affect how limited financial resources are competitively allocated between different types of investments.

How does economic growth contribute to nutrition?

The relationship between increased national income (GDP per capita) and nutrition works through two complementary channels. When economic growth stimulates average incomes, populations may spend a larger part of their incomes on healthy, nutrition-relevant goods and services. Increased GDP may also boost state provision of nutrition-relevant services as well as social and health infrastructure – if governments use newly generated tax revenues to invest in them.

The role of economic growth in reducing child undernutrition remains a highly debated issue. For example, there is extensive empirical evidence that economic growth and child stunting are negatively correlated (i.e. the higher the economic growth, the lower the child stunting). However, evidence on the magnitude of this relationship varies across studies.¹⁰⁶ One study finds a prominent role for economic growth, in which a 10 percent increase in GDP per capita would lead to a 6 percent reduction in child stunting prevalence.¹⁰⁷ While this is in line with the findings of several studies,¹⁰⁸ others find that child stunting would be decreased even more, for example by 7.3 percent.¹⁰⁹ In contrast, still others find the relationship to be much weaker or even nonexistent.¹¹⁰

The relationships between economic growth and child stunting can also differ by region. For example, cross-country time series data suggest that the relationship is weaker in sub-Saharan Africa than in other regions.¹¹¹ For Africa as a whole, other variables such as maternal education, socio-economic status and poor maternal nutrition are more important in explaining the slow progress in reducing child undernutrition.¹¹²

Not only can economic growth affect child stunting, but the reverse may occur.¹¹³ A new study finds that a 10 percent increase in GDP per capita would reduce stunting prevalence by 2.7 percent. However, the reverse causality impacts of stunting on current growth estimate that a one percentage point increase in stunting prevalence would result in a 0.4 percent decrease in current GDP per capita. The study's back-of-the-envelope calculation suggests that stunting costs on average about 13.5 percent of GDP per capita in developing countries.¹¹⁴ If these recent findings on the negative reverse causality are correct, it implies that the results of earlier studies could be biased downwards and overstate the actual impact of economic growth towards child stunting reductions.

Despite the debate on the magnitude of effects, it is clear that while economic growth contributes to improvements in child nutrition, it does so only modestly and is not sufficient in many settings to accelerate reductions in child undernutrition. What matters most is addressing other causes of undernutrition, including access to nutritious foods for a healthy diet, improvement in women's status and education, feeding and care practices and quality health services. This requires implementation of nutrition-specific policies and interventions with a focus on vulnerable populations, regardless of whether there is economic growth.¹¹⁵

As for obesity and overweight, their relationship with economic growth is less clear-cut due to the paucity of research. However, evidence does suggest that the relationship varies depending on the income setting of the country. For example, a study using data from 175 countries found a positive relationship between body weight and GDP per capita growth. Seventy-two countries

where GDP was below USD 3 000 showed a significantly positive linear relationship between the body mass index (BMI) and GDP, whereas 102 countries where GDP was above USD 3 000 showed no significant relationship between the two.¹¹⁶ Clearly, income growth alone does not necessarily guarantee healthier diets and improved nutritional status; other policies, for example those that create healthy food environments and facilitate and promote physically active lives, among others, are also needed.

How does economic growth contribute to food security?

There is even less empirical evidence on the links between economic growth and food security, partially due to the lack of common food-insecurity measures and data. Empirical analysis is increasingly common, however, given the development of the Food Insecurity Experience Scale (FIES) by FAO and with the newly available FIES panel data (for more details about FIES see Part 1). Recent studies provide consistent results and an important first indication of the relationship, although evidence is not conclusive and more research is required.

The results generally confirm that with increases in economic growth, there are concurrent declines in severe food insecurity. However, similar to child stunting, the magnitude of this relationship varies across countries. In this case, it varies by income level and the degree of income inequality of the country.¹¹⁷

One recent study for Latin America and the Caribbean finds that a 10 percent increase in a country's GDP per capita lowered the likelihood of moderate and severe food insecurity by 11.5 percentage points and severe food insecurity by 9.7 percentage points.¹¹⁸ Another study of 134 countries also finds the same negative relationship, but with much smaller effects and with statistically significant results only for low- and high-income countries.¹¹⁹

To complement these two studies, a new FAO analysis was conducted for this report, using newly available cross-country FIES panel data for 75 low- and middle-income countries. The results

reconfirmed a negative relationship between GDP per capita and severe food insecurity.¹²⁰

An FAO analysis found that the relationship between GDP per capita and undernourishment (as measured by the prevalence) was also negative. However, it was highly nonlinear, meaning that the relationship became progressively weaker at higher levels of development. The most recent data show that the strength of the relationship decreases sharply up to USD 2 000 per capita in constant prices, which is within the lower-middle-income category (countries with income of USD 996–3 895 per capita). In other words, economic growth is more effective in reducing the PoU in low-income countries; as the level of a country's GDP per capita rises, the effect weakens. Most of the world's hungry, however, live in middle-income countries (see next section). So the potential contributions of economic growth to ending hunger are weaker than expected.

Poverty reduction and food security and nutrition

It is commonly understood that poverty goes hand in hand with hunger and malnutrition. Poverty is indeed one of the underlying causes of food insecurity and malnutrition. However, they do not always move in unison, and in some cases they diverge from what is expected. Investigating why this is the case is critical for eradicating food insecurity and malnutrition.

The relationship between poverty, food security and nutrition is also bidirectional, meaning that food security and nutrition are both determinants and dimensions of poverty. Food insecurity, poor health and malnutrition are often reasons why households end up in poverty or sink further into it, if they are already poor.¹²¹

One reason is that poverty, food insecurity and malnutrition are distinct and multifaceted phenomena.¹²² Not all people who are food insecure and malnourished necessarily live in the poorest households. This is especially so when the problems of food insecurity and malnutrition are greater. Additionally, poverty reduction may not necessarily translate into better food security and nutrition due to existing inequalities.

By definition, extreme poverty is the lack of sufficient income to meet basic dietary needs. It affects the ability of individuals and households to access healthy, nutritious foods that constitute a healthy diet through purchase or production, and is linked to minimal or inadequate access to essential health services.

The World Bank defines extreme poverty as living on less than USD 1.90 per day, which generally reflects the cost of enough dietary energy and other essentials to meet basic needs. This is a very low poverty threshold, as it is estimated based on the average of the national poverty lines of 15 very poor countries, adjusted for inflation using 2011 prices and taking into account differences in prices across countries (i.e. purchasing power parity – PPP). The main purpose is to help obtain a measure of extreme poverty comparable across countries.

Higher levels of extreme poverty as defined by the World Bank are correlated with higher rates of undernourishment as measured by the PoU, and higher rates of child stunting at the country level, with the latter relationship being nonlinear ([Figure 31](#)). The correlation coefficient between extreme poverty and undernourishment is 0.68, and it is 0.62 between extreme poverty and child stunting. This indicates a moderate-to-strong correlation between poverty and these two measures of food security and nutrition.

Poverty explains around half of the observed variation in undernourishment and child stunting (i.e. R-squared of 0.50 and 0.57 for PoU and child stunting, respectively). However, there are also a number of countries where undernourishment and child stunting are higher than predicted by extreme poverty (countries above the line in [Figure 31](#)) and countries that have lower levels than predicted by extreme poverty (countries below the line in [Figure 31](#)).

Beyond the absolute levels of income or poverty, variability of income is critical and is often one of the main causes of food insecurity.¹²³ Income variability, even within the same year, can have a significant impact on food access. It is caused by a convergence of factors, such as weather-related shocks, that limit households' ability to smooth consumption over time, rendering access

to food, health and nutrition vulnerable to economic shocks.

In addition to income variability, access to food is also conditioned by people's awareness and knowledge of food quality, as well as other factors that can cause significant differences when it comes to malnutrition among members of households at similar levels of poverty. Other factors include diverse consumption and intra-household distribution patterns, dietary habits, climate conditions and cultural factors.¹²⁴ There is also an array of public policies that can significantly affect non-income-based access to food and utilization of food, and access to basic health and social services critical to nutrition, as outlined in the ICN2 Framework for Action.¹²⁵

At the household level, there is clear evidence that low levels of household income and household wealth are associated with different forms of malnutrition. For example, the poorest children are 2.26 times more likely to be stunted than the richest children. However, the extent of the income inequality in stunting varies considerably. For example, there is an elevenfold difference between the richest and the poorest children in Peru, and more than fivefold differences in Bolivia (Plurinational State of), Gabon, Honduras and Jordan.¹²⁶ Other multi-country studies confirm that stunting prevalence is higher in households with lower wealth and income.¹²⁷ Country data from Cambodia,¹²⁸ Colombia,¹²⁹ India,¹³⁰ and Pakistan¹³¹ find a similar pattern.

While the analysis of selected country microdata also confirms that higher levels of child stunting are found in the poorest households, it also shows that not all stunted children live in the poorest households. In some countries this number can be quite large ([Figure 32](#)). For example, a recent study of 30 countries in sub-Saharan Africa found that around 75 percent of underweight women and children were not in the poorest 20 percent of households, and around half were not in the poorest 40 percent of households.¹³² The study also found that a larger share of undernourished people are members of non-poor families in countries with a higher overall incidence of undernutrition. »

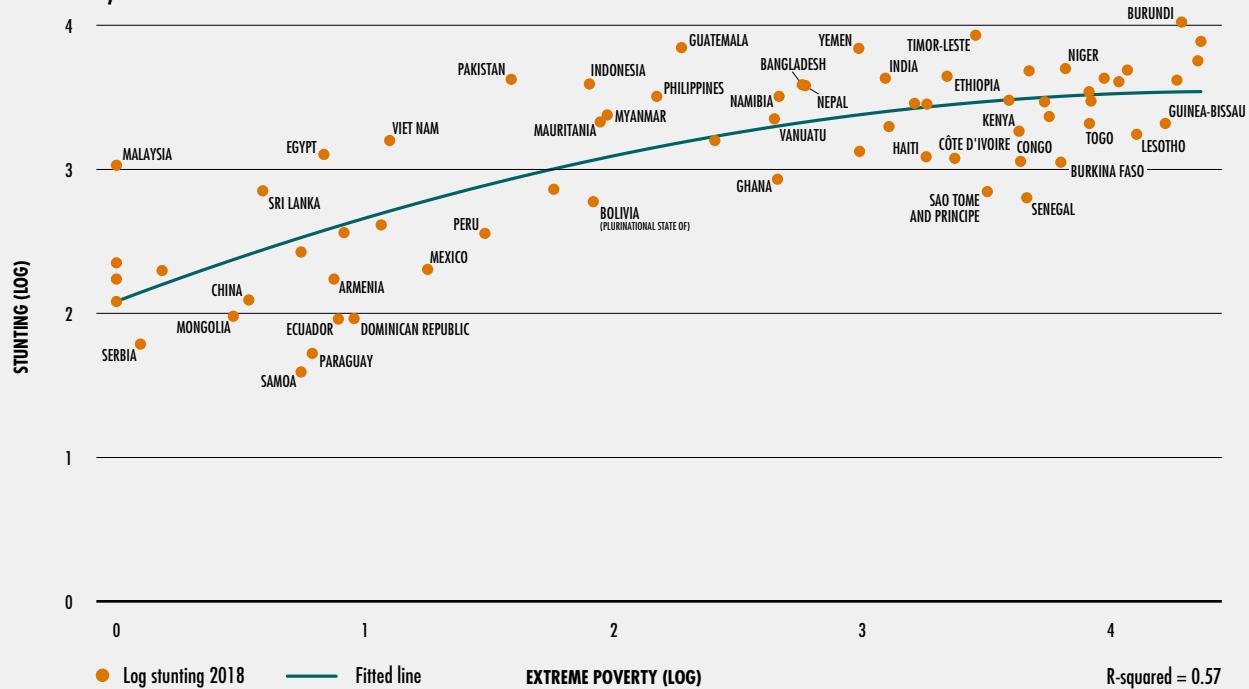
FIGURE 31

PREVALENCE OF UNDERNOURISHMENT (PoU) AND CHILD STUNTING RATES ARE CORRELATED WITH EXTREME POVERTY AT THE COUNTRY LEVEL

A) RATIO BETWEEN EXTREME POVERTY AND PoU



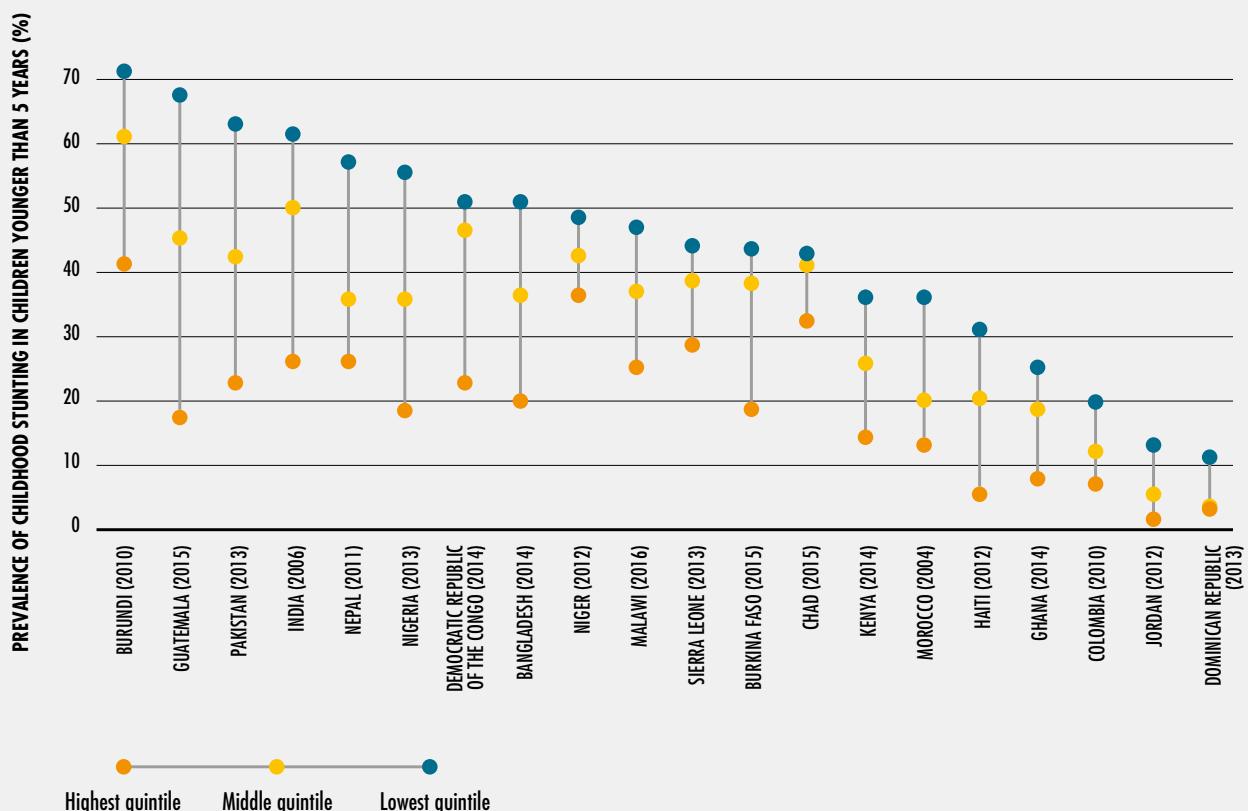
B) RATIO BETWEEN EXTREME POVERTY AND STUNTING PREVALENCE



NOTES: Correlation analysis between prevalence of undernourishment and extreme poverty (graph A) and child stunting and extreme poverty (graph B). Extreme poverty is measured by the Poverty Headcount Ratio at USD 1.90 per day; child stunting for children under 5 years of age and prevalence of undernourishment (PoU) are measured in year 2018. Extreme poverty is measured in the latest year available at country level between years 2010–2017. R-squared is 0.50 for the association between extreme poverty and the PoU, and 0.57 for the association between extreme poverty and child stunting. Country names are not reported in the graph for countries that fall inside the 95 percent confidence interval (close to the fitted line), but a list of these countries is provided in Annex 3. The Former Yugoslav Republic of Macedonia is now officially called North Macedonia. West Bank and Gaza is a territory and follows the World Bank classification. The analysis includes some countries with imputed PoU, see Annex 3 for methodology and list of countries.

SOURCES: For poverty data, World Bank. 2019. World Development Indicators. In: *World Bank DataBank* [online]. Washington, DC. [Cited 9 May 2019]. <https://databank.worldbank.org>. For child stunting and PoU, see Annex 1A.

FIGURE 32
HIGH LEVELS OF CHILD STUNTING ARE NOT ONLY FOUND IN THE POOREST HOUSEHOLDS



NOTES: Prevalence of stunting in children under five, by household income, plotted with range of income quintile from highest to lowest. The year when stunting is available is indicated in parentheses. Data are from the Demographics and Health Surveys (DHS) Program.

SOURCE: A. De la O Campos, C. Villani, B. Davis and M. Takagi. 2018. *Ending extreme poverty in rural areas: sustaining livelihoods to leave no one behind*. Rome, FAO.

- » An important explanation of this finding is the existence of intra-household inequality, which is in line with evidence from a number of studies that find vulnerable individuals do not necessarily live in households that would normally be considered poor. As such, they are hidden from view in standard data sources on poverty.¹³³

There are numerous studies that find that low socio-economic status is negatively associated with other nutrition-related indicators beyond

child stunting, including child wasting,¹³⁴ low birthweight,¹³⁵ anaemia in women,¹³⁶ and diet-related non-communicable diseases (NCDs).¹³⁷

Lastly, in unpacking the linkages between poverty and food insecurity and malnutrition, it is important to keep in mind that poverty reduction does not ensure increased food security, and even when it does happen, increased food security does not necessarily

imply improved nutritional status. Poverty or food insecurity and malnutrition are linked, but food security is only one underlying cause of nutrition besides adequate care for children and women, and sufficient health services and a healthy environment. Therefore, the linkages between food insecurity and malnutrition may be weak.

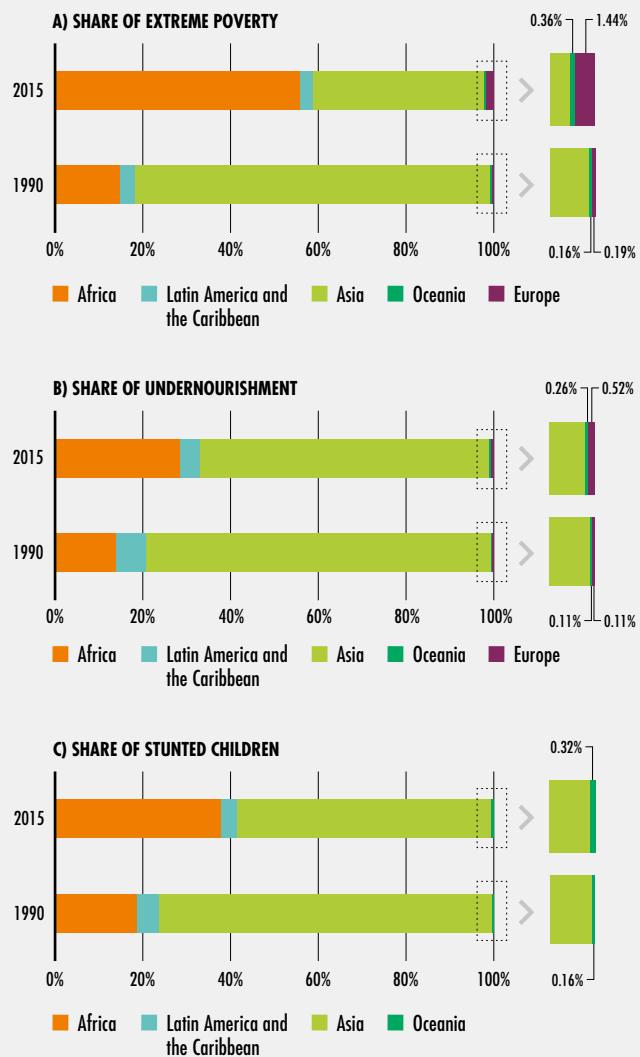
For example, high-quality foods might not be evenly distributed among household members, reflecting intra-household inequality. Households may not have access to basic services, such as adequate sanitation, safe drinking water and health care, which are critical underlying determinants of food security and nutrition. Adequate access to food and basic services often play a more important role in fighting hunger and delayed child growth and other forms of malnutrition, despite economic growth and income.¹³⁸

Evidence for the possible disconnect between poverty reduction and eradication of food insecurity and malnutrition has important policy implications, given that anti-poverty policies in developing countries often assume that targeting poor households will be reasonably effective in reaching those who are malnourished. From a policy perspective, the evidence suggests that targeting relatively poor households will tend to work less well than reaching vulnerable women and children in countries where the overall problem of malnutrition is greater.

Furthermore, most of the hungry and undernourished people today do not live in the world's poorest countries. In 2017, more than 75 percent of the world's hungry, 78 percent of the stunted children and 64 percent of the extreme poor lived in middle-income countries – and only in a handful of these countries.¹³⁹ Although the highest rates of poverty, hunger and child stunting are typically found in low-income countries, they do not make a substantive contribution to the total number of extreme poor nor the hungry in the world.

The geographical distribution of the number of extreme poor, undernourished and stunted children also show a different pattern (Figure 33). The distribution of global extreme poverty has

FIGURE 33
MOST OF THE WORLD'S EXTREME POOR NOW
LIVE IN AFRICA, BUT THE MAJORITY OF THE
WORLD'S HUNGRY AND CHILDREN AFFECTED
BY STUNTING LIVE IN ASIA



NOTES: Since the latest available data for extreme poverty are for 2015, for comparability, the share of undernourished and stunted children are also taken from year 2015. The number of stunted children is not available for Europe.
SOURCES: World Bank. 2019. PovcalNet: an online analysis tool for global poverty monitoring. In: *The World Bank* [online]. Washington, DC [Cited 9 May 2019]. <http://iresearch.worldbank.org/PovcalNet/home.aspx> for extreme poverty; FAO for PoU; UNICEF, WHO and World Bank. 2019. UNICEF-WHO-The World Bank: Joint child malnutrition estimates – Levels and trends (March 2019 edition) [online]. <https://data.unicef.org/topic/nutrition/>; www.who.int/nutgrowthdb/estimates/; <https://data.worldbank.org> for stunting.

shifted dramatically from Asia to sub-Saharan Africa between 1990 and 2015. Most of the world's hungry and children affected by stunting still live in Asia.

Relationship between poverty, overweight and obesity

Like other indicators, in the case of overweight and obesity, the relationship with poverty is not so clear and generally tends to vary depending on the general income level of the country.

A systematic review of obesity shows that the association between socio-economic status and obesity appears to be positive for both men and women in low-income countries. Those who are more affluent or with higher educational attainment tend to be more likely to be obese.¹⁴⁰ On the other hand, more extensive evidence shows that in middle- and high-income countries, overweight and obesity are linked to lower socio-economic settings among women, with no association observed among men.¹⁴¹ In middle-income countries, the association becomes largely mixed for men and mainly negative for women. Obesity in children appears to be predominantly a problem of the rich in low- and middle-income countries.¹⁴²

The burden of obesity tends to shift towards poorer populations as countries move through the nutrition transition.¹⁴³ This shift towards overweight and obesity in people with lower socio-economic status seems to be happening faster in low-income countries than it did in high-income countries.¹⁴⁴

However, there are still inconsistencies in the data on this issue. A meta-analysis of the data from 62 scientific papers published between 1990 and 2015 concludes that the studies that investigated the association between socio-economic status and obesity in children point to ambiguous results.¹⁴⁵ This meta-analysis finds that children with lower socio-economic status had higher risks of overweight and obesity, but the risks did not seem to increase with the income level of countries. Moreover, the inverse relationship – a higher risk of overweight and obesity associated with higher socio-economic status – was found in high-income countries and in more economically developed areas.

Overweight and obesity increase the risk of non-communicable diseases, which, in turn, can be linked to loss of income or earning potential due to illness as well as increased healthcare costs.

The role of inequalities and marginalization in shaping food-security and nutrition outcomes

It is clear from the evidence presented up until now that economic growth alone is not sufficient to reduce extreme poverty or improve food security and nutrition. In most cases, the rate at which extreme poverty shrinks as growth accelerates differs from country to country, given the initial level of income inequality in the country and changes in income inequality over time.

Inequality, not only in the distribution of income, but also in access to nutrition-relevant services and social and health infrastructure is critical in understanding why economic growth alone will not significantly reduce extreme poverty or food insecurity and malnutrition. Income inequality itself can result not only in undernutrition, but also overweight and obesity, as the higher costs of nutritious foods induces the poor to resort to cheap, energy-dense and nutrient-poor foods.

Furthermore, inequalities within households help explain why even when economic growth translates into extreme poverty reduction, it may not necessarily reduce food insecurity and malnutrition. Thus, reducing inequality plays an important role in reducing both undernourishment and malnutrition.

This is true at all times, not only for periods of economic boom. Inequalities are structural characteristics of countries that prevent the most food-insecure and malnourished people from being helped by economic growth, but they also expose and make them more vulnerable during periods of economic turmoil. In fact, evidence indicates that in countries that have greater levels of inequality, economic slowdowns and downturns have a disproportionately negative effect on food and nutrition security.¹⁴⁶

This section looks more closely at the different forms of inequality and the evidence on how these inequalities work to shape outcomes of food security and nutrition. Five forms of inequality are explored: income inequality, inequalities between rural and urban populations, inequalities in asset distribution, marginalization and social exclusion, and intra-household inequality.

It is important to acknowledge that any analysis on inequality is challenging, as there is a lack of data disaggregated by wealth quintile, gender, age, geography and disability, which poses a significant barrier to addressing inequality and tackling undernourishment and malnutrition in marginalized groups.¹⁴⁷ Data on prevalence and national averages of undernourishment and malnutrition are not sufficient to fully understand and address these issues.

Inequality in income distribution

Income inequality is a defining issue of our time. It is also a cause of entrenched uncertainty and vulnerability.¹⁴⁸ A country experiences income inequality when not every member of its population gets exactly the same share of the income the economy is generating. Although the world has made remarkable progress in reducing extreme poverty, income inequality remains high. This means that most of the reduction in poverty has been achieved through increased economic growth, not through reductions in income inequality.¹⁴⁹

Income inequality has remained constant and high over the last 15 years (*Figure 34*).¹⁵⁰ As a region, Latin America and the Caribbean shows the most progress in reducing income inequality, but still has the highest levels of inequality globally (*Figure 34*). Nonetheless, this overall progress in income distribution does not seem to be shown in the distribution of workers' remuneration.¹⁵¹

Measured by the shared prosperity premium¹⁵² – the difference between the annual income or consumption growth rate of the bottom 40 percent and the annual growth rate of the mean in the economy – inequality is rising in nearly half of the countries in the world, including many low- and middle-income countries (*Figure 35*).

However, when focusing only on low- and middle-income countries, the income distribution trend is mixed. In *Figure 36*, countries above the line have seen an increase in income inequality from 2000 to 2015, whereas those below the line have seen a reduction. Notably, several countries in Africa and Asia have seen large increases in income inequality over the last 15 years. Of the 78 countries shown in the figure, 58 are high commodity-dependent countries. In 12 of these countries, income inequality remained unchanged, while for 26 of these, inequality increased. More importantly, 20 out of these 26 are high commodity-dependent countries.

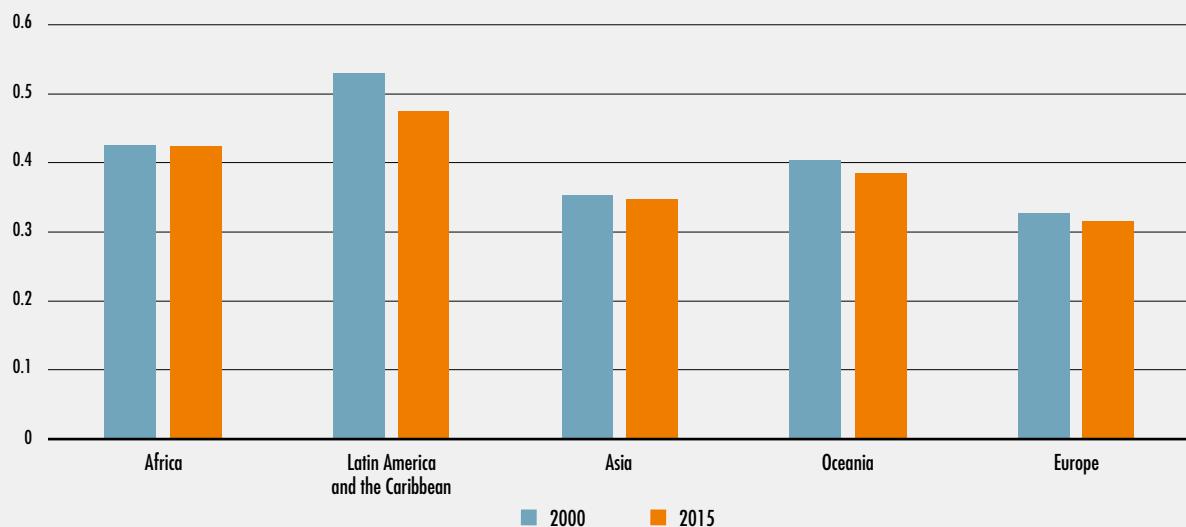
Income inequality is shaped by the type of economic growth and the distribution of earnings from factor markets, particularly those of labour and capital. Countries in Latin America, where inequality remains high, implemented many reforms beginning in the 1990s to open up their economies and promote export-led growth. Costa Rica is an example in the region of a country where the export sector was diversified. Interestingly, income inequality rose in Costa Rica as a result of the skill intensity of the new export sectors, which contributed to widening wage gaps.¹⁵³

Income inequality also shapes the impact of economic growth. For instance, if economic growth is associated with rising income inequality (Kuznets curve),¹⁵⁴ the poorest may not benefit from increased national income.¹⁵⁵ The links between economic growth with increased average incomes and increased food and nutrition security can be weaker than expected, especially if there are high levels of income inequality. In the context of economic growth with high inequality, inequalities must be addressed to ensure a way out of hunger and malnutrition (*Box 14*).

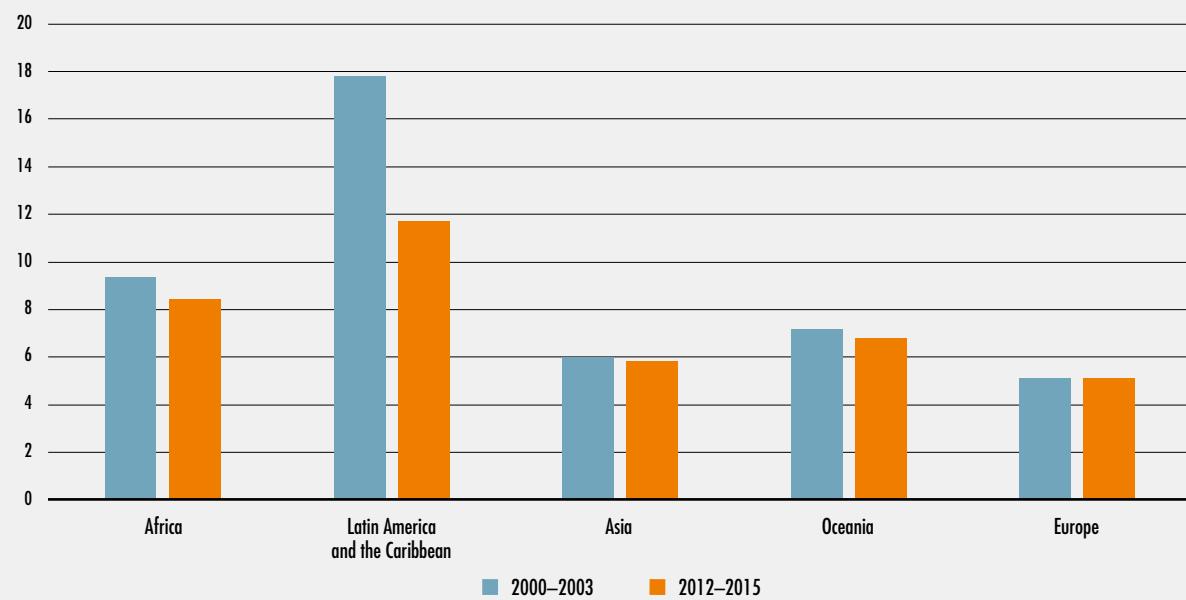
Income inequality shapes the impact of economic deceleration or contraction on food security and nutrition. In countries where inequality is greater, economic slowdowns and downturns have a disproportionate effect on low-income populations in terms of food and nutrition security, since they use large portions of their income to buy food.

FIGURE 34
HIGH AND PERSISTENT LEVELS OF INCOME INEQUALITY IN LOW- AND MIDDLE-INCOME COUNTRIES

A) GINI INDEX INCOME INEQUALITY – BY REGION



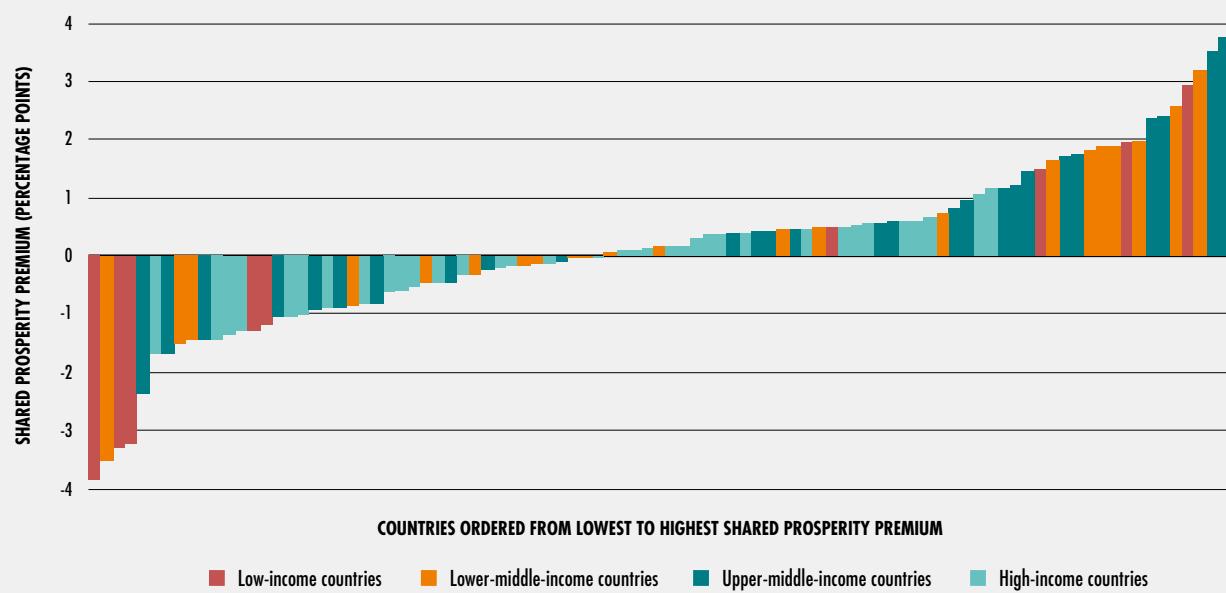
B) RATIO BETWEEN THE INCOME SHARE OF THE RICHEST AND THE POOREST 20% OF THE POPULATION – BY REGION



NOTES: Europe refers to low-income and middle-income countries in Eastern Europe. In particular, European countries include Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Montenegro, North Macedonia, Republic of Moldova, Romania, Russian Federation, Serbia and Ukraine.

SOURCES: World Bank. 2019. PovcalNet: an online analysis tool for global poverty monitoring. In: *The World Bank* [online]. Washington, DC. [Cited 9 May 2019]. <http://iresearch.worldbank.org/PovcalNet/home.aspx> for the Gini index; World Bank. 2019. World Development Indicators. In: *World Bank DataBank* [online]. Washington, DC. [Cited 9 May 2019]. <https://databank.worldbank.org> for the income shares used to compute the ratios.

FIGURE 35
**INCOME INEQUALITY IS RISING IN NEARLY HALF THE COUNTRIES OF THE WORLD,
 INCLUDING IN SEVERAL LOW-INCOME COUNTRIES AND SOME MIDDLE-INCOME COUNTRIES**



NOTES: Shared prosperity premium is defined as the difference in growth between the average consumption or income per capita (2011 PPP USD per day) of the bottom 40 percent of the population, and the growth in income or consumption per capita of the mean population in a country. Since it is a difference between two growth rates, the shared prosperity premium is expressed in percentage points. Data on shared prosperity premium are available for 93 countries in the period 2011–2016. A positive (negative) shared prosperity premium means that the poorest 40 percent in a country are getting a larger (lower) share of the overall income.

SOURCE: World Bank. 2019. Global Database of Shared Prosperity. In: *World Bank* [online]. Washington, DC. [Cited 19 March 2019].

<http://www.worldbank.org/en/topic/poverty/brief/global-database-of-shared-prosperity>

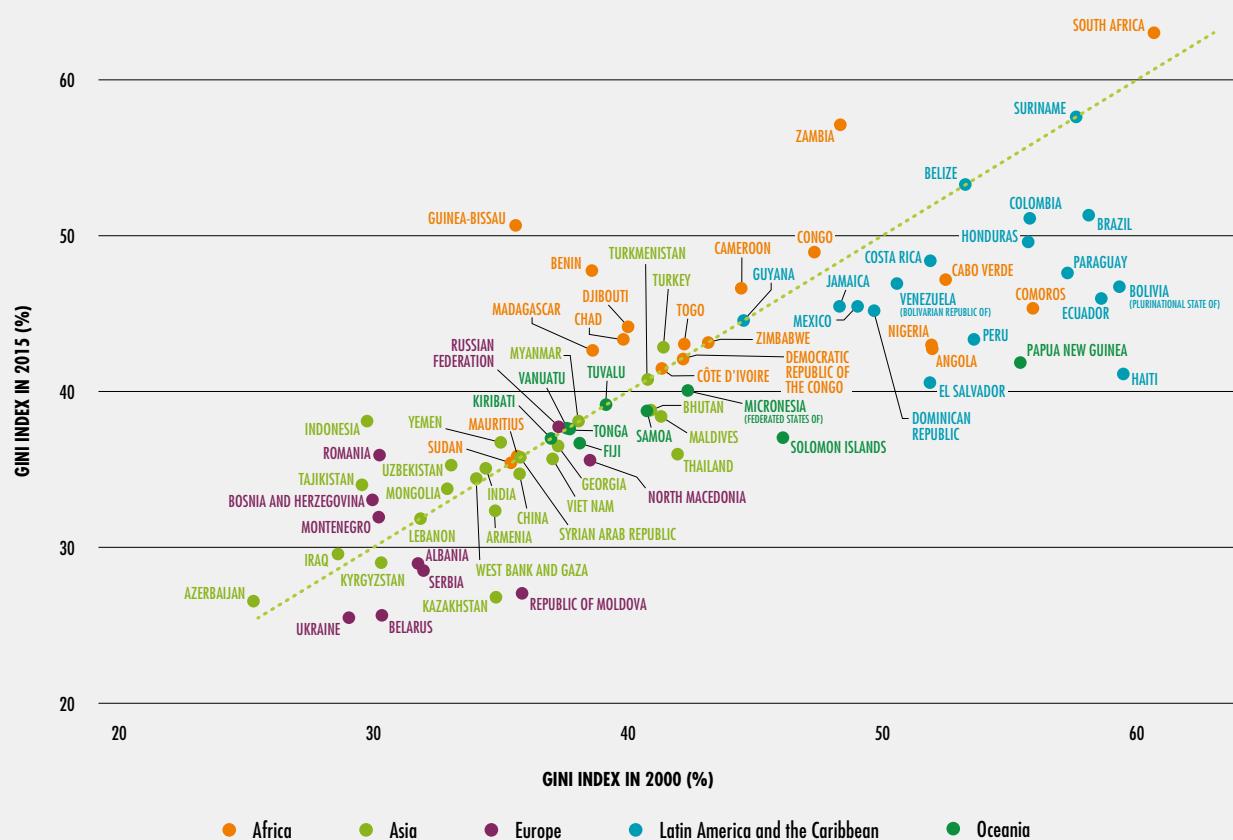
Inequality increases the likelihood of severe food insecurity, and this effect is 20 percent higher for low-income countries compared with middle-income countries. An FAO study for 75 low- and middle-income countries finds that on average countries with a high Gini coefficient (higher than 0.35) have a 33 percentage point higher probability of experiencing severe food insecurity.¹⁵⁶ Indeed, the prevalence of severe food insecurity is almost three times higher in countries with high income inequality (21 percent) compared with countries with low income inequality (7 percent).

Moreover, the same FAO study finds that in countries with high levels of inequality, increases

in household income are highly correlated with a reduction in severe food insecurity. Where there is high inequality, this effect is almost three times more than that of lower levels of inequality. A 10 percent increase in household income is associated with a 0.8 or 0.3 percentage point lower likelihood of severe food insecurity in countries with, respectively, high or lower inequality.

Income and wealth inequalities are also closely associated with undernutrition, while more complex inequality patterns are associated with obesity. Such inequality patterns associated with health conditions are seen in low- and middle-income countries. Economic inequalities

FIGURE 36
SOME COUNTRIES HAVE REDUCED INCOME INEQUALITY, WHILE FOR OTHERS IT HAS WORSENED



NOTES: As the Gini index is not available for all countries for all years, data available for 1996–2002, and for 2011–2015 are used to inform on Gini index in the past (2000) and on Gini index in recent years (2015), respectively. Only countries for which the Gini index is available in both the periods are used (total of 78 low- and middle-income countries, according to the World Bank classification of country income in 2017). Europe refers to the following low- and middle-income countries: Albania, Belarus, Bosnia and Herzegovina, Montenegro, North Macedonia, Republic of Moldova, Romania, Russian Federation, Serbia and Ukraine. West Bank and Gaza is a territory that follows the World Bank classification.

SOURCE: C. Holleman and V. Conti. (forthcoming). *Role of income inequality in shaping outcomes on food insecurity*. FAO Agricultural Development Economics Working Papers 19-06. FAO, Rome.

play a significant role as lower levels of income compromise access to health, nutrition and care. For example, in most countries, stunting prevalence among children younger than five years of age is about 2.5 times higher in the lowest wealth quintile compared with the highest wealth quintile.¹⁵⁷ Moreover, within countries, there are also substantial inequalities between regions and population subgroups.

Inequality in access to basic services – within and between rural and urban areas

Around 40 percent of the inequality in low- and lower-middle-income countries is due to the gap in living standards between rural and urban populations,¹⁵⁸ with the standards being lower for people living in rural areas. Around two-thirds of the world's poor live in rural areas with an even higher share in low-income countries.¹⁵⁹

BOX 14

ADDRESSING INEQUALITY IN THE CONTEXT OF ECONOMIC GROWTH IN BRAZIL –
A WAY OUT OF HUNGER AND MALNUTRITION

Brazil's high and persistent inequalities in income and in access to basic services such as education and health care are well known. However, in the 2000s inequality declined substantially, while the economy grew at an annual rate of 3.2 percent between 1999 and 2014.¹ The Gini coefficient dropped from 59 in 1999 to 51 in 2014, and income grew substantially among the poorest. As a result, the reductions in poverty and inequality followed a similarly impressively downward pattern during the 2000s (figure below): 26.5 million Brazilians exited poverty between 2004 and 2014.

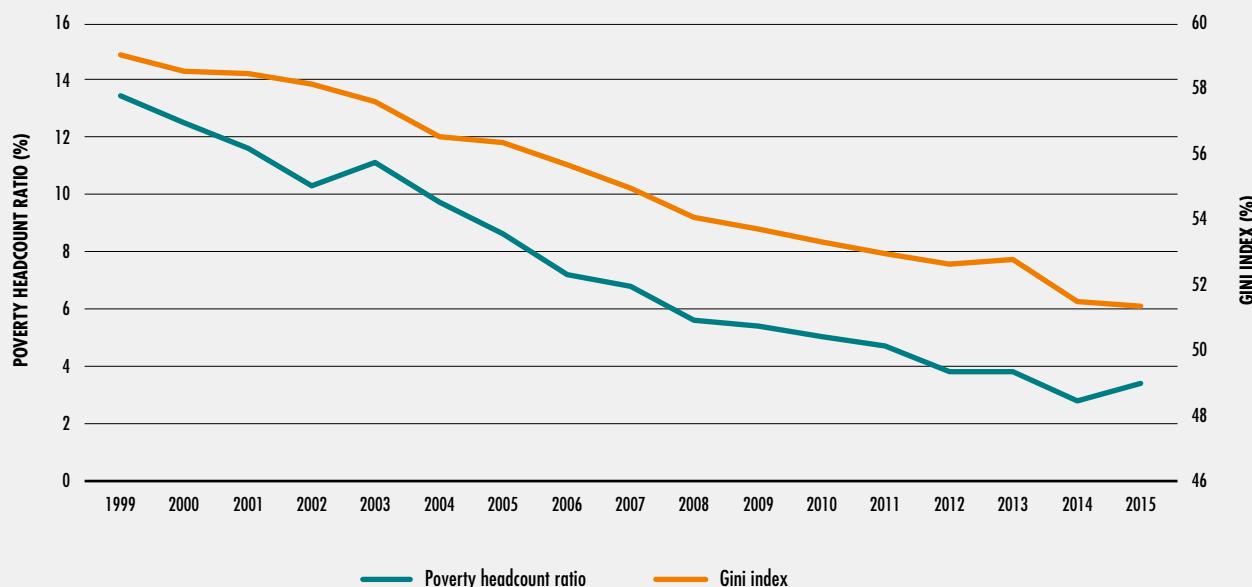
The prevalence of undernourishment (PoU) was reduced from 11.9 percent in 1999–2001 to less than 2.5 percent in 2008–2010.² At the same time, the rate of stunting for children under five years of age was reduced by 6 percent per year between 1996 and 2007, reaching 7.1 percent.³ While Brazil made

considerable progress in reducing stunting, obesity rates remained high and continue to climb.

The increase in household income combined with strong and coordinated social, education, health policies as well as policies favourable to the productive sectors have been key for poverty and inequality reduction during 2002–2014. Nearly two-thirds of the annual poverty reduction rate in the country could be explained by the effects of median-income growth, especially up until 2008.⁴ The effect of coordinated policies was also important, especially when the growth effect diminished.

Among these policies, *Fome Zero* represented a key initiative of the new Brazilian Government in 2003. It transformed food security and nutrition into a crucial issue in the social and economic policy strategy, and also mainstreamed hunger eradication into the political agenda.⁵

DECREASING POVERTY HEADCOUNT RATIO AND GINI INDEX IN BRAZIL (YEARS 1999–2015)



NOTES: Poverty headcount ratio in Brazil (left axis) refers to USD 1.90 a day (2011 PPP). Since data on the Gini index and extreme poverty are not available for 2000 and 2010, mean imputation is applied for these years using information on the year before and after. For instance, the Gini index in 2000 is the average of the Gini index in 1999 and 2001.

SOURCE: FAO elaboration based on data from World Bank. 2019. PovcalNet: an online analysis tool for global poverty monitoring. In: *The World Bank* [online]. Washington, DC. [Cited 9 May 2019]. <http://iresearch.worldbank.org/PovcalNet/home.aspx>

BOX 14
(CONTINUED)

Fome Zero and its successor, *Brasil sem Miséria*, coordinated several programmes in diverse sectors: cash transfers, school feeding, access to health, family farming, productive inclusion and access to water, housing and sanitation facilities, among others.⁶ One of these is *Bolsa Família*, Brazil's flagship conditional cash transfer (CCT) programme. Between 2004 and 2014, *Bolsa Família* increased its expenditure from 0.29 percent to 0.46 percent of annual GDP, and household coverage from 6.6 million to 14 million households.⁷

It is estimated that the cash transfer component of *Bolsa Família* has been responsible for 25 percent

of extreme poverty reduction and near 15 percent of poverty reduction since 2004.⁸ Its distribution effect could explain between 1 percent and 1.5 percent of the annual Gini coefficient reduction in the country.⁹ Other policies directed specifically to rural populations have been important for the observed poverty and inequality reduction process. For example, Brazil is one of the few countries of the LAC region that has a non-contributive pension mechanism especially designed towards rural populations – *Previdência Rural*. Several studies have shown the importance of the programme for the income of vulnerable rural populations.¹⁰

¹ World Bank. 2019. World Development Indicators. In: *World Bank DataBank* [online]. Washington, DC. [Cited 9 May 2019]. <https://databank.worldbank.org>

² FAO. 2019. FAOSTAT. In: *FAO* [online]. Rome. [Cited 6 May 2019]. <http://www.fao.org/faostat/en/#home>

³ M. Keefe. 2016. Nutrition and equality: Brazil's success in reducing stunting among the poorest. In IFPRI. 2016. *Nourishing millions: Stories of change in nutrition*, pp. 99–105. Washington, DC.

⁴ Economic Commission for Latin America and the Caribbean (ECLAC). 2018. *Panorama Social de América Latina 2017*. Santiago de Chile.

⁵ C. Guerra Tomazini and C. Kerches da Silva Leite. 2016. Programa Fome Zero e o paradigma da segurança alimentar: ascensão e queda de uma coalizão? *Revista de Sociologia e Política*, 24(58): 13–30.

⁶ T. Campello, T. Falcão and P. Vieira da Costa. 2015. *Brasil sin Miseria*. Brasilia, Ministerio de Desarrollo Social y Combate al Hambre.

⁷ S. Cecchini and B. Atuesta. 2017. *Programas de transferencias condicionadas en América Latina y el Caribe: Tendencias de cobertura e inversión*. Santiago de Chile, ECLAC.

⁸ National poverty lines of R\$ 89 and R\$ 178 (2018), respectively.

⁹ P.H.G. Ferreira de Souza, R.G. Osorio, L.H. Paiva and S. Soares. 2018. Os efeitos do Programa Bolsa Família sobre a pobreza e a desigualdade: um balanço dos primeiros 15 anos. In Silva, Falcão Tiago. 2018. *Bolsa Família 15 anos (2003 – 2018)*, pp. 155–191. Brasilia, ENAP.

¹⁰ R.P. De Oliveira and J.R. De Aquino. 2017. A previdência rural e sua importância para as famílias pobres no nordeste: resultados de um estudo de caso no Rio Grande do Norte. *Revista Económica do Nordeste*, 48(1): 115–130; G.D. Nunes Souto, C. Becker and A. Troian. 2018. Effects of rural social security in a settlement of agrarian reform: case study in Santana do Livramento/RS. *Brazilian Journal of Development*, 4(6): 2876–2897.

- » Despite recent progress, rural areas may not always fully benefit from advances in national economic development and may experience lower levels of public investment in infrastructure and poorer access to essential services, including quality health care, education, water and sanitation,¹⁶⁰ which negatively impacts people's livelihoods, food security and nutrition.

Country-level data show that in many low- and middle-income countries, the prevalence of stunting among children is higher in rural as

compared to urban areas, according to joint WHO, UNICEF and World Bank global data on malnutrition.¹⁶¹ Furthermore, according to a pooled data analysis from multiple countries, women in rural areas have an increased risk of anaemia compared with those living in urban areas, especially among women with lower socio-economic status.¹⁶² However, the differences in prevalence of overweight among young children between urban and rural areas are quite small, and the gap in adult obesity rates between urban and rural areas is narrowing (see Part 1 of this report).

Regarding feeding practices, research findings indicate that infants in rural areas have higher levels of exclusive breastfeeding and continued breastfeeding for the first and second year than their urban peers. However, the complementary feeding practices are of poorer quality compared with those of urban areas. In urban areas, infants and young children are more likely to be fed with more diverse and frequent meals.¹⁶³ Alarmingly, only one out of every six children aged 6–23 months in low- and middle-income rural and urban settings receives a minimum acceptable diet – i.e. one that meets both the minimum number of meals and minimum diet diversity.¹⁶⁴

Inequalities in accessing basic services that are critical to eradicating hunger and malnutrition are also seen within urban areas. Massive rural-to-urban migration¹⁶⁵ is creating “hidden cities” of extreme poor urban populations, including over 800 million people living in slum conditions who are often not accounted for in official statistics.¹⁶⁶ These urban poor are particularly vulnerable to financial crises or food price hikes.¹⁶⁷ While urban populations enjoy better health on average, moving to or living in an urban area does not necessarily guarantee this health for everyone, and inequalities within urban populations are growing. For example, rates of stunting among the poorest urban populations can be as high or even higher than rates among poor rural children.¹⁶⁸ One-third of the world’s stunted children now live in urban areas.¹⁶⁹

For poor urban households, food security and nutrition are more dependent on families having cash to buy food and meet other needs than in poor rural households. This means that households rely on labour markets to provide jobs for family members with women often dependent on employment in the informal sector. Parents and other caregivers have to spend more time outside home with potential consequences for childcare and feeding.¹⁷⁰ Furthermore, access to services such as health care, safe water and sanitation is unequal.¹⁷¹ Alarmingly, the nutrition transition, which has seen shifts in consumption patterns from traditional foods that are often more healthy to highly processed foods often high in dietary energy, saturated fat, sugars and salt, is happening fastest in the urban areas of

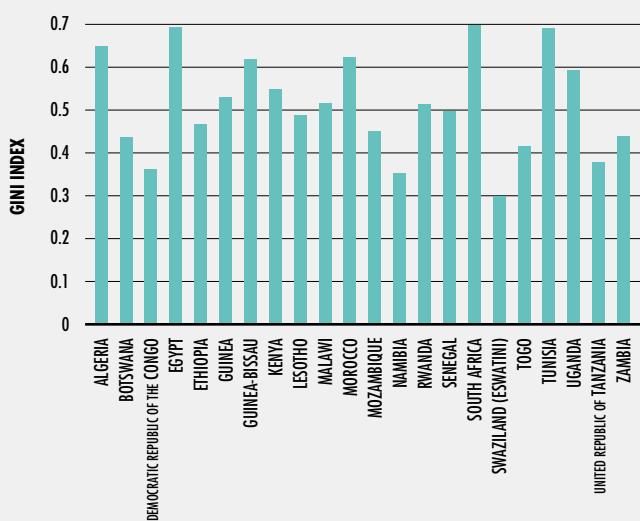
low- and middle-income countries, bringing with it increased risk of overweight, obesity and diet-related diseases.¹⁷²

The poorest of the poor are, therefore, most vulnerable to economic slowdowns and downturns whether they live in rural or urban areas.¹⁷³ Inclusive development policies aligned across sectors, which address the vulnerability of the rural poor and protect and increase the resilience of the poorest urban populations, are needed. These are particularly important in the face of economic slowdowns or downturns. They can protect the poor when public and private expenditures in basic services are cut due to lack of fiscal space. And they can protect the poor from undesirable coping strategies with negative impacts on food security and nutrition, as described in Section 2.2.

As has already been shown, during economic crises, access to health care often deteriorates, particularly for poorer population groups.¹⁷⁴ Government spending on publicly funded health services is often reduced in real terms, while healthcare demand tends to shift from private to public services because of the lower cost.¹⁷⁵ Resource constraints during economic slowdowns and downturns may result in restricted access to health care, availability, cost and deterioration in the quality of services provided, especially among the poor and marginalized groups.¹⁷⁶ These conditions are likely to disrupt treatment and subsequently worsen disease outcomes.¹⁷⁷

Economic downturns and slowdowns also affect access to education. During times of economic crisis, governments’ capacity to fund education is often reduced, and families may be less able to invest in education. At the same time, resource constraints may negatively impact the quality of education.¹⁷⁸ Again, these constraints disproportionately affect poor and marginalized groups. Unless there are contingency mechanisms and funds in place to reverse such effects on education, there may be long-term effects on human capital and a higher risk that children are taken out of school so that they can contribute to a household’s income, with consequences for their nutrition, as further explained below.¹⁷⁹

FIGURE 37
INEQUALITY IN THE DISTRIBUTION OF AGRICULTURAL LAND IS HIGH IN MANY COUNTRIES IN SUB-SAHARAN AFRICA



NOTES: The figure reports the Gini index for land distribution, mostly referring to year 2000 or around.

SOURCE: N. Cuffaro and G. D'Agostino. 2017. *Land inequality and growth: meta-analysis and relevance for contemporary development in Africa*. Working Paper n° 222 [online]. Rome, Università di Roma Tre. [Cited 5 May 2019]. <http://dipeco.uniroma3.it/db/docs/WP%20222.pdf>

Inequality in the distribution of productive assets

Evidence shows that equitable access to assets is a way through which economic progress for everyone can be enhanced.¹⁸⁰ The greater the inequality in asset distribution such as land, water, capital, finance, education and health, the more difficult it is for the poor to participate in economic growth processes. This then slows the progress in reducing food insecurity and malnutrition. For example, poor people often have little education, which prevents them from participating in labour markets that offer higher wages. This in turn reduces the rate of overall economic growth, further harming the poor and challenging their food security and nutrition.

Land-resource scarcity and inequities are growing, with poor and marginalized population groups worldwide often having the least access to land. They are confined to “poverty traps” of marginal and degraded lands of poor quality soils, where they are vulnerable to climate variability and have no secure tenure.¹⁸¹ Women, for instance, make essential contributions to agriculture in low-income countries; yet, they have less access to productive resources and opportunities than men.¹⁸²

Even in the context of sub-Saharan Africa, where arable land is relatively abundant as a whole compared with other regions, data at the country level reveal that the amount of suitable land per rural inhabitant varies considerably, and that about one-third of the countries have less than one hectare of land suitable for agriculture. Furthermore, recent data on inequality of land distribution shows that surplus land in the region is not only concentrated within relatively few countries, but that unequal distribution of land is very high in many countries (Figure 37).¹⁸³

Inequality in land ownership not only challenges livelihoods, but also undermines the productive capacity of the population. One study found that less inequality in land ownership across agricultural populations, as opposed to inequality within the landholding class, has been associated with greater public provision of education.¹⁸⁴

Women often have no security of tenure or access to financial credit.¹⁸⁵ They are disproportionately represented among landless populations that face food insecurity and are unable to meet basic needs. This often pushes them into wage farm labour and endangers their livelihoods (Box 16).¹⁸⁶

Like land access, water availability affects the livelihoods of billions globally and contributes to food security, nutrition and environmental health.¹⁸⁷ Inequalities in water access in terms of availability, access, safety and sustainability are defined across geographical regions on the basis of gender, economic, political and power relations, and thus work prominently to the disadvantage of women, smallholder farmers, indigenous communities and pastoralists.¹⁸⁸ Unfortunately, the multiple linkages between water, land, soils, food and

inequalities are rarely addressed in policies and programmes for inclusive economic growth and sustainable development.

Marginalization and social exclusion

Social exclusion is a dynamic process embedded in unequal power relationships that operate across economic, political, social and cultural dimensions. The economic dimension is defined by access to and distribution of material resources necessary to sustain life. The political dimension relates to power dynamics and unequal patterns of both formal rights and the conditions in which rights are exercised, including access to services.¹⁸⁹ These dimensions also affect food security and nutrition.

Given this context, socially excluded and marginalized groups – such as ethnic and religious minorities, indigenous populations and people with disabilities – are likely to be hit particularly hard by economic downturns. These groups already have poorer access to resources and essential services, and these inequalities are likely to increase during economic crises.¹⁹⁰

Indigenous populations around the world, for example, are often affected by poor food security and nutrition. They frequently live in extreme poverty and in environments that have been damaged; or they have lost their land and no longer have access to traditional food sources. As a result, they are particularly exposed to different types of shocks, including climate and economic shocks (Box 15).

Minority ethnic groups are often at higher risk of different forms of malnutrition. Children in most disadvantaged ethnic groups in low- and lower-middle-income countries have on average 2.8 times the rate of stunting and six times the rate of wasting compared with their more advantaged peers, although the disparities are much higher in some countries. Additionally, ethnic disparities appear to be increasing in many countries.¹⁹¹ People living with a disability are also often more vulnerable to food insecurity and malnutrition, and this relationship is bidirectional through poor living conditions and lack of access to health services.¹⁹²

Although analyses are limited, data from more developed economies show that socially disadvantaged groups are often at increased risk of malnutrition. Evidence from several middle- and high-income countries suggests that mothers from socially disadvantaged groups, including ethnic minorities and indigenous populations, have a higher risk of giving birth to babies of low birthweight¹⁹³ and of being affected by anaemia.¹⁹⁴ Furthermore, in low- and lower-middle-income countries differences in rates of childhood overweight between ethnic groups have been observed.¹⁹⁵ In some high-income countries, rates of overweight and obesity among children and adolescents have been rising faster in minority ethnic populations living in low-income communities.¹⁹⁶

Inequality within households

Inequalities of social, political and economic power are not only seen within societies as a whole, but also within households. They can make economic events particularly beneficial for some, but not for all members of the household.

At the household level, differential inequalities are determined by who has the power in deciding, for example, what is consumed.¹⁹⁷ “Bargaining-power” models within households suggest that incomes are rarely pooled together.¹⁹⁸ Consequently, gender inequalities and power struggles tend to exacerbate poverty and deprivation of food and nutritional security during periods of economic slowdown or downturn. Such intra-household inequalities often affect children negatively, depending on factors like gender, age, birth order, and mother’s socio-economic status.¹⁹⁹

The allocation of food can be severely constrained during economic slowdowns and downturns and this can be particularly challenging for some members of the household. More generally, while no systematic bias at the global level has been observed towards one specific age or sex group within a household concerning intra-household food distribution,²⁰⁰ wide consensus posits that women are disadvantaged in the allocation of food (Box 16). Also, pregnant women tend to receive relatively lower allocations, with likelihood of serious consequences for their own and their child’s nutritional status.²⁰¹ Moreover,

BOX 15**INCREASING OPPORTUNITIES FOR INDIGENOUS POPULATIONS IS KEY TO NURTURING THEIR DIETARY DIVERSITY**

Indigenous peoples are disproportionately represented among food-insecure and hungry populations.¹ For instance, Native Americans in the United States of America are at least twice as likely to be food insecure as non-Native Americans.² In Guatemala, indigenous children aged below five are twice as likely to be stunted compared to non-indigenous children.³ Similarly, indigenous peoples are disproportionately affected by the prevalence of poverty. Despite their contributions to economic empowerment and social development, indigenous women often face marginalization and discrimination even within their own communities.⁴ While indigenous peoples represent 5 percent of the world's population, they represent 15 percent of the world's poor.⁵ In Ecuador, while the national poverty rate was 30 percent in 2012, it was at 60 percent for the indigenous peoples.⁶

The prevalent loss of control over their territories and resources have left indigenous peoples impoverished in many countries. Resource-extracting development models pose threats to their lands,⁷ especially in the absence of documented land rights and tenure security. Recent changes in economic conditions, climate and access to natural resources have adversely affected their livelihood strategies, which further exacerbates the prevalence of poverty, food insecurity and hunger among these groups.

Indigenous peoples' territories cover about 22 percent of the global surface and contain 80 percent of the world's biodiversity.⁸ Because their lands and territories have not been subject to intensive

development, they have been able to maintain biodiversity on these lands over millennia, which is central to their livelihoods and natural resource management strategies.⁹

Indigenous peoples' traditional food systems involve the production of diverse foods with minimal negative impact to the environment. These systems are anchored in sustainable livelihood practices, adapted to ecosystems of their territories, and are rooted in biodiversity conservation which ensures adequate dietary diversity.¹⁰ Many neglected and underutilized species that they cultivate are nutrient dense, functional foods, rich source of micronutrients, and have an untapped livelihood and nutritional potential. For instance, Marula, native in Southern and Eastern Africa, provides four times the content of vitamin C contained in an orange. Marula has been promoted as a sustainable plant food for rural development.¹¹ Indigenous peoples' traditional farming practices including diversification of land use, crop rotations and crop diversification supports adaption to climate change. Their diets from foods harvested from forests to nutrient rich local fish, are diversified and suited to the local environments, and are a response to malnutrition.

Greater attention to address the inequalities that prevent harnessing the knowledge and nurturing indigenous peoples' traditional food systems, including through increased access through the natural resources they rely upon, will facilitate making their dietary diversity more sustainable in the face of economic and climate shocks.

¹ I. Anderson, B. Robson, M. Connolly, F. Al-Yaman, E. Bjertness, A. King, M. Tynan *et.al.* 2016. Indigenous and tribal peoples' health (The Lancet-Lowitja Institute Global Collaboration): a population study. *The Lancet*, 388(10040): 131–157; S. Lemke and T. Delormier. 2017. Indigenous peoples' food systems, nutrition, and gender: conceptual and methodological considerations. *Maternal & Child Nutrition*, 13: e12499.

² C. Gundersen. 2007. Measuring the extent, depth, and severity of food insecurity: an application to American Indians in the USA. *Journal of Population Economics*, 21(1): 191–215.

³ S. Fukuda-Parr. 2016. Re-framing food security as if gender equality and sustainability mattered. In M. Leach, ed. *Gender equality and sustainable development*, pp. 82–104. London, Routledge; New York, USA, Taylor & Francis Group.

⁴ UN. 2010. *Gender and indigenous peoples* [online]. New York, USA. [Cited 6 May 2019]. <https://www.un.org/esa/socdev/unpfii/documents/Briefing%20Notes%20Gender%20and%20Indigenous%20Women.pdf>

⁵ H.V. Kuhnlein. 2017. Gender roles, food system biodiversity, and food security in indigenous peoples' communities. *Maternal & Child Nutrition*, 13: e12529.

⁶ L. Cord, M.E. Genoni and C. Rodríguez-Castelán, eds. 2015. *Shared prosperity and poverty eradication in Latin America and the Caribbean*. Washington, DC, World Bank.

⁷ Economic Commission for Latin America and the Caribbean (ECLAC). 2014. *Guaranteeing indigenous people's rights in Latin America: Progress in the past decade and remaining challenges*. Summary. Santiago de Chile.

⁸ C. Sobrevila. 2008. *The role of indigenous peoples in biodiversity conservation: the natural but often forgotten partners*. Washington, DC, World Bank.

⁹ A. Kelles-Viitanen. 2008. *Custodians of culture and biodiversity: Indigenous peoples take charge of their challenges and opportunities*. Rome, IFAD.

¹⁰ IFAD. 2015. Second global meeting of the Indigenous Peoples' Forum at IFAD. In: *IFAD* [online]. Rome. [Cited 24 April 2019]. <https://www.ifad.org/en/web/latest/event/asset/39008834>

¹¹ R. Wynberg, J. Cribbins, R. Leakey, C. Lombard, M. Mander, S. Shackleton and C. Sullivan. 2002. Knowledge on *Sclerocarya birrea* subsp. *caffer* with emphasis on its importance as a non-timber forest product in South and southern Africa: a summary. Part 2: Commercial use, tenure and policy, domestication, intellectual property rights and benefit-sharing. *The Southern African Forestry Journal*, 196(1): 67–77.

BOX 16 GENDER DIMENSIONS OF INEQUALITY IN AGRICULTURE AND RURAL AREAS

Women play an indispensable role in on-farm and off-farm activities, particularly in rural areas, which contribute to economic welfare and food security of their households. Approximately 43 percent of the global agricultural workforce is made up of women.¹ The contribution of women to labour in African agriculture is regularly quoted in the range of 60–80 percent. Using individual, plot-level labour input data from nationally representative household surveys across six sub-Saharan African countries, recent evidence² challenges the conventional wisdom by estimating the average female labour share in crop production at 40 percent. The evidence shows that this share was slightly above 50 percent in Malawi, Uganda and United Republic of Tanzania, and substantially lower in Nigeria (37 percent), Ethiopia (29 percent) and the Niger (24 percent). The agricultural productivity of women has direct implications on income as well as on the food security of their households. Evidence suggests that increased income for women is associated with greater food consumption and improved nutritional status of household members.³

As economies grow and transform, new opportunities emerge for rural populations. Improved infrastructure and services, increased access to education, information, credit, technology, technical skills as well as improved access to agricultural value chains and markets open up new economic opportunities for both men and women. However, the extent to which women and men are able to benefit from these growing opportunities differs.⁴ Women often face greater challenges in accessing input factors (i.e. land, labour and financial services). For instance, less than 5 percent of women in North Africa and West Asia are agricultural landholders. In sub-Saharan Africa, the proportion of women holding agricultural land ranges widely from less than 5 percent in Mali up to 30 percent in Botswana and Malawi.¹ Further, many

women face greater difficulty than men accessing agricultural labour and formal financial services.²

Agricultural production outcomes also differ greatly between men and women. There is evidence that the gaps in agricultural productivity between women and men with similar-sized plots in a similar context range from 23 percent in United Republic of Tanzania, 24 percent in Ethiopia, 25 percent in Malawi, 33 percent in Uganda, and to 66 percent in the Niger.⁵ Traditional roles also require women to spend significant amounts of time on household chores and in caring for infants and young children, which limits their participation in income-generating opportunities that arise when economies grow.⁶ In developing countries, estimates indicate that women spend three hours more per day on unpaid work than men.² Finally, when rural women migrate in search of greater employment opportunities, they often face barriers seeking decent work, training opportunities, assets and personal safety.⁷

However, narrowing the gender dimensions of inequality goes beyond strengthening women's economic opportunities and decision-making capacities in groups and organizations. It also requires an in-depth understanding of intra-household dynamics where, in some parts of the world, men and women within the same household pursue separate livelihood strategies. While women are typically disadvantaged in terms of access to resources, services and markets, and burdened by more onerous daily tasks, they also lack a voice in determining household priorities, spending patterns and distribution of benefits. This includes gender inequalities in intra-household food allocation, which can result in a gender gap in food and nutrition security.⁸ Consequently, what happens inside the family has substantial implications not only for individual motivation and well-being, but also for productivity and investments in agriculture and rural development, and more importantly for food and nutrition security within the household.

¹ FAO. 2011. *The State of Food and Agriculture 2010–11. Women in agriculture, closing the gender gap for development*. Rome.

² A. Palacios-Lopez, L. Christiaensen and T. Kilic. 2017. How much of the labor in African agriculture is provided by women? *Food Policy*, 67: 52–63.

³ D. Thomas. 1990. Intra-household resource allocation: an inferential approach. *The Journal of Human Resources*, 25(4): 635–664; G.J. Bobonis. 2009. Is the Allocation of Resources within the Household Efficient? New Evidence from a Randomized Experiment. *Journal of Political Economy*, 117(3): 453–503.

⁴ IFAD. 2016. *Rural Development Report 2016. Fostering inclusive rural transformation*. Rome.

⁵ World Bank and ONE Campaign. 2014. *Levelling the field: improving opportunities for women farmers in Africa* [online]. Washington, DC, World Bank [Cited 6 May 2019]. <http://documents.worldbank.org/curated/en/579161468007198488/pdf/860390WPOWBOON0osureDate0March0180.pdf>

⁶ C.M. Blackden and Q. Wodon, eds. 2006. *Gender, time use, and poverty in sub-Saharan Africa*. World Bank Working Papers No. 73. Washington, DC, World Bank.

⁷ International Organization for Migration (IOM). 2012. *Rural women and migration* [online]. Geneva, Switzerland. [Cited 6 May 2019]. https://www.iom.int/jahia/webdav/shared/shared/mainsite/published_docs/brochures_and_info_sheets/Rural-Women-and-Migration-Fact-Sheet-2012.pdf

⁸ A. Chinyophiro. 2017. *Gender in food and nutrition security: towards attaining the right to food* [online]. UN Women, IFAD, FAO, WFP Expert Group Meeting – 'Challenges and opportunities in achieving gender equality and the empowerment of rural women and girls'. Rome, 20–22 September 2017. EGM/RWG/EP4. [Cited 7 May 2019]. <http://www.unwomen.org/-/media/headquarters/attachments/sections/csw/62/egm/ep4%20%20am%20chinyophiro.pdf?la=en&vs=2826>

- » studies done in some regions in South Asia have found that in periods of critical food shortages, the highest inequity within households tends to occur in households experiencing severe or unexpected food insecurity.²⁰²

Increasingly, evidence on associations between intra-household inequalities and malnutrition indicates that females score worse on nutritional indicators compared with males. In Bangladesh, for instance, household survey data reveal that men tend to have much smaller dietary energy shortfalls compared with women.²⁰³ Of growing concern is the coexistence of underweight or stunted children with overweight mothers in the same households in various low- and middle-income countries, such as Bangladesh, Ghana, India, Kenya and Peru.²⁰⁴ This suggests increasing inequalities in economic and social access to resources. The combination of different inequalities contributing to stunting and overweight phenomena have been linked to maternal age at first birth, maternal short stature, family size and socio-economic status.²⁰⁵ ■

2.4 POLICIES FOR ACHIEVING SUSTAINABLE ESCAPES FROM FOOD INSECURITY AND MALNUTRITION IN THE CONTEXT OF ECONOMIC SLOWDOWNS AND DOWNTURNS

KEY MESSAGES

- ➔ Responding to economic events that constrain households' purchasing power requires short- and long-term policy responses to safeguard food security and nutrition. Actions will depend on institutional capacity and availability of contingency mechanisms and funds to respond.
- ➔ Countries need to protect incomes in the short term, particularly for the most affected households, through social protection programmes, public works programmes, or policies aimed at stabilizing food prices. At the same time, they need to avoid cuts in essential social services.
- ➔ Countries need to invest wisely during periods of economic boom to reduce economic vulnerabilities and build capacity to quickly recover when economic turmoil erupts. This requires balancing a set of policies for an inclusive transformation that is characterized by economic diversification, human capital accumulation and universal access to health care and other social services.
- ➔ Given the rising importance of global trade in food and agricultural commodities, trade policy also needs to feature prominently in the minds of policymakers when promoting economic transformation that helps achieve food security and nutrition objectives.
- ➔ Integrating food security and nutrition concerns into poverty reduction efforts, while increasing synergies between poverty reduction and hunger eradication, helps accelerate both goals.
- ➔ When implementing these policies, reducing gender inequalities and social exclusion of population groups needs to be either the means to, or outcome of, improved food security and nutrition.

The imperative of safeguarding food security and nutrition

In the absence of policies and resilience capacity to face economic slowdowns and downturns when they occur, households will suffer a decline in their purchasing power, either through income loss, higher domestic prices, or both. In attempting to meet their food needs with reduced budgets, while perhaps also facing higher food prices, households may resort to coping strategies that can further weaken their food security and nutritional status.

While adverse economic conditions affect food security and nutrition in all countries through the channels analysed in Section 2.2, their impact was stronger in countries depending heavily on commodity imports and exports in the most recent 2011–2017 period. Moreover, as was also discussed previously, economic slowdowns and downturns have different impacts on different population groups, and their effects on food security and nutrition cannot be separated from the underlying factors of poverty and inequality.

This final section spells out potential policy responses to safeguard food security and nutrition in the face of economic slowdowns and downturns. It considers short-term policies that can directly and immediately tackle the main transmission channels from which the impacts of economic slowdowns and downturns flow. In the longer term, the responses will need to be guided by a vision of development that fosters pro-poor and inclusive structural transformation, allowing countries to diversify their economies and reduce their commodity dependence, and ultimately lower their economic vulnerability. Moreover, this section makes the case for the need to enhance the synergies among different policies towards reducing poverty, inequalities, food insecurity and malnutrition, as these phenomena are not easily dissociated.

Policies to respond to the key transmission channels of economic slowdowns and downturns

The main transmission channels linking the effects of economic slowdowns and downturns to food security and nutrition ([Figure 29](#)) feature prominently in the earlier analysis of this second part of the report for a very good reason: their understanding is critical for policymakers to decide what to do when these economic events begin to appear. External events, including commodity price fluctuations, can have direct impacts through terms of trade, exchange rate and balance of payments. Secondary indirect effects may arise through inflation and food prices; unemployment, wages and income; and health expenditures. Food security and nutrition will be affected depending on the ability of individuals and households – strengthened by appropriate policies – to cope with these economic events.

As shall be seen below, food security and nutrition will ultimately be affected depending on the policy responses put in place to either bring about economic adjustment (e.g. through fiscal and trade policies), or to help strengthen the resilience of households to economic shocks, and thus prevent undesirable coping strategies (e.g. through social protection or social sectoral policies), or both. Indeed, there needs to be a unique set of policies to address the myriad of potential transmission channels that economic slowdowns and downturns present for food security and nutrition. Known as countercyclical policies, these should aim at smoothing out the cycles by targeting both the demand side and the supply side of the economy. Some of these policy responses are discussed here, in relation to the key transmission channels.

At the same time, the following discussion also shows that, in addition to responding to the transmission channels, policymakers must continue with some key existing policies for nutrition and health, including maintaining the delivery and the quality of relevant care and health services and ensuring universal access to those services as well as adequate access to water and sanitation. These basic policies tend to be highly affected by cuts in social spending during

economic slowdowns and downturns if there is no contingency to prevent them.

Curbing rising food prices or offsetting their effects

International commodity price shocks and volatility transmit effects into the economy through exchange rate adjustments, as highlighted before. Declining commodity prices have resulted in currency depreciations and devaluations leading to domestic price increases. Policy responses in the face of this trend are both short and long term in nature. In the short term, there may be actions to offset the effect on domestic price increases, particularly food prices. In a different scenario, international food prices may rise, even if other commodity prices decline. In the long term, policies will target the supply side of the economy (to boost economic activity and diversification) so as to face down the secular downward trend of commodity prices, as further explained below.

Countries that depend on food imports are particularly vulnerable to commodity price fluctuations leading to an increase in food prices. When these prices rise significantly, poor households and those that are net food buyers can be highly affected. In most cases, the group of net food buyers includes poor farmers, who may not be able to take advantage of the rise in food prices by increasing their production (and earnings) and accessing markets.

To mitigate the negative impact of rising food prices on food security and nutrition, policymakers should consider different factors: the specific food items affected by the rising prices; the distribution of households between net food buyers and sellers; the possibility of substitution among different food items, without negatively affecting the quality of diets; and the potential negative effects of the policy response itself.

The most common policies that countries implement to promote food security and nutrition in the context of rising food prices can be classified into three groups.²⁰⁶ The first group includes universal policies aimed at reducing excessive volatility of food prices in the short term, such as restrictions on exports of staple food items, use of food stocks to boost

the food supply, consumption subsidies for certain essential food items, and import tariff and consumption/sales tax cuts, among others. While implementing some of these policies can be necessary for political reasons,²⁰⁷ it should be stressed that they may not necessarily be first-best policies. Some of these measures can be rather costly if they provide a price subsidy not only to poor and vulnerable households, but to the general population. They can also create pervasive market distortions and, in a trade context, can create negative externalities for other countries.

Social protection measures and other policies aimed at protecting purchasing power and access to social services constitute the second group. Social protection programmes play a critical role in both helping households avoid negative coping mechanisms and in accelerating recovery after adverse economic episodes, through the creation of new economic opportunities and the fostering of human capital in the long run (**Box 17**). For example, homegrown school feeding is a social protection strategy with proven effects in preventing undesirable coping strategies (**Box 18**). These measures aimed at producing positive results in the short and long term may be preferable to policies aimed at reducing excessive volatility of food prices. In many cases these measures are targeted to those that most need them. But it is also important to ensure universal coverage to social services and social protection as this protects families in times of economic crisis from having to decide whether to spend money on food or health.

The third group comprises medium- and long-term policies to boost domestic production of food, such as free or subsidized input distribution, import-tariff or value-added tax cuts on fertilizers and technology for agricultural production, government-funded agricultural research and extension activities, and subsidies for the adoption of new technologies and irrigation.

These policies need to be carefully designed and implemented to avoid unintended consequences. For example, consumer subsidies for staple food (cereals, oil, sugar) in many countries of the Near East and North Africa region seem to be »

BOX 17**SOCIAL PROTECTION IS CRITICAL FOR FOOD SECURITY AND NUTRITION, ESPECIALLY DURING ECONOMIC SLOWDOWNS AND DOWNTURNS**

Low-income countries are increasingly expanding their social protection systems, particularly social assistance, which may include social transfers and other programmes that ensure access to social services, social support and care services, in addition to legislation and policy reforms that ensure equity and non-discrimination. Social protection plays a critical role in improving poor households' access to food and health care, which are essential for adequate nutrition, particularly for women and children.¹

Cash transfer programmes are social assistance programmes that are usually targeted at poor and vulnerable groups.² Available evidence shows that these programmes improve household dietary diversity, increase food consumption³ and enhance productive capacity, with positive effects on the availability of more and higher quality food.⁴ However, their impact on diet diversity among young children is still inconclusive,⁵ and likewise the evidence in child nutritional status.⁶ Potential explanations include the multidimensional nature of the determinants of malnutrition, which require multisectoral approaches to see long-term changes; limited attention to explicit nutrition goals and actions; and poor service quality, which may explain the lack of overall nutrition benefits.⁷ Studies suggest that programmes with larger impacts are those that have a larger transfer size and are of long duration, are targeted at young children in

low-income households, and include complementary nutritional features.⁸

In the humanitarian context, cash transfer programmes are also being increasingly used. An analysis of these programmes in over 62 countries⁹ finds that they can support access to food and livelihoods, and prevent deteriorations in child nutrition.¹⁰

Launched in 2005, Ethiopia's Productive Safety Net Programme (PSNP) is one of the most important and largest social safety net programmes in Africa.¹¹ It contributes to both reducing poverty and strengthening the resilience of vulnerable households in the face of recurrent climate hazards and other shocks. The PSNP is the only social protection programme which has considered food security and nutrition as well as Disaster Risk Reduction in its design since its inception. It is therefore a reference for other African countries on shock-responsive social protection. It currently covers 8 million beneficiaries nationwide. Most notably, the PNSP included a contingency budget equivalent to 20 percent of the base programme cost and a risk financing facility designed to respond to transitory needs of the chronically food insecure. When such contingency was exhausted, a Risk Financing Mechanism (RFM) was developed. The financial facility and the RFM were crucial to the impact and effectiveness of the PNSP in response to the 2011 Horn of Africa crises.¹²

¹ R. de Groot, T. Palermo, S. Handa, L.P. Ragno and A. Peterman. 2015. *Cash transfers and child nutrition: what we know and what we need to know*. Office of Research Working Paper No. 2015-07 [online]. Florence, Italy, UNICEF. [Cited 7 May 2019]. https://www.unicef-irc.org/publications/pdf/Social%20protection%20and%20nutrition_layout.pdf; M.T. Ruel and H. Alderman. 2013. Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? *The Lancet*, 382(9891): 536–551.

² UNICEF. 2012. *Integrated social protection systems: enhancing equity for children*. UNICEF Social Protection Strategic Framework. New York, USA.

³ M. Adato and L. Bassett. 2009. Social protection to support vulnerable children and families: the potential of cash transfers to protect education, health and nutrition. *AIDS Care*, 21(Suppl. 1): 60–75.

⁴ B. Davis, S. Handa, N. Hypher, N. Winder Rossi, P. Winters and J. Yablonski, eds. 2016. *From evidence to action: the story of cash transfers and impact evaluation in sub-Saharan Africa*. New York, USA, UNICEF, Rome, FAO and Oxford, UK, Oxford University Press.

⁵ R. de Groot, T. Palermo, S. Handa, L.P. Ragno and A. Peterman. 2017. Cash transfers and child nutrition: pathways and impacts. *Development Policy Review*, 35(5): 621–643.

⁶ F. Bastagli, J. Hagen-Zanker, L. Harman, V. Barca, G. Sturge, T. Schmidt and L. Pellerano. 2016. *Cash transfers: what does the evidence say? A rigorous review of programme impact and of the role of design and implementation features*. London, Overseas Development Institute (ODI); J. Manley, S. Gitter and V. Slavchevska. 2013. How effective are cash transfers at improving nutritional status? *World Development*, 48: 133–155.

⁷ M.T. Ruel and H. Alderman. 2013. Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? *The Lancet*, 382(9891): 536–551.

⁸ R. de Groot, T. Palermo, S. Handa, L.P. Ragno and A. Peterman. 2015. *Cash transfers and child nutrition: what we know and what we need to know*. Office of Research Working Paper No. 2015-07 [online]. Florence, Italy, UNICEF. [Cited 7 May 2019]. https://www.unicef-irc.org/publications/pdf/Social%20protection%20and%20nutrition_layout.pdf; M.T. Ruel and H. Alderman. 2013. Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? *The Lancet*, 382(9891): 536–551; F. Bastagli, J. Hagen-Zanker, L. Harman, V. Barca, G. Sturge, T. Schmidt and L. Pellerano. 2016. *Cash transfers: what does the evidence say? A rigorous review of programme impact and of the role of design and implementation features*. London, ODI.

⁹ WFP. 2019. Cash transfers. In: *World Food Programme* [online]. Rome. [Cited 5 May 2019]. <https://www.wfp.org/cash-transfers>

¹⁰ P. Harvey and S. Bailey. 2011. *Cash transfer programming in emergencies*. Good Practice Review 11, June 2011. London, Humanitarian Practice Network, ODI.

¹¹ S. Coll-Black and J. Van Domelen. 2012. *Designing and implementing a rural safety net in a low income setting: lessons learned from Ethiopia's Productive Safety Net Program 2005–2009*. Washington, DC, World Bank.

¹² M. Hobson and L. Campbell. 2012. How Ethiopia's Productive Safety Net Programme (PSNP) is responding to the current humanitarian crisis in the Horn. *Humanitarian Exchange*, Number 53, February 2012. (also available at <https://odi.hpn.org/wp-content/uploads/2012/03/humanitarianexchange053.pdf>).

BOX 18

HOME GROWN SCHOOL FEEDING AS A WAY TO PREVENT UNDESIRABLE COPING STRATEGIES

During periods of economic difficulty, children face the risk of being taken out of school to contribute to the household income as well as of having less access to nutritious and balanced meals. Homegrown school feeding, which features among a number of possible social protection programmes, may help policymakers to reduce this risk. This innovative approach links school feeding programmes with local smallholder farmers to provide millions of school children with food that is safe, diverse, nutritious and above all local. Nearly half the world's school children, some 310 million, in low- and middle-income countries eat a daily meal at school, making this the most widespread safety net. Moreover, homegrown school feeding can not only tackle food insecurity for school-age children, but can also provide income benefits to communities at large.

The last ten years have seen a growing global consensus that school feeding programmes generate positive impacts, with the available evidence pointing to multiple benefits.¹ School feeding generates high returns in four critical areas that translate into human capital growth and sustainable development: increasing access to education, especially for girls; improving nutrition and health which, in turn, benefits cognition and learning, especially for the most vulnerable children; providing essential safety nets for poor children and their families; and stimulating local economies, especially in the agricultural sector.

The value of meals in school is equivalent to about 10 percent of families' income. For families with several children, that can mean substantial

savings. At the same time, this may also generate new economic activity.

Linking local consumption to local production helps create a stable and predictable market for local farmers, especially smallholders, including many women and mothers. In Brazil, for example, 30 percent of all purchases for school feeding come from smallholder agriculture. Another example of a large-scale homegrown programme is in Nigeria, where 6 million locally sourced eggs and 80 tonnes of fish are consumed by 9.2 million schoolchildren across the nation every week.

With the schools as reliable markets, farmers earn more income, which they spend in other parts of the economy. As the process continues, school feeding programmes create local income multipliers and spillovers by linking the school feeding programmes to caterers, traders, households, businesses and other activities in the local economy.² The Homegrown School Feeding Programme in rural Kenya, for instance, has a large income multiplier: each United States dollar (USD) transferred to a school for food purchases creates an additional USD 2.74 of total household nominal (cash) income in rural areas.

In recognition of the importance of school feeding programmes, many countries are including these initiatives in their strategies for achieving food security and implementing the 2030 Sustainable Development Agenda. Many governments are increasingly sourcing food for school feeding locally from smallholder farmers in a bid to boost local agriculture, strengthen local food systems and move people out of poverty.

¹ D.A.P. Bundy, N. de Silva, S. Horton, D.T. Jamison and G.C. Patton, eds. 2018. *Re-imagining school feeding: a high-return investment in human capital and local economies*. Child and Adolescent Health and Development, Volume 8. Washington, DC, World Bank.

² J.E. Taylor and M.J. Filipski. 2014. *Beyond experiments in development economics: local economy-wide impact evaluation*. Oxford, UK, Oxford University Press.

- » promoting unbalanced diets, increasing the risk of malnutrition and health among the population. Poor diets distorted by subsidies can contribute to greater disease burden, lead to excess health

expenditures of households and have economic impact on countries in terms of lost productivity and foregone economic growth associated with stunting and obesity.

Boosting job creation and incomes

The real economy responds to world and domestic price adjustments in various ways, as noted already. When sluggish economic activity is the result, this will lead to unemployment, loss of wages and, consequently, loss of income. Before policies can be put in place to achieve the structural transformations that can shield the economy against these external shocks, policymakers may need to resort to other types of short-term responses to minimize or, even better, fully offset the impacts on food security and nutrition.

Social protection programmes can enable countries to protect the poor and vulnerable in the event of an economic slowdown or downturn, safeguarding their food security and nutrition, while also triggering other economic benefits. The example of school feeding illustrates the dual functionality of social protection in terms of improving food security and nutrition while promoting local economic activity (**Box 18**). But social protection can also foster human capital in the long run, including through the impacts on food security and nutrition, while enhancing the productive capacity of beneficiary households (**Box 17**). And because social protection is usually targeted towards poor and vulnerable groups, mainly through social assistance, it is a policy strategy than can tackle the inequalities that prevent many people from improving their food security and nutrition during economic booms – as has been the case for some low- and middle-income countries.²⁰⁸

To enhance their impact and role, countries are starting to develop risk-informed and shock-responsive systems during times of stability, strengthening certain mechanisms in order to identify not only the poorest households, but also those which could be most affected and in need of assistance when a shock occurs.²⁰⁹ Key features of these programmes include comprehensive social registries with information on poor and vulnerable households; and early-warning information systems to alert when, and in what manner, a programme response is required. To be effective, these programmes should be able not only to maintain the support provided at times of stability, but also to scale up at times of economic slumps. However, this

can be particularly challenging during an economic slowdown or downturn if this leads to cuts in public social protection spending due to reduced government revenue. It requires both the existence of contingency mechanisms and funds – generated during periods of economic growth – and adequate institutional capacity. The successful scaling up of the system contributes to protect poor and vulnerable households, minimizing the likelihood that they use negative coping strategies with long-term consequences.

Kenya's Hunger Safety Net Programme (HSNP) is an example of a flexible and scalable social protection programme that provides a rapid response at times when the income of households is affected.²¹⁰ During more stable times, it functions like a standard social assistance programme, delivering cash transfers to poor households in northern counties of Kenya. However, the HSNP is also prepared to quickly scale up its coverage to other vulnerable households during climate shocks, like droughts.²¹¹ For that purpose, the programme has registered all households living in high-risk locations and has opened a bank account for each of them. Using satellite data, an early warning system indicates when an area is affected by a severe weather event, allowing the programme to respond by delivering additional cash transfers to all the households in the affected areas.

Another important set of social assistance programmes are Public Works Programmes. These can be used as a short-term safety net to protect the purchasing power of poor and vulnerable households at times of economic slowdowns or downturns.²¹² Unlike cash transfers (**Box 17**), public works programmes do not require detailed information to identify their intended beneficiaries. They offer low-skill, low-paying temporary jobs, usually attracting those workers that are not able to find a job in the labour market. Through the generation of public jobs in the construction and rehabilitation of local infrastructure, this kind of programme provides poor households with a stable source of income during critical times and improves their access to basic services in the longer term. There are many costs and implications in terms of design and implementation, however, which should

be taken into account when deciding on this type of intervention *vis-à-vis* unconditional cash transfers, particularly in fragile and crisis contexts.²¹³

In some countries, for example the Republic of Korea after the crisis in 1997, public works programmes were implemented with the main objective of providing temporary jobs to unemployed workers. In others, such as Sri Lanka after the 2004 tsunami, programmes pursued a double objective: providing affected households with a reliable source of income and, at the same time, rebuilding community and basic infrastructure to speed up the recovery. Then there is the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), introduced by India in 2005, which is the largest public works programme in the world. Unlike the previous cases, the MGNREGS was not designed to address employment problems arising from an economic downturn or to rebuild infrastructure damaged by a natural disaster. Building on the experience of the state of Maharashtra, the MGNREGS instead guarantees up to 100 days of unskilled manual work on public projects during the lean seasons, at the statutory minimum wage, to all rural households. In this way, the programme helps rural households to stabilize their earnings and to smooth their consumption all along the year.

Initial feasibility and subsequent sustainability of countercyclical policies

One of the most important challenges faced by policymakers at the time of economic slowdowns or downturns is the limited amount of government resources to fund the implementation of public policies. Insufficient funding, or other political priorities, can hinder the possibility of maintaining and scaling up the support provided by the public sector to poor and vulnerable households. Establishing countercyclical financial mechanisms to safeguard regular, risk-informed and shock-responsive policies is fundamental to increasing resilience of households during critical times. Of course, this requires adequate institutional capacity to capitalize on episodes of economic boom in order to have the finances on hand when the situation becomes critical.

First and foremost, it is critical to strengthen the savings capacity of the economy before an economy slows down or contracts, so as to make countercyclical policies feasible in the first place. Commodity-dependent countries, in particular, would need to save more during periods of high commodity prices, and rely more on a set of existent tools such as, *inter alia*, automatic fiscal stabilizers, stabilization funds, sovereign wealth funds, macro-prudential norms, and the like. However, more broadly, there should also be actions to raise average saving rates in order to more durably insulate the stability of aggregate demand and avoid episodes of large (though temporary) real exchange rate appreciations. By limiting the size of macroeconomic disequilibria and providing more breathing room, higher saving rates should help reduce the risks of falling into restrictive policies, as has been the case in some countries.²¹⁴ This can be critical to avoid reductions in public expenditure in priority sectors for food security and nutrition.

Fiscal policy also provides other instruments for generating funding, provided implementing reforms is fiscally and politically feasible. The available evidence²¹⁵ indicates that most developing countries should enact reforms that simultaneously enhance the redistributive impact and improve the efficiency of fiscal policies. This would help generate additional fiscal space to safeguard policies aimed at protecting food security and nutrition at the time of slowdowns and downturns. On the tax side, developing countries may have room to increase the magnitude of tax revenues, and at the same time improve their composition (e.g. moving from indirect consumption taxes to direct income taxes). On the spending side, fiscal space could be generated by avoiding the fragmentation or inefficiency of social assistance programmes. The targeting of the different programmes could be improved as well, but this would entail additional costs and requirements that might make it unfeasible if economic conditions were unfavourable.

When contingency funds are available, programmes can be scaled up by, for example, providing extra support to current beneficiaries and/or by including new households among the beneficiaries. Two developing countries

that were able to accomplish this in the past are Chile and Colombia. In these cases, countercyclical spending was financed by lowering overall spending in good times and increasing spending and/or borrowing in times of economic downturns.²¹⁶ In the case of the state of Maharashtra in India, on the other hand, the rural Employment Guarantee Scheme is financed with taxes collected from the relatively richer urban households.

In the absence of contingency funds, countries can prioritize social spending during economic crises to increase their redistributive impact and protect food security and nutrition. A suitable alternative is refocusing policy responses towards those households most affected by the downturn and, in this way, increasing the positive effect of policies on food security and nutrition of the households most in need. Another alternative is relying on contributions of partners and donors. This is the case of the HSNP in Kenya, although the agency in charge (the National Drought Management Authority) is also working to increase the contribution of different levels of government.

Fostering inclusive structural transformation to reduce economic vulnerability

Section 2.2 of this report shows that the group of countries at higher risk of compromised food security and nutrition from economic slowdowns and downturns is mostly comprised of low- and lower-middle-income countries with high commodity dependence. Nevertheless, commodity dependence may be often unavoidable, particularly for countries in the first stages of development and structural transformation.

These countries should use the periods of commodity booms to invest wisely in order to develop other sectors of the economy and foster human capital accumulation to reduce inequalities and increase economic resilience. During these periods, these countries should not only ensure the adequate countercyclical mechanisms discussed previously but also implement long-term development actions with a structural development pathway in mind.²¹⁷

This includes safeguarding and increasing expenditures on essential social services that will increase the resilience of households, and decrease population vulnerability to food insecurity and malnutrition, as prioritized in the Sustainable Development Goals.²¹⁸

Balancing policies and investments for inclusive transformation

In pursuing a longer-term development strategy, countries will need to balance a set of policies and investments to achieve a structural transformation that also fosters poverty reduction and more egalitarian societies: i.e. pro-poor and inclusive transformation. During the early stages of transformation, countries need to seek broad-based growth that is labour intensive (especially for low-skilled labour), while investing heavily in the generation of human capital to enable the development of highly productive sectors and the diversification of their economies.

It is also important to understand labour markets and balance the right policies to meet labour demand and supply. As noted earlier, export-led growth strategies in Latin America led to a more unequal income distribution, precisely because of insufficient employment growth in modern sectors. There is evidence that investing in human capital without sufficient creation of skilled jobs results in high rates of unemployment (particularly for youth) and skill mismatches in the labour market, resulting in negative repercussions in terms of rising inequality of income and opportunities, and less poverty reduction.²¹⁹ On the other hand, as economies continue to grow, countries (like many in Asia) are confronted by the need to upgrade the skills of their labour force to catch up with the labour demand of newly growing industries.²²⁰ It is important to overcome sectoral and spatial mismatches in the labour market looking at all employment possibilities (for example, through green jobs, entrepreneurship, skill training, diversification of on-farm/off-farm activities, and so forth) as well as incentives for sectoral mobility and migration (including seasonal/circular migration).

Low- and lower-middle-income countries need to develop and expand their social protection

systems while they wait the required time to see transformation in their economies and reap the rewards of investing in human capital. This may start from social assistance programmes that not only guarantee food security and a minimum income, but also support the poorest through both human capital accumulation and economic participation in society.²²¹ As countries move to more advanced stages of transformation, different types of social protection are needed to permanently support people's capacity to manage risk across the life cycle, moving from social insurance towards contributory social security.²²² In this context, setting up measures to insure against setbacks to families, nations and regions, due to disabilities, recessions, disasters and disease, is another fundamental investment for safeguarding the progress made.²²³ Investing in universal health coverage and primary health care is another important safeguard against such setbacks, and protects families from damaging out-of-pocket healthcare costs that can push families into poverty.

For transformation to be pro-poor and inclusive, in addition to investments, key reforms are often needed to enable more equal distribution of resources and access to social services. Examples of past reforms of this kind, and their positive impacts, have been seen in several countries,²²⁴ including the land reforms that transferred more land to poor farmers in the Republic of Korea and Taiwan Province of China (1940s to 1960s), and in Viet Nam (in the late 1980s and 1990s). China's establishment of the household responsibility system (1979) that held farmers responsible for the losses and profits of their agricultural activity boosted production and also massively reduced poverty in that country. The expansion of universal health insurance in Thailand (2000s) helped increase human capital, thus facilitating the participation of the poor in the economy.

The example of Costa Rica shows that moving away from commodity dependency is indeed possible. As noted earlier, this country has diversified its exports through trade reforms and an export-led growth strategy. Starting in the 1980s, it set up a number of initiatives to stimulate the diversification of the economy, including financial incentives (tax exemptions,

subsidies, etc.) leading to the development of so-called "non-traditional exports" (i.e. pineapples, cut flowers, shrimps and textiles), which already in the 1990s had outpaced traditional exports (notably coffee and bananas). At the same time, food-related manufacturing developed and export-processing zones helped attract foreign direct investment inflows in the manufacturing and high-tech sectors. Growth in the services sector also contributed to the establishment of the strong tourism industry that exists today.²²⁵ These transformations bore fruit to a large extent also because large investments had been made in human development. Costa Rica's education system has been a pioneer among Latin American countries, and has played an important role in the country's economic performance and in maintaining its democratic stability.²²⁶

The role of agricultural development is also key for reducing food-import dependence and for achieving structural transformation in both low- and middle-income countries.²²⁷ Countries with more suitable agricultural potential could invest to acquire a certain level of national staple production in order to lower food-import dependency.²²⁸ At the same time, however, these countries should also seek to develop other sectors, capitalizing on initial investments in agriculture and its related industries. For "late transforming" low-income countries, where industrialization is lagging, agro-industrial development and strengthened rural–urban linkages have large potential for improving livelihoods and contributing to the eradication of poverty.²²⁹ Investing to diversify and better integrate small-scale agriculture into markets in low-income countries can lead to positive outcomes in terms of income generation (**Box 19**), which can potentially reduce poverty, food insecurity and malnutrition. Encouraging more diverse diets and enabling the accessibility of more diverse foods can help lower demand for food staples,²³⁰ while stimulating the diversification of agricultural products, including that of local foods.²³¹ Finally, designing policies and interventions with a territorial perspective, recognizing the linkages of rural/agricultural areas with small cities/towns and larger cities, can lead to more dynamic growth of economic opportunities, including beyond agriculture.²³²

BOX 19

BOOSTING SMALL-SCALE FARMING FOR DIVERSIFICATION AND MARKET INTEGRATION IN SAO TOME AND PRINCIPÉ, AND SENEGAL

Developing agro-industrial value chains opens up market opportunities for small-scale farmers,¹ particularly in commodity-dependent countries such as São Tomé and Principe, and Senegal. São Tomé and Principe exports cocoa, and Senegal oil fuel, fishery products and gold; both are highly dependent on food imports.² Commodity dependence makes them more vulnerable to commodity price shocks. Efforts by these countries to develop a sustainable and diversified agricultural sector in recent years have included policies and programmes to increase access to markets for small-scale producers (who make up the majority of these countries' workforces) while improving the quality of agricultural production.³

Senegal's agricultural sector accounts for 17.5 percent of its GDP.⁴ The country has experienced an economic slowdown since 2006, with its agricultural sector facing several shocks that have weakened its full potential. To address this challenge, the Government stepped up investment in agriculture to more than 10 percent of GDP annually beginning in 2009, and committed to transforming the agricultural sector.⁵ The Agricultural Value Chains Support Project (PAFA), for example, was implemented in the Groundnut Basin, a region that has suffered from high levels of poverty and food insecurity following a decline in global groundnut prices. The project aimed to improve the rural livelihoods and incomes of 16 035 households by integrating small-scale producers into profitable and diversified value chains, and also to improve access to markets by establishing commercialization contracts with market operators.

The project was successful in increasing production commercialization of crops that had mainly been grown for domestic consumption. It also helped farmers to transition away from groundnut production, by investing in poultry rearing and vegetable growing.⁶ Evidence from an impact assessment of the project found that as a result of PAFA, crop income increased by 48 percent, and total income increased by 11.3 percent, within those households participating in the project.⁷

The experience of São Tomé and Principe shows that inclusive rural transformation can also be achieved through strengthening linkages between farms and markets, while also achieving positive outcomes in food security and nutrition. The Government launched the Participatory Smallholder Agriculture and Artisanal Fisheries Development Programme (PAPAFPA) in 2003, followed by the Smallholder Commercial Agriculture Project (PAPAC) in 2015. This helped promote the commercialization of organic, high quality cocoa, coffee and pepper by creating farmer cooperatives and establishing family plantations to increase sales to domestic and export markets. Results from the impact assessment of these programmes demonstrated positive and significant impacts on agricultural incomes (an increase of 46 percent, 77 percent of which was derived from cocoa, coffee and pepper); and on dietary diversity (an increase of 5 percent). Another result of the project was an increase in take-up of organic certification among the participants of the project.⁸

¹ T. Reardon, C.B. Barrett, J.A. Berdegué and J.F. Swinnen. 2009. Agrifood industry transformation and small farmers in developing countries. *World Development*, 37(11): 1717–1727.

² UNCTAD. 2017. *The State of Commodity Dependence 2016*. Geneva, Switzerland, and New York, USA.

³ IFAD. 2016. *Rural Development Report 2016. Fostering inclusive rural transformation*. Rome.

⁴ FAO. 2015. *Senegal: country fact sheet on food and agriculture policy trends* [online]. Rome. [Cited 7 May 2019]. <http://www.fao.org/3/a-i4841e.pdf>

⁵ USAID. 2019. Increasing inclusive economic growth in Senegal. In: *USAID* [online]. Updated 9 April 2019. Washington, DC. [Cited 7 May 2019]. <https://www.usaid.gov/senegal/fact-sheets/increasing-inclusive-economic-growth-senegal>

⁶ IFAD. 2018. *Results from the field*. IFAD Results Series Issue 3. Rome.

⁷ A. Garbero, D. Diatta and M. Olapade. forthcoming. *Impact assessment report: Agricultural Value Chains Support Project, Senegal*.

⁸ A. Garbero, M. Impróta and S. Gonçalves. forthcoming. *Impact assessment report: Smallholder Commercial Agriculture Project and Participatory Smallholder Agriculture and Artisanal Fisheries Development Programme, São Tomé and Principe*.

» Actions that foster agricultural development could, at the same time, lower the negative impacts of economic slowdowns and downturns on food security and nutrition; however, agricultural transformation does not always necessarily meet food-security and nutrition objectives. Besides the pro-poor nature of transformation, the positive effects of agricultural transformation on food security and nutrition will depend on the type of commodities and the quality of food that is generated under this process, and on fostering better access for everyone to more nutritious foods.²³³ The overlap of policies for food security and nutrition with others seeking to foster economic development, particularly those with a focus on poverty reduction, is further discussed in the last section.

Finally, an important point is that mobilizing investments for achieving economic diversification requires effective political leadership to address the related issues of governance and the political economy of economic and social transformation. For example, investment in human development in commodity-dependent countries, which are often low-income countries, tends to be low.²³⁴ This is explained not only by lack of resources, but also by the level of democratization of governments and capacity of government institutions. When democratization and institutional capacity are lacking, it may result in some forms of rent-seeking that impede economic growth (or prevent countries from fully taking advantage of commodity price booms) and create further social inequalities.

Making the most of trade for food security and nutrition

While economic and export diversification and domestic market development are necessary to reduce the external vulnerability that challenges food security and nutrition, import diversification is also needed as part of a larger transformation, including in food systems, towards healthier diets. Therefore, international trade as a whole, and the global, regional and unilateral policies that shape it, also need to feature prominently in the minds of policymakers when promoting this transformation.

Global, regional and unilateral trade policies are more important than ever. It was highlighted earlier that a number of universal policies can help stabilize food prices, including restrictions on exports of staple food items, or import-tariff cuts. The latter can also boost domestic production of food in the medium and long term. However, the importance of trade policies extends beyond their role in stabilizing food prices and boosting food production. These policies need to be carefully crafted to be among the triggers of a sustainable transformation.

World agricultural and food markets are increasingly integrated. This is largely driven by trade and investment policy, which influences food systems at global, regional and national levels, shaping aspects of food environments such as food availability, prices, quality, and food-security and nutrition outcomes.²³⁵

Broadly speaking, trade is good for food security. By moving food from surplus to deficit countries, trade can ensure the availability and variety of food, and promote access and stable prices. Trade can also promote dietary diversity, which is recognized as essential for adequate nutrient intake and human health. For some countries, especially low-income ones, diets reflect the diversity of foods produced, such as in Nepal.²³⁶ At the same time, trade is associated with the “nutrition transition” where diets become richer in animal sourced foods, and highly-processed foods often high in fat, sugar and salt are more widely available as average income increases. For example, Mexico’s exposure to food imports from the United States of America explains four percent of the rise in obesity prevalence among Mexican women between 1988 and 2012.²³⁷

In spite of the benefits, policymakers still need to be careful that trade policies and agreements are not detrimental to nutrition objectives – especially given that these policies rarely, if ever, consider healthy diets as their underlying rationale.²³⁸ This is quite important, considering that global trade in food and agricultural commodities has increased significantly, so there is potential for it to contribute to nutrition objectives, as noted above. This will not only require considering the impacts of trade policy on nutrition, but also enhanced coherence »

BOX 20**TRADE POLICY, FOOD SYSTEMS, AND FOOD SECURITY AND NUTRITION**

International trade has the potential to make healthy foods available to populations and foster demand for healthier food commodities. Nonetheless, trade policy rarely, if ever, considers healthy diets as its underlying rationale. Thus, rather than driving healthy diets, trade is often associated with forms of malnutrition.¹

As depicted in the figure below, trade of agricultural and food products is among the key factors mediating between trade policy and the food environment. Other key factors include foreign direct investment and domestic policies addressing nutrition goals.

Global trade in food and agricultural commodities has increased significantly in the past half century, both in terms of the quantity and value of commodities traded.² Also, foreign direct investment (FDI) has been on the rise, partly as a result of trade agreements. FDI in food and agriculture is a way of “domesticating” the food supply and deepening the capacity of the national food system, without increasing food imports. The health impacts of these changes are mixed and dependent on various factors, including whether the food products traded or the type of food-related FDI is healthy or unhealthy. FDI has been shown to be a key driver of growth in sugar-sweetened beverage (SSB) consumption.³

Increased trade in food and agricultural commodities has been accompanied by significant changes in the governance of trade. Increasingly, trade agreements are negotiated outside of the multilateral system of the World Trade Organization (WTO). The trade agreements negotiated both within the WTO system and outside of the WTO system are often characterized by power imbalances between participating countries and can be strongly influenced by the interests of multinational companies. Particularly problematic are regional and bilateral trade agreements that include unprecedented clauses, particularly strong investor protections with potentially deep impacts on domestic policy space.⁴

It is critical for country decision makers to consider the impacts of trade policy on nutrition, and to enhance coherence between trade policy and action on nutrition. However, achieving such policy coherence will require collaboration and coordination between two different stakeholder groups – from both the “trade” and “nutrition” communities – including agreement on policy objectives. This poses a significant challenge given the different worldviews, institutional

CONCEPTUAL FRAMEWORK OF KEY RELATIONSHIPS BETWEEN TRADE POLICY, NUTRITION AND HEALTH OUTCOMES

SOURCES: Adapted from C. Turner, A. Aggawal, H. Walls, A. Herforth, A. Drewnowski, J. Coates, S. Kalamianou and S. Kadiyala. 2018. Concepts and critical perspectives for food environment research: a global framework with implications for action in low- and middle-income countries. *Global Food Security*, 18: 93–101; S.G.D. Cuevas, L. Cornelisen, R. Smith and H. Walls. 2019. Economic globalization, nutrition and health: a review of quantitative evidence. *Globalization and Health*, 15: 15.

**BOX 20
(CONTINUED)**

norms, interests and power imbalances between the two communities.⁵

However, the positive news is that there have already been some agreements negotiated that point in the right direction. At the Second International Conference on Nutrition (ICN2),⁶ 164 Members of FAO and WHO agreed upon and recognized the important impact of trade on nutrition, recommending two policy actions to improve availability and access of the food supply through trade, to ensure that trade agreements do not have a negative impact on the right to adequate food in other countries. Further, building

on the ICN2 commitments, the UN Decade of Action on Nutrition⁷ identified six cross-cutting action areas, including: “trade and investment for improved nutrition”, focusing on identification of opportunities to achieve global food security and nutrition targets through trade and investment policies; and the implementation of the Principles for Responsible Investments in Agriculture and Food Systems.⁸ Trade and investment are of critical importance in supporting healthier diets and contribute to the achievement of SDG 2 (ending hunger and reducing malnutrition in all its forms by 2030).

¹ The food environment can be defined as “the interface that mediates people’s food acquisition and consumption within the wider food system. It encompasses external dimensions such as the availability, prices, vendor and product properties and promotional information; and personal dimensions such as the accessibility, affordability, convenience and desirability of food sources and products” from C. Turner, A. Aggarwal, H. Walls, A. Herforth, A. Drewnowski, J. Coates, S. Kalamatianou and S. Kadiyala. 2018. Concepts and critical perspectives for food environment research: a global framework with implications for action in low- and middle-income countries. *Global Food Security*, 18: 93–101; H. Walls, R. Smith, S. Cuevas and J. Hanefeld. forthcoming. International trade and investment: still the foundation for addressing nutrition-related non-communicable diseases in the era of Trump?

² FAO. 2018. *The State of Agricultural Commodity Markets 2018. Agricultural trade, climate change and food security*. Rome.

³ P. Baker, S. Friel, A. Schram and R. Labonte. 2016. Trade and investment liberalization, food systems change and highly processed food consumption: a natural experiment contrasting the soft-drink markets of Peru and Bolivia. *Globalization and Health*, 12(1): 24; A. Schram, R. Labonte, P. Baker, S. Friel, A. Reeves and D. Stuckler. 2015. The role of trade and investment liberalization in the sugar-sweetened carbonated beverages market: a natural experiment contrasting Vietnam and the Philippines. *Globalization and Health*, 11(1): 41.

⁴ R. Baldwin. 2011. *21st Century Regionalism: Filling the gap between 21st century trade and 20th century trade rules*. Staff Working Paper ERSD-2011-08 [online]. Geneva, Switzerland, World Trade Organization (WTO). [Cited 6 May 2019]. https://www.wto.org/english/res_e/reser_e/ersd201108_e.pdf; H.L. Walls, R.D. Smith and P. Drabos. 2015. Improving regulatory capacity to manage risks associated with trade agreements. *Globalization and Health*, 11: 14; D. Gleeson and S. Friel. 2013. Emerging threats to public health from regional trade agreements. *The Lancet*, 381(9876): 1507–1509.

⁵ H. Walls, P. Baker and R. Smith. 2015. Commentary: Moving towards policy coherence in trade and health. *Journal of Public Health Policy*, 36(4): 491–501.

⁶ FAO and WHO. 2014. *Conference Outcome Document: Framework for Action* [online]. Second International Conference on Nutrition. Rome, 19–21 November 2014. ICN2 2014/3 Corr.1. [Cited 7 May 2019]. <http://www.fao.org/3/a-mm215e.pdf>

⁷ UN. 2019. *Decade of Action on Nutrition (2016–2025)*. In: *United Nations* [online]. New York, USA. [Cited 7 May 2019]. www.un.org/nutrition

⁸ Committee on World Food Security (CFS). 2014. *Principles for responsible investment in agriculture and food systems - decision box* [online]. Forty-first Session - “Making a Difference in Food Security and Nutrition”. Rome, 13–18 October 2014. CFS 2014/41/4 Add.1. [Cited 7 May 2019]. <http://www.fao.org/3/a-ml620e.pdf>

- » between trade policy and action on nutrition. Achieving such policy coherence depends on strengthening cross-sectoral collaboration and coordination, and improving governance of policymaking processes at global, regional and country levels (Box 20).

Multisectoral policies for sustaining escapes from food insecurity and malnutrition, with a focus on poverty and inequalities

As seen earlier in the report, the impact of economic slowdowns and downturns on food security and nutrition cannot be separated from poverty and inequality issues. The interactions between poverty and hunger and malnutrition

form a vicious trap, where poverty is a cause of hunger and where a lack of adequate and proper nutrition is itself an underlying cause of poverty.²³⁹ However, poverty reduction strategies and policies are not sufficient to reduce hunger and malnutrition, including in the context of economic slowdowns and downturns, particularly if important inequalities prevail. This last section looks at how multisectoral policies for food security and nutrition are linked to policies for the reduction of poverty and inequality. It points to the importance of reinforcing these with specific actions, focusing particularly on nutrition.

How does poverty reduction play a role and what policies can be strengthened?

The disconnect between poverty alleviation and improvements in food security and nutrition has recently become more apparent, as seen in Section 2.3. Several countries have made significant progress in reducing poverty; however, similar progress in food security and nutrition has not been realized.

Of course, the relationship between poverty and food security and nutrition is also complicated by the different ways in which these two phenomena are measured, and by the limited research that has addressed both in a comparative manner. Moreover, vulnerability to poverty and to food insecurity and malnutrition is also defined through different concepts; thus, in practice, it may be difficult to identify which phenomenon manifests first in a given situation in order to understand causal relationships.²⁴⁰ For example, poor households may go hungry after a period of utilizing and depleting their resource base, showing poverty and vulnerability to food insecurity, but not actual undernourishment. Similarly, food may suddenly become physically unavailable to a household due to a idiosyncratic shock, even for non-poor households with the resources to buy nutritious food. Higher incomes can also increase food consumption, but this does not guarantee positive outcomes in nutrition.²⁴¹

From a policy perspective, these complexities have important implications. While similar policy instruments may apply in some cases for achieving both poverty reduction and food security, the specificities of food security and

nutrition should be emphasized and addressed more comprehensively.²⁴² Table 12 helps explain the ways in which policies and actions for reducing poverty can follow a more coherent multisectoral approach to food security and nutrition, using the four pillars of food security. The table also highlights constraints that may prevent the poverty reduction policies from helping to improve food security and nutrition. Sociocultural factors may play an important role for the feasibility of all these multisectoral policies; however, they can be rather context specific. The table, nonetheless, identifies some of the cultural characteristics that generally act as constraints to achieving outcomes in food security and nutrition.

Overcoming the constraints listed in Table 12 requires looking at coherent integrated policies for poverty reduction and eradication of food insecurity and malnutrition. However, because the relationship between these phenomena may be bidirectional, actions towards sustainable food security and nutrition should also consider a long-term view of poverty reduction and economic growth, as well as resilience through preparedness mechanisms and shock-responsive social protection.

A number of countries have been strengthening food security and nutrition outcomes in their poverty-reduction interventions. Social protection (social assistance in particular) can help address some of the economic and social determinants of malnutrition, including when targeting all nutritionally vulnerable populations to food insecurity and malnutrition (including infants and young children, pregnant and lactating women, people living with HIV/AIDS, older people, and those who are sick) or when ensuring that appropriate linkages with health, education and agriculture are strategically made for food security and nutrition.

Nutrition-sensitive social protection (NSSP) can be made possible by fostering policy coherence across these sectors, and by facilitating programmes that integrate different components like social assistance (e.g. cash transfers), access to nutrition education, health services, and nutrition-sensitive agriculture.²⁴³ For example, since 2013, Lesotho has been working to »

**TABLE 12
MULTISECTORAL POLICIES FOR REDUCING POVERTY, AND THE CONSTRAINTS THAT MUST BE OVERCOME
TO IMPROVE FOOD SECURITY AND NUTRITION**

Poverty reduction policies addressing each food security pillar	Constraints to achieving sustainable outcomes in food security and nutrition
<p>Physical availability of food*</p> <ul style="list-style-type: none"> ▶ Promoting poor farmers' productivity increases the production and the availability of food for the poor at the national level; however, this depends on the potential of the production frontier, type of crop and the market where agricultural production is sold. ▶ Facilitating trade of food products allows poor consumers to access food commodities at lower prices. 	<ul style="list-style-type: none"> ▶ Supporting poor farmers' food production may not provide enough food supply at national level because of market failures or lack of supply response. ▶ Additional policies in relation to food imports, trade and investments (see Box 20), utilization of food production, and available stocks for emergency situations to supply safety net mechanisms may not be in place.
<p>Economic and physical access to food**</p> <ul style="list-style-type: none"> ▶ Several poverty reduction policies aim to increase economic inclusion of the poor, which also expand their access to food and to productive resources (including land and water) and markets; and provide support to increase productivity and develop other income-generating opportunities. ▶ Ensuring a minimum income can be achieved through: social protection systems, work promotion programmes; supporting agricultural production of poor farmers and their access to markets; and more broadly, rural development programmes, investment in employment generation, and developing entrepreneurship. ▶ Supporting long-term investments in children's education and school feeding, and ensuring their access to appropriate care and health services, also helps to expand their future economic prospects and reduce the intergenerational transmission of poverty. ▶ Basic infrastructure and roads, particularly in rural areas, and the development of markets in urban and peri-urban areas facilitates physical access to food. 	<ul style="list-style-type: none"> ▶ Cultural characteristics related to gender and social inequalities, as well as other behavioural aspects, could affect equal access to food by all members in the household. They could also affect the prioritization of food, particularly of quality food, over other expenditures. These factors affect both poor and non-poor households. ▶ Supporting women's economic empowerment, as part of poverty reduction efforts, may present trade-offs in terms of their time for breastfeeding, caring for infants and young children, and food preparation. Poverty-reduction programmes often fail to address these constraints and provide additional support, including working with the whole household to reconsider existing gender roles and share household responsibilities; this can compromise women's nutritional well-being as well as that of their families. ▶ Raising the profile of traditional foods and ensuring their affordability would also require that enhanced support is provided to poor farmers. ▶ In urban areas, fostering more enabling environments for healthy food choices can be supported by zoning policies and social support systems, including safe redistribution of unsold food for charities to improve access to healthy foods; promotion of urban agriculture; and shorter food supply chains that reconnect cities to their zones of influence. ▶ In the absence of universal health coverage, poor health and/or catastrophic out-of-pocket healthcare costs can undermine achievement of a minimum income or reduce expenditure available for food.
<p>Food utilization***</p> <ul style="list-style-type: none"> ▶ Basic investments in the quality of diets; quality of health, education; and water, sanitation and hygiene (WASH) can improve childcare and feeding practices, maternal nutrition, dietary choices of consumers and food preparation. ▶ Together with improvements in information on the quality of diets, these can help prevent diseases which can affect food utilization and exacerbate malnutrition. 	<ul style="list-style-type: none"> ▶ More nutrition-specific interventions that address the immediate causes of malnutrition, and some of its underlying causes (e.g. lack of nutrition education) are often not seen as part of poverty reduction strategies. The food accessible to the poor, but also the non-poor, may be suboptimal for improved nutrition and health. Micronutrient deficiencies are often more prevalent among the poor. ▶ There are other issues related to the microbiome and its impact on food and agriculture, which simultaneously affect human nutrition. ▶ Women's lack of empowerment and intra-household gender relations, and women's lack of knowledge and understanding of nutritional issues jeopardize utilization.

**TABLE 12
(CONTINUED)**

Poverty reduction policies addressing each food security pillar	Constraints to achieving sustainable outcomes in food security and nutrition
<p>Stability of the other three dimensions over time****</p> <ul style="list-style-type: none"> ▶ Actions to sustain economic growth and foster preparedness mechanisms can help improve resilience in the face of economic and climate-related shocks more broadly. ▶ Shock-responsive social protection systems can expand cash transfers (conditional or unconditional depending on the existing level of institutionality), cash for work or food for work programmes when covariate or intrinsic shocks occur. ▶ School feeding programmes and insurance mechanisms can enable the stability of food security over time. 	<p>Constraints to achieving sustainable outcomes in food security and nutrition</p> <ul style="list-style-type: none"> ▶ In some cases, there is an absence of nutrition-sensitive interventions (including in social sector services and social protection programmes) which help address some of the underlying and basic causes of malnutrition by incorporating nutrition goals and actions from a wide range of sectors. ▶ In some cases the essential nutrition actions are not accessible to people in need.

NOTES: * Food availability addresses the "supply side" of food security and is determined by the level of food production, stock levels and net trade. ** An adequate supply of food at the national or international level does not in itself guarantee household level food security. Concerns about insufficient food access have resulted in a greater policy focus on incomes, expenditure, markets and prices in achieving food security objectives. *** Utilization is commonly understood as the way the body makes the most of various nutrients in the food. Sufficient energy and nutrient intake by individuals are the result of good care and feeding practices, food preparation, diversity of the diet and intra-household distribution of food. Combined with good biological utilization of food consumed, this determines the nutritional status of individuals. **** Even if your food intake is adequate today, you are still considered to be food insecure if you have inadequate access to food on a periodic basis, risking a deterioration of your nutritional status. Adverse weather conditions, political instability, or economic factors (unemployment, rising food prices) may have an impact on your food security status.

SOURCE: Social Protection Interagency Cooperation Board (SPIAC-B). forthcoming. *Interagency social protection assessment tool on social protection programmes for food security and nutrition*.

» improve the resilience and food and income security of the extreme poor by creating synergies between social protection and agriculture interventions. Lesotho's innovative approach complements the existing national cash transfer programme, the Child Grant Programme (CGP), with home gardening and nutrition kits and training, paying special attention to those households most affected by drought, which are not only poor but also vulnerable to food insecurity. Rigorous impact evaluations of the CGP and of additional interventions have provided strong evidence that, when all these elements are combined, a stronger impact in reducing poverty and nutrition is simultaneously achieved.²⁴⁴

However, these efforts will not be enough to protect food security and nutrition, particularly during periods of economic slowdowns and downturns, if the multisectoral approach does not address determinants of nutrition such as food security, care, health, and water, sanitation and hygiene (WASH). The health system is the primary channel through which to address some of these determinants.²⁴⁵ In recent years, Ethiopia, Uganda and the United Republic of Tanzania have all been working to scale up their nutrition interventions in this regard. These three countries have focused on essential maternal,

infant and young child nutrition during the first 1 000 days. In Ethiopia, local evidence convinced policymakers of the need to address anaemia among adolescent girls. In Uganda, participatory district assessments brought stakeholders together around evidence-informed nutrition actions. And in the United Republic of Tanzania, district-level investments for nutrition increased when capacity was developed for planning and budgeting.²⁴⁶ Universal interventions for food security and nutrition like these are necessary in order to avoid leaving out not only the poor but also several other, non-poor populations who may be at risk of food insecurity.

Economic and social inequalities impede progress in food security and nutrition

Inequality can limit opportunities for households to escape poverty, food insecurity and malnutrition. Because of income inequality, the poor are not able to benefit from economic booms – as they disproportionately accrue less income compared to others – and nor do they have sufficient income streams to better cope during episodes of economic difficulty. But, as noted earlier, finding sustained escapes from food insecurity, malnutrition and poverty also depends on having adequate access to basic services, in particular: care, health and WASH. Unfortunately, there are still great inequalities

within low- and middle-income countries in the access of these basic services. The reasons for the existing gaps need to be further analysed, including from a perspective of political economy and corruption prevention.

The stark inequalities that are observed between urban and rural areas in some developing countries demonstrate how processes of economic growth and transformation can be unequal. Poverty reduction and development efforts need to focus more on raising agricultural productivity and rural incomes, generating wider employment opportunities and integrating rural areas more effectively into mechanisms of national economic development. In doing so, it is important to conceive rural development as an endeavour that involves other actions beyond agriculture. In the twenty-first century, rurality cannot be seen to be synonymous with decline, as this view risks neglecting essential opportunities for economic growth and social development. The revalorization of rural spaces is needed, and with that, the adoption of rural policies that leverage regional assets rather than exclusively pursuing a compensatory approach.²⁴⁷ At the same time, there is a need to increase the resilience and address the food security and nutrition needs of urban residents living in extreme poverty, including by creating healthier food environments and by ensuring that the urban poor are able to access WASH services from which, despite better urban provision, they are often excluded.

Often, inequality is nested within the household, with gender inequalities still persistent across all regions, and in both developed and developing countries. As seen in the previous sections and in Section 1.1 in Part 1, women are at higher risk of undernourishment than men, and women of reproductive age tend to be more vulnerable to food insecurity and malnutrition. In order to reduce gender inequalities, more dedicated and comprehensive policies and development approaches are required that specifically target women's economic empowerment and nutrition. Integrated approaches for women could include access to reproductive health services and nutrition services, care services, skills training and access to employment, maternity protection

and social protection. In addition to assets and access to basic services, these approaches should directly address gender inequalities by focusing on the people involved: understanding who they want to be, what they want to do, and how they can achieve their goals using a joint vision and practical strategy.²⁴⁸ At the same time, this requires understanding human behaviour, fostering community awareness, and identifying effective incentives for women to access services and support.

Beyond gender inequalities, other social inequalities derived from discrimination and exclusion of population groups based on ethnicity, caste or religion – also noted earlier – hamper any potential advancement in ensuring food security and good nutrition. Social discrimination and exclusion of these population groups can be reversed only through policies and social mobilization to address the multiple challenges they face. There are a number of possible actions to this end, including: legal, regulatory and policy frameworks to promote social inclusion; national public expenditure; improving access to and adequacy of public services (sometimes exclusively targeted to these population groups); empowering institutions, their organizational capacity and their participation in decision-making processes; increasing accountability to protect human rights; and working to gradually change discriminatory attitudes and behaviours.²⁴⁹

2.5 CONCLUSIONS

This year's report continues to signal the significant challenges that remain in the fight against hunger, food insecurity and malnutrition in all its forms. Part 2 calls for bolder actions to address these challenges in the face of economic slowdowns and downturns. The latest global economic prospects warn of slowing and stalled economic growth in many countries, including emerging and developing economies. Episodes of financial stress, elevated trade tensions, declining commodity prices, and tightening financial conditions are all contributing to these increasingly grim prospects.

Part 2 has presented new evidence confirming that:

- ▶ hunger has been on the rise for many countries where the economy has slowed or contracted – strikingly, the majority of these are not low-income countries, but middle-income countries;
- ▶ economic shocks are prolonging and worsening the severity of acute food insecurity, in food crisis countries;
- ▶ economic slowdowns tend to be sharper and economic contractions deeper and longer lasting for commodity-dependent countries; and
- ▶ economic events generally have a harsher effect on food security and nutrition when extreme poverty and inequalities are greater.

Inequalities in income and in access to basic services and assets, as well as social exclusion and marginalization of groups, are preventing large numbers of people from reaping benefits during times of strong economic growth, or from coping adequately during periods of economic slowdowns or downturns. The new evidence in Part 2 points to the fact that these slowdowns and downturns disproportionately undermine food security and nutrition where inequalities are greater, particularly in middle-income countries. Income and wealth inequalities are also closely associated with undernutrition, while more complex inequality patterns are associated with obesity. Therefore, reducing these inequalities must be a primary goal, either as a means to improving food security and nutrition, or as an outcome of doing so.

The report calls for action on two fronts to safeguard food security and nutrition from economic slowdowns and downturns. In the short term, countries need to protect incomes so as to counteract economic adversity. To enhance the contingency mechanisms and financial capacity that policymakers need to respond, it is critical to strengthen savings capacity when the economy is growing, using available instruments (automatic fiscal stabilizers, stabilization funds, sovereign wealth funds, macro-prudential norms, and the like), so as to make countercyclical policies feasible. Policies may include targeted social protection programmes, including conditional

or unconditional cash transfers and school feeding; public works programmes that help reduce unemployment; or policies aimed at stabilizing food prices, and protecting incomes from damaging out-of-pocket healthcare costs by ensuring full coverage of essential health services. The potential unintended consequences for nutrition must be carefully considered throughout, and cuts to essential social services, including health, must be avoided at all costs.

In the longer term, countries need to invest wisely during periods of economic booms to reduce economic vulnerabilities and build capacity to withstand and quickly recover when economic turmoil erupts. This requires balancing a set of policies and investments to achieve an inclusive structural transformation that diversifies the economy away from commodity dependence, while also fostering poverty reduction and more egalitarian societies.

This includes transforming agriculture and food systems such that the type of commodities and the quality of food that they produce contribute to improving access to more nutritious foods for all. Measures to increase dietary diversity and to create healthier food environments are required to prevent economic slowdowns or downturns from undermining the nutritional quality of diets. Policymakers must ensure that facilitating trade access does not have unintended negative consequences for food security and nutrition in sectors that would in principle be affected by the increase in trade access. Integrating food security and nutrition concerns into poverty reduction efforts, while increasing synergies between poverty reduction and hunger eradication, must also be part of the transformation.

Ensuring that this transformation is pro-poor and inclusive will not be possible by focusing on economic growth alone: it will require tackling existing inequalities at all levels, through multisectoral policies that keep these inequalities as the central focus. Ultimately, this kind of transformation will only materialize if policies effectively strengthen the economic resilience of countries to safeguard food security and nutrition at those times when the economy slows or contracts. ■

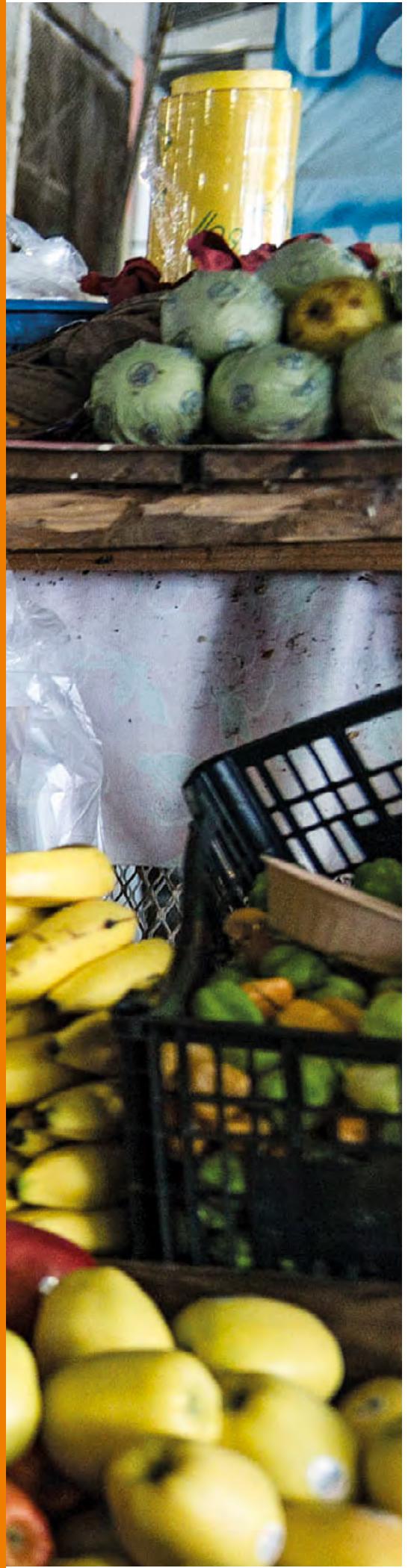


MEXICO

A participant in an FAO-supported food security project working at his fruit and vegetable stall.

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ANNEXES



ANNEX 1

ANNEX 1A. STATISTICAL TABLES TO PART 1

**TABLE A1.1
PROGRESS TOWARDS THE SUSTAINABLE DEVELOPMENT GOALS (SDGs): PREVALENCE OF UNDERNOURISHMENT, MODERATE OR SEVERE FOOD INSECURITY,
SELECTED FORMS OF MALNUTRITION, EXCLUSIVE BREASTFEEDING AND LOW BIRTHWEIGHT**

REGIONS/ SUBREGIONS/ COUNTRIES	PREVALENCE OF SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}										PREVALENCE OF MODERATE OR SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}										PREVALENCE OF WASTING IN CHILDREN (UNDER 5 YEARS OF AGE) STUNTING IN CHILDREN (UNDER 5 YEARS OF AGE) OVERWEIGHT IN CHILDREN (UNDER 5 YEARS OF AGE)										PREVALENCE OF ANEMIA AMONG WOMEN OF REPRODUCTIVE AGE (15-49)										PREVALENCE OF EXCLUSIVE BREASTFEEDING AMONG INFANTS 0-5 MONTHS OF AGE									
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%													
WORLD	14.4	10.7	7.9	8.7	23.5	25.4	7.3	25.0	21.9	5.5	5.9	11.7	13.2	30.3	32.8	36.9	31.6	41.6	15.0	14.6																														
Least Developed Countries	28.6	23.6	20.3	22.4	49.4	52.5	8.5	37.7	32.1	3.2	3.9	4.4	5.4	39.3	39.6	44.9	30.8	50.8	16.2	15.6																														
Land Locked Developing Countries	26.4	21.9	17.4	19.6	46.5	50.8	6.8	35.1	30.8	3.8	3.8	7.3	8.3	32.1	33.1	45.5	53.2	14.3	13.9																															
Small Island Developing States	21.1	17.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	18.6	20.9	30.0	31.5	36.6	31.6	11.2	11.1																															
Low-income countries	30.3	27.7	23.0	25.8	54.0	58.3	7.4	38.1	34.2	3.3	3.1	5.7	6.8	38.2	38.4	43.5	49.9	14.8	14.3																															
Lower-middle-income countries	19.6	13.8	10.7	10.9	29.6	30.6	11.6	35.7	31.1	3.7	3.9	6.5	7.6	42.2	43.0	39.4	47.6	20.6	19.9																															
Upper-middle-income countries	11.6	7.1	7.5	8.7	26.0	28.6	1.8	9.2	6.3	7.2	7.4	12.2	13.8	22.3	26.1	28.7	23.9	7.4	7.3																															
High-income countries	< 2.5	< 2.5	1.8	1.9	8.8	8.6	0.6 ^a	3.3	3.0 ^a	6.7	7.2 ^a	22.6	24.6	15.4	18.0	n.a.	n.a.	7.6	7.6																															
Low-income food-deficit countries	22.7	18.4	n.a.	n.a.	11.3	38.4	33.7	3.1	12.3	14.2	46.2	46.3	40.8	48.8	20.9	20.1																																		

TABLE A1.1
(CONTINUED)

Regions/ Subregions/ Countries	Prevalence of undernourishment in the total population ^{1,2,3}	Prevalence of severe food insecurity in the total population ^{1,2,3}	Prevalence of severe food insecurity in the total population ^{1,2,3}	Prevalence of wasting in children under 5 years of age ⁴	Prevalence of stunting in children under 5 years of age ⁴	Prevalence of overweight in children under 5 years of age ⁴	Prevalence of obesity in the adult population (older) ⁴	Prevalence among women of reproductive age (15-49) ⁴	Prevalence of breastfeeding among infants 0-5 months of age ⁴	Prevalence of low birthweight ⁴										
											2004-06	2016-18	2014-16	2016-18	2014-16	2016	2012	2015		
%	%	%	%	%	%	%	%	%	%	%							%	%		
Africa	21.3	19.6	19.7	22.1	49.5	53.1	7.1	32.6	30.0	4.8	4.9	10.4	11.8	37.7	37.7	35.6	43.7	14.1	13.7	
Northern Africa	6.1	7.1	8.4	9.1	25.9	30.8	8.5	19.2	17.2	9.7	10.6	22.5	25.4	30.9	31.8	40.5	44.7	12.4	12.2	
Algeria	8.8	3.9					n.a.	11.7	n.a.	12.4	n.a.	23.1	26.6	33.6	35.7	25.4	n.a.	7.3	7.3	
Egypt	5.4	4.5	9.4 ^b	10.1	27.6 ^b	36.0	9.5	30.7	22.3	20.4	15.7	27.9	31.1	29.3	28.5	52.8	39.5	n.a.	n.a.	
Libya		n.a.					n.a.	n.a.	n.a.	n.a.	n.a.	28.3	31.8	30.5	32.5	n.a.	n.a.	n.a.	n.a.	
Morocco	5.7	3.4					n.a.	14.9	n.a.	10.8	n.a.	22.4	25.6	34.2	36.9	27.8	n.a.	17.5	17.3	
Sudan	--	20.1	n.a.	n.a.	n.a.	16.8	34.1	38.2	1.5	3.0	5.6	7.4	29.4	30.7	41.0	54.6	n.a.	n.a.		
Tunisia	5.6	4.3				n.a.	10.1	n.a.	14.2	n.a.	24.1	27.3	28.1	31.2	8.5	n.a.	7.5	7.5		
Northern Africa (excluding Sudan)	6.1	4.3	8.4	9.1	25.9	30.8	n.a.	n.a.	n.a.	n.a.	25.4	28.7	31.2	32.1	40.4	39.5	11.5	11.4		
Sub-Saharan Africa	24.3	22.5	22.3	25.1	55.0	58.2	6.9	34.9	32.1	4.0	3.9	6.9	8.0	39.5	39.2	34.8	43.6	14.4	14.0	
Eastern Africa	34.4	30.9	25.7	27.5	60.9	64.3	6.0	38.6	35.2	4.4	4.3	4.3	5.2	30.6	31.2	48.7	59.8	13.8	13.4	
Burundi	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.1	57.6	55.9	2.9	1.4	3.5	4.4	25.6	26.7	69.3	82.3	15.5	15.1
Comoros	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	31.1	n.a.	10.6	n.a.	5.8	6.9	27.6	29.3	11.4	n.a.	24.2	23.7	
Djibouti	32.2	18.9	n.a.	n.a.	n.a.	n.a.	n.a.	33.5	n.a.	8.1	n.a.	10.8	12.2	30.9	32.7	12.4	n.a.	n.a.	n.a.	
Eritrea	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	52.0	n.a.	2.0	n.a.	3.2	4.1	36.9	38.1	68.7	n.a.	n.a.	n.a.	
Ethiopia	39.7	20.6					10.0	44.4	38.4	1.8	2.9	3.6	21.7	23.4	52.0	56.5	n.a.	n.a.		
Kenya	28.2	29.4	19.1 ^c	19.1 ^c	56.5 ^c	56.5 ^c	4.2	35.5	26.2	5.0	4.1	4.8	6.0	27.5	27.2	31.9	61.4	11.7	11.5	
Madagascar	35.0	44.4	n.a.	n.a.	n.a.	n.a.	7.9	49.4	48.9	n.a.	1.1	3.6	4.5	36.6	36.8	41.9	n.a.	17.5	17.1	
Malawi	26.1	17.5	51.7 ^c	51.7 ^c	81.9 ^c	81.9 ^c	2.8	47.3	37.4	9.0	4.6	3.9	4.7	32.3	34.4	70.8	59.4	14.9	14.5	
Mauritius	5.2	6.5	5.2	6.2	13.0	18.5	n.a.	n.a.	n.a.	n.a.	10.1	11.5	21.6	25.1	n.a.	n.a.	17.0	17.1		
Mozambique	37.0	27.9	39.5	42.5	63.7	68.6	n.a.	42.9	n.a.	7.8	n.a.	5.1	6.0	49.9	51.0	40.0	41.0	14.1	13.8	
Rwanda	44.5	36.8					2.0	44.3	36.9	6.9	5.6	3.8	4.8	19.4	22.3	83.8	86.9	8.2	7.9	
Seychelles	n.a.	n.a.	3.2 ^c	3.2 ^c	14.3 ^c	14.3 ^c	n.a.	7.9	n.a.	10.2	n.a.	12.5	14.6	20.3	22.3	n.a.	11.0	11.7		

TABLE A1.1
(CONTINUED)

REGIONS/ SUBREGIONS/ COUNTRIES	PREVALENCE OF UNDERNOURISHMENT IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF SEVERE FOOD INSECURITY IN POPULATION ^{1,2,3}	PREVALENCE OF MODERATE OR SEVERE FOOD IN- SECURITY IN POPULATION ^{1,2,3}	PREVALENCE OF WASTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF STUNTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF OVERWEIGHT IN CHILDREN (UNDER 5 YEARS OF AGE) ⁵	PREVALENCE OF OBESITY IN THE ADULT POPULATION OLDER THAN 18 YEARS AND ADULT POPULATION OLDER THAN 18 YEARS ⁶	PREVALENCE AMONG ANEMIA AMONG WOMEN OF REPRODUCITIVE AGE (15–49) ⁷	PREVALENCE OF EXCLUSIVE BREASTFEEDING MONTHS OF INFANTS 0–5 AMONG INFANTS 0–5 MONTHS OF AGE ⁸	BIRTHWEIGHT PREVALENCE OF LOW BIRTHWEIGHT ⁹								
%	%	%	%	%	2012 ⁴	2018 ⁴	2012 ⁵	2018 ⁴	2012	2016	2012	2016	2012	2016	2012	2016	2012	2015	
Somalia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	25.3	n.a.	3.0	n.a.	5.9	6.9	43.5	44.4	5.3	n.a.	n.a.	n.a.	
South Sudan	--	n.a.	n.a.	n.a.	n.a.	n.a.	31.3	n.a.	5.8	n.a.	n.a.	32.3	34.0	44.5	n.a.	n.a.	n.a.	n.a.	
Uganda	24.1	41.0	n.a.	n.a.	n.a.	3.5	33.7	28.9	5.8	3.7	3.4	4.1	38.6	37.2	62.3	65.5	n.a.	n.a.	
United Republic of Tanzania	34.4	30.7				4.5	34.9	34.5	5.2	3.7	5.8	7.1	29.6	28.5	48.7	59.0	10.7	10.5	
Zambia	51.1	46.7				6.2	n.a.	40.0	n.a.	6.2	5.4	6.5	31.2	33.7	59.9	72.0	11.9	11.6	
Zimbabwe	42.2	51.3				3.3	32.2	27.1	5.8	5.6	11.1	12.3	30.1	28.8	31.3	47.1	12.8	12.6	
Middle Africa	32.5	26.3	n.a.	n.a.	n.a.	7.2	34.5	32.1	4.5	4.6	5.5	6.6	45.4	43.5	28.5	37.7	12.8	12.5	
Angola	54.8	25.0	22.2	n.a.	64.6	n.a.	4.9	n.a.	37.6	n.a.	3.4	5.6	6.8	47.3	47.7	n.a.	37.4	15.8	15.3
Cameroon	20.3	9.9	35.6	44.2	62.2	71.2	5.2	32.6	31.7	6.4	6.7	8.1	9.5	41.7	41.4	19.9	28.0	12.1	12.0
Central African Republic	39.5	59.6	n.a.	n.a.	n.a.	n.a.	39.6	n.a.	1.9	n.a.	5.3	6.3	46.2	46.0	33.0	n.a.	14.8	14.5	
Chad	39.2	37.5	n.a.	n.a.	n.a.	13.3	38.7	39.8	2.7	2.8	4.0	4.8	48.1	47.7	3.2	0.1	n.a.	n.a.	
Congo	40.2	40.3				8.2	24.4	21.2	3.5	5.9	7.1	8.4	53.8	51.9	20.2	32.9	11.8	11.6	
Democratic Republic of the Congo	n.a.	n.a.	n.a.	n.a.	n.a.	8.1	43.4	42.7	4.7	4.4	4.6	5.6	44.7	41.0	36.4	47.3	11.1	10.8	
Equatorial Guinea	n.a.	n.a.	n.a.	n.a.	n.a.	26.2	n.a.	9.7	n.a.	6.2	7.4	44.1	43.7	7.4	n.a.	n.a.	n.a.		
Gabon	10.9	10.5				n.a.	17.0	n.a.	7.7	n.a.	12.0	13.4	58.3	59.1	5.1	n.a.	14.4	14.2	
Sao Tome and Principe	9.4	7.0	n.a.	n.a.	n.a.	4.0	30.6	17.2	11.2	2.4	8.9	10.6	45.4	46.1	50.3	71.7	6.7	6.6	
Southern Africa	6.5	8.3	48.3	30.7	53.6	3.5	30.5	29.3	12.1	13.0	23.2	25.6	25.9	26.0	n.a.	35.0	14.3	14.2	
Botswana	31.9	26.4	35.0	41.3	62.3	70.0	n.a.	n.a.	n.a.	14.7	16.1	29.4	30.2	20.3	n.a.	15.9	15.6		
Eswatini	17.0	20.6	n.a.	29.5	n.a.	63.5	2.0	30.9	25.5	10.7	9.0	12.0	13.5	26.7	27.2	43.8	63.8	10.5	
Lesotho	11.7	13.1	50.1	78.6	77.8	2.8	39.3	33.4	7.3	7.5	12.0	13.5	27.2	27.4	52.9	66.9	14.8	14.6	
Namibia	25.1	27.3	41.4	39.0	66.0	67.9	7.1	n.a.	22.7	n.a.	4.0	12.9	15.0	24.7	23.2	22.1	48.3	15.7	15.5
South Africa	4.4	6.2	22.0	29.2	45.4	51.1	2.5	27.2	27.4	17.2	13.3	24.5	27.0	25.7	25.8	n.a.	31.6	14.3	14.2

TABLE A1.1
(CONTINUED)

**TABLE A1.1
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	PREVALENCE OF UNDERNOURISHMENT IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}										PREVALENCE OF MODERATE OR SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF WASTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF STUNTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF OVERWEIGHT IN CHILDREN (UNDER 5 YEARS OF AGE) ⁵	PREVALENCE IN THE ADULT POPULATION (18 YEARS AND OLDER) ⁶	PREVALENCE AMONG WOMEN OF REPRODUCTIVE AGE (15-49) ⁷	EXCLUSIVE BREASTFEEDING MONTHS OF AGE AMONG INFANTS 0-5 MONTHS OF AGE ⁸	BIRTHWEIGHT PREVALENCE OF LOW BIRTHWEIGHT ⁹
		2004-06	2016-18	2014-16	2016-18	2014-16	2016-18 ⁴	2012 ⁶	2018 ⁴	2012 ⁶	2018 ⁴								
Tajikistan	n.a.	5.3	9.6	18.8	29.6	5.6	26.8	17.5	6.7	3.3	10.4	12.6	29.7	30.5	32.6	35.8	5.7	5.6	
Turkmenistan	4.8	5.4	n.a.	n.a.	n.a.	4.2	n.a.	11.5	n.a.	5.9	14.9	17.5	31.1	32.6	10.9	58.3	5.0	4.9	
Uzbekistan	14.5	6.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	12.9	15.3	36.8	36.2	23.8	n.a.	5.3	5.3	
Eastern Asia*	14.0	8.4	0.6	1.0	6.4	8.9	1.7	7.9	4.9	6.3	5.0	6.4	20.8	26.1	28.6	19.9	5.1	5.1	
China, mainland	15.2	8.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.1	6.6	20.7	26.4	27.6	18.6	5.0
Taiwan Province of China	4.7	3.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
China, Hong Kong SAR	<2.5	<2.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
China, Macao SAR	14.6	11.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Democratic People's Republic of Korea	35.4	47.8	n.a.	n.a.	n.a.	2.5	27.9	19.1	<0.1	2.3	6.1	7.1	30.0	32.5	68.9	71.4	n.a.	n.a.	
Japan	<2.5	<2.5	<0.5	0.6	2.3	2.8	n.a.	7.1	n.a.	1.5	n.a.	3.8	4.4	19.4	21.5	n.a.	n.a.	9.6	9.5
Mongolia	31.0	13.4	3.2	5.4	20.9	27.1	1.3	15.5	7.3	6.7	11.7	16.3	19.6	16.3	19.5	65.7	58.3	5.5	5.4
Republic of Korea	<2.5	<2.5	<0.5 ^c	<0.5	4.8 ^c	5.4	n.a.	2.5	n.a.	7.3	n.a.	4.4	4.9	18.4	22.7	n.a.	n.a.	5.4	5.8
Eastern Asia (excluding China, mainland)	5.8	7.2	<0.5	0.6	3.8	4.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	8.5	8.4	
South-eastern Asia	18.4	9.4	4.1	5.1	18.7	20.3	8.7	29.1	25.0	5.7	7.7	5.3	6.7	25.9	28.3	33.5	n.a.	12.4	12.3
Brunei Darussalam	<2.5	3.2	n.a.	n.a.	n.a.	n.a.	19.7	n.a.	8.3	n.a.	12.3	14.7	13.9	16.9	n.a.	n.a.	12.1	10.8	
Cambodia	20.0	16.4	17.1	14.2	48.9	44.9	9.8	39.8	32.4	1.9	2.2	2.7	3.5	46.0	46.8	72.8	65.2	12.6	12.1
Indonesia	19.4	8.3	1.1 ^c	1.0 ^c	8.7 ^c	13.5	39.2	36.4	12.3	11.5	5.4	6.9	26.2	28.8	40.9	n.a.	10.2	10.0	
Lao People's Democratic Republic	27.0	16.5	n.a.	n.a.	n.a.	44.2	n.a.	2.0	n.a.	3.4	4.5	36.5	39.7	39.7	44.4	17.7	17.3		
Malaysia	3.9	2.5	n.a.	n.a.	n.a.	35.1	29.4	2.6	1.5	4.4	5.7	41.7	46.3	23.6	51.2	12.5	12.3		
Myanmar	32.0	10.6	n.a.	n.a.	n.a.	11.5	n.a.	20.7	n.a.	6.0	12.7	15.3	22.2	24.9	n.a.	40.3	11.3	11.3	

**TABLE A1.1
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	PREVALENCE OF UNDERNUTRITION IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF MODERATE OR SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF WASTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF STUNTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF OVERWEIGHT IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF OBESITY IN THE ADULT POPULATION (18 YEARS AND OLDER) ⁴	PREVALENCES AMONG WOMEN OF REPRODUCTION (15-49) ⁴	PREVALENCE OF EXCLUSIVE BREASTFEEDING AMONG INFANTS 0-5 MONTHS OF AGE ⁴	BIRTHWEIGHT PREVALENCE OF LOW BIRTHWEIGHT ⁴	2004-06		2014-16		2016-18		2018 ⁴		2012 ⁵		2016		2012 ⁶		2018 ⁷		2012		2015	
											%	%	%	%	%	%	%	%	%	%	%	%	%	%	%					
Philippines	16.3	13.3	11.2	15.0	45.4	52.5	7.1	33.6	33.4	4.3	3.9	5.0	6.0	18.0	15.7	33.0	n.a.	20.4	20.1	n.a.	n.a.	9.7	9.6	n.a.	n.a.					
Singapore	n.a.	n.a.	0.7	1.0	2.8	4.1	n.a.	n.a.	n.a.	n.a.	n.a.	6.1	6.6	19.0	22.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.					
Thailand	12.5	7.8										5.4	16.4	10.5	10.9	8.2	8.4	10.8	26.3	31.8	12.3	23.0	10.8	10.5						
Timor-Leste	31.3	24.9	n.a.	n.a.	n.a.	n.a.	10.5	57.5	50.9	5.8	1.4	2.4	2.9	33.1	41.3	50.8	50.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.					
Viet Nam	18.2	9.3	1.8	2.3	16.4	14.5	6.4	22.7	24.6	4.4	5.3	1.5	2.1	21.0	24.2	17.0	24.0	8.4	8.2											
Southern Asia	21.1	14.9	12.2	12.0	30.8	30.9	14.6	38.1	32.7	2.9	3.1	4.2	5.2	48.2	48.7	46.8	53.9	27.2	26.4											
Afghanistan	33.2	29.8	15.4	18.3	45.2	54.3	9.5	n.a.	40.9	n.a.	5.4	3.7	4.5	3.7	42.0	n.a.	43.1	n.a.	n.a.											
Bangladesh	16.6	14.7	11.1	10.2	32.3	30.5	14.4	42.0	36.2	1.6	1.6	2.6	3.4	40.3	39.9	55.9	55.3	29.0	27.8											
Bhutan	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	33.5	n.a.	7.6	n.a.	4.5	5.8	39.2	35.6	48.7	51.4	11.9	11.7												
India	22.2	14.5									20.8	n.a.	37.9	n.a.	2.4	3.0	3.8	51.3	51.4	46.4	54.9	n.a.	n.a.	n.a.	n.a.					
Iran (Islamic Republic of)	6.1	4.9									n.a.	6.8	n.a.	n.a.	22.0	25.5	27.9	30.5	53.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.					
Maldives	18.2	10.3	n.a.	n.a.	n.a.	n.a.	18.6	n.a.	6.1	n.a.	5.9	7.9	41.1	42.6	45.3	n.a.	12.0	11.7												
Nepal	16.0	8.7	8.8	7.8	31.6	9.6	40.5	36.0	1.5	1.2	3.0	3.8	35.4	35.1	69.6	65.2	22.6	21.8												
Pakistan	23.3	20.3									7.1	43.0	37.6	6.4	2.5	6.3	7.8	50.1	52.1	37.0	47.5	n.a.	n.a.	n.a.	n.a.					
Sri Lanka	18.2	9.0									15.1	14.7	17.3	0.6	2.0	4.3	5.4	30.3	32.6	75.8	82.0	16.6	15.9							
Southern Asia (excluding India)	18.3	15.7	9.9	9.2	38.6	35.6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	47.7	51.4	n.a.	n.a.														
Western Asia	9.5	12.1	8.9	9.8	28.8	29.3	4.0	17.5	15.1	8.2	9.0	25.7	28.6	33.9	36.1	31.9	24.0	10.0	9.9											
Armenia	7.8	4.3	3.2	4.0	28.8	34.3	4.5	20.9	9.4	16.5	13.7	18.5	20.9	24.7	29.4	34.1	44.5	8.0	9.0											
Azerbaijan	5.5	< 2.5									3.2	16.4	17.8	10.4	14.1	17.1	19.9	36.2	38.5	10.8	12.1	7.0	7.3							
Bahrain	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	26.2	28.7	41.4	42.0	n.a.	n.a.	10.2	11.9												
Cyprus	5.7	5.6									n.a.	20.9	22.6	21.6	25.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.					

TABLE A1.]
(CONTINUED)

**TABLE A1.1
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	PREVALENCE OF UNDERNOURISHMENT IN THE TOTAL POPULATION ^{1,2,3}										PREVALENCE OF SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}										PREVALENCE OF MODERATE OR SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}										PREVALENCE OF WASTING IN CHILDREN (UNDER 5 YEARS OF AGE) STUNTING IN CHILDREN (UNDER 5 YEARS OF AGE) OVERWEIGHT IN CHILDREN (UNDER 5 YEARS OF AGE)										PREVALENCE OF LOW BIRTHWEIGHT PREGNANCY									
	2004-06		2016-18		2014-16		2016-18		2014-16		2018 ^a		2012 ^b		2018 ^a		2012 ^b		2016		2012		2016		2012		2016		2012		2015																			
Bahamas	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.											
Barbados	5.9	3.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7.7	n.a.	12.2	n.a.	22.2	24.8	20.7	21.6	19.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.											
Cuba	< 2.5	< 2.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	24.3	26.7	24.3	25.1	48.6	32.8	5.2	5.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.															
Dominica	5.7	6.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	25.6	28.2	23.5	24.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.											
Dominican Republic	24.4	9.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.4	n.a.	7.1	n.a.	7.6	23.5	26.9	29.5	29.7	8.0	4.6	11.4	11.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.															
Grenada	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	17.5	20.2	22.8	23.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.											
Haiti	57.1	49.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.7	22.0	21.9	3.6	3.4	17.2	20.5	46.1	46.2	39.3	39.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.																			
Jamaica	7.0	8.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.6	6.8	6.0	7.8	8.3	21.9	24.4	21.8	22.5	23.8	n.a.	14.7	14.6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.																
Puerto Rico	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.											
Saint Kitts and Nevis	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	20.4	23.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.										
Saint Lucia	n.a.	n.a.	4.5 ^c	4.5 ^c	22.2 ^c	22.2 ^c	n.a.	n.a.	2.5	n.a.	6.3	n.a.	17.4	19.8	21.4	21.9	3.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.													
Saint Vincent and the Grenadines	9.1	5.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	20.8	23.8	23.9	24.8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.											
Trinidad and Tobago	11.8	5.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.2	n.a.	11.4	n.a.	16.7	19.7	21.8	22.5	21.5	n.a.	12.5	12.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.																		
Central America	8.3	6.1	10.5	10.6	32.2	31.7	0.9	16.0	12.9	6.6	24.2	26.6	15.3	21.3	33.9	8.8	8.7	14.7	33.2	8.7	8.6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.																		
Belize	4.6	7.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.8	19.3	15.0	7.9	7.3	19.9	22.4	21.0	21.7	14.7	33.2	8.7	8.6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.																			
Costa Rica	5.4	4.8	4.8	5.2	21.4	23.2	n.a.	n.a.	5.6	n.a.	8.1	n.a.	22.4	25.7	13.3	14.9	32.5	n.a.	7.3	7.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.												
El Salvador	10.5	9.0	13.5	12.7	42.3	40.0	2.1	20.8	13.6	5.7	6.4	20.4	22.7	18.9	22.7	31.4	46.7	10.4	10.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.													
Guatemala	15.8	15.2	15.6	16.4	43.1	43.6	0.8	48.0	46.7	4.9	4.9	16.6	18.8	17.5	16.4	49.6	53.2	11.2	11.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.													
Honduras	17.0	12.9	18.5	17.7	52.4	49.3	n.a.	22.6	n.a.	5.2	n.a.	16.9	19.4	16.3	17.8	30.7	n.a.	11.0	10.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.													
Mexico	5.5	3.6	9.0	8.9	28.5	28.0	2.0	13.6	10.0	9.0	5.3	26.0	28.4	14.7	14.6	14.4	30.1	8.0	7.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.													
Nicaragua	24.4	17.0	n.a.	17.3	n.a.	8.3	n.a.	19.3	21.8	13.9	16.3	31.7	n.a.	10.8	10.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.															
Panama	22.9	10.0	n.a.	19.0	n.a.	9.7	n.a.	20.2	22.5	24.0	23.4	n.a.	21.5	10.2	10.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.															

TABLE A1.1
(CONTINUED)

REGIONS/ SUBREGIONS/ COUNTRIES	PREVALENCE OF UNDERNUTRITION IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF MODERATE OR SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF WASTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁵	PREVALENCE OF STUNTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁵	PREVALENCE OF OVERWEIGHT IN CHILDREN (UNDER 5 YEARS OF AGE) ⁵	PREVALENCE OF OBESITY IN THE (18 YEARS AND OLDER) ⁵	PREVALENCE AMONG WOMEN OF REPRODUCITIVE AGE (15-49) ⁵	EXCLUSIVE BREASTFEEDING MONTHS OF INFANTS 0-5 AMONG INFANTS 0-5 MONTHS OF AGE ⁵	BREASTFEEDING PREVALENCE OF WOMEN OF REPRODUCITIVE AGE (15-49) ⁵	PREVALENCE OF LOW BIRTHWEIGHT PREVALENCE OF LOW BIRTHWEIGHT	2004-06	2016-18	2014-16	2018 ⁴	2012 ⁵	2018 ⁴	2012	2016	2012	2015
												%	%	%	%	%	%	%	%		
South America	7.9	5.4	8.2	23.8	30.8	1.3^a	8.9	7.1^a	7.6	7.8^a	20.8	23.0	22.7	23.9	36.3	n.a.	8.6	8.6			
Argentina	4.7	4.6	5.8	11.3	19.1	32.1	n.a.	n.a.	n.a.	n.a.	26.3	28.5	15.9	18.6	32.0	n.a.	7.1	7.3			
Bolivia (Plurinational State of)	30.3	17.1				2.0	18.1	16.1	8.7	10.1	16.8	18.7	30.1	30.2	64.3	58.3	7.3	7.2			
Brazil	4.6	< 2.5				n.a.	n.a.	n.a.	n.a.	n.a.	19.9	22.3	25.3	27.2	38.6	n.a.	8.4	8.4			
Chile	3.9	2.7	n.a.	3.4 ^c	n.a.	13.6 ^c	0.3	2.0	1.8	9.5	9.3	26.6	28.8	11.6	15.0	n.a.	n.a.	6.0	6.2		
Colombia	9.7	4.8				n.a.	12.6	n.a.	4.8	n.a.	19.9	22.1	22.3	21.1	n.a.	n.a.	10.0	10.0			
Ecuador	17.0	7.9	7.1 ^c	7.1 ^c	23.3 ^c	1.6	25.4	23.9	7.5	8.0	17.3	19.3	18.4	18.8	n.a.	n.a.	11.3	11.2			
Guyana	9.4	8.1	n.a.	n.a.	n.a.	6.4	19.3	11.3	6.7	5.3	16.6	19.2	33.4	32.3	31.3	21.1	15.8	15.6			
Paraguay	11.9	10.7				1.0	10.7	5.6	11.3	12.4	16.7	19.0	20.5	22.8	24.4	29.6	8.2	8.1			
Peru	19.6	9.7				0.5	18.4	12.9	7.2	8.0	17.2	19.1	20.0	18.5	67.4	64.2	9.5	9.4			
Suriname	10.9	8.5	n.a.	n.a.	n.a.	8.8	n.a.	4.0	n.a.	24.2	26.5	23.4	24.1	2.8	n.a.	14.9	14.7				
Uruguay	4.3	< 2.5	6.6	7.6	20.6	25.3	n.a.	10.7	n.a.	7.2	n.a.	26.8	28.9	18.3	20.8	n.a.	7.9	7.6			
Venezuela (Bolivarian Republic of)	10.5	21.2				n.a.	13.4	n.a.	6.4	n.a.	23.3	25.2	22.9	23.9	n.a.	n.a.	8.6	9.1			
OCEANIA	5.5	6.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	26.5	28.9	14.8	16.5	n.a.	7.8	7.9					
Australia and New Zealand	< 2.5	< 2.5	2.7	3.6	11.2	13.5	n.a.	n.a.	n.a.	28.2	30.7	8.3	9.5	n.a.	n.a.	6.2	6.4				
Australia	< 2.5	< 2.5	2.7	3.5	11.3	13.4	n.a.	n.a.	n.a.	n.a.	27.9	30.4	8.1	9.1	n.a.	n.a.	6.3	6.5			
New Zealand	< 2.5	< 2.5	2.7	4.1	10.6	14.0	n.a.	n.a.	n.a.	n.a.	29.5	32.0	9.7	11.6	n.a.	n.a.	5.9	5.7			
Oceania excluding Australia and New Zealand	n.a.	n.a.	n.a.	n.a.	n.a.	9.4	37.7	38.2	7.3	9.1	20.1	22.4	33.2	35.4	56.8	n.a.	10.0	9.9			
Melanesia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	18.4	n.a.	n.a.	n.a.	33.9	35.9	56.8	n.a.	10.1	9.9		
Fiji	4.3	3.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	27.2	30.0	29.8	31.0	n.a.	n.a.	n.a.	n.a.	n.a.			

TABLE A1.1
(CONTINUED)

REGIONS/ SUBREGIONS/ COUNTRIES	PREVALENCE OF UNDERNOURISHMENT IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF MODERATE OR SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF WASTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF STUNTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF OVERWEIGHT IN CHILDREN (UNDER 5 YEARS OF AGE) ⁵	PREVALENCE OF OBESITY IN THE ADULT POPULATION OLDER THAN 18 YEARS AND ADULT POPULATION 15-49 ⁶	PREVALENCE AMONG WOMEN OF REPRODUCTIVE AGE (15-49) ⁷	EXCLUSIVE BREASTFEEDING MONTHS OF AGE AMONG INFANTS 0-5 MONTHS ⁸	BIRTHWEIGHT PREVALENCE OF LOW BIRTHWEIGHT ⁹	2004-06	2016-18	2014-16	2016-18	2014-16	2018 ⁴	2012 ⁵	2018 ⁴	2012 ⁵	2016	2012	2016	2012 ⁶	2018 ⁷	2012	2015
New Caledonia	8.2	7.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	49.5	n.a.	13.7	n.a.	17.1	19.4	34.4	36.6	56.1	n.a.	n.a.	n.a.					
Papua New Guinea	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	49.5	n.a.	13.7	n.a.	17.1	19.4	34.4	36.6	56.1	n.a.	n.a.	n.a.					
Solomon Islands	11.9	8.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	8.5	n.a.	31.6	n.a.	4.5	17.9	20.5	38.4	38.9	73.7	76.2	n.a.	n.a.				
Vanuatu	7.0	7.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4.4	n.a.	28.5	n.a.	4.6	20.7	23.5	24.1	24.0	39.5	72.6	11.0	10.9				
Micronesia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	44.2	46.8	22.3	25.1	69.0	n.a.	9.4	9.3				
Kiribati	4.6	2.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	43.0	45.6	23.8	26.1	69.0	n.a.	n.a.	n.a.				
Marshall Islands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.5	n.a.	34.8	n.a.	4.1	50.1	52.4	24.1	26.6	27.3	42.3	n.a.	n.a.				
Micronesia (Federated States of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	38.6	41.6	19.5	23.3	n.a.	n.a.	n.a.	n.a.				
Nauru	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	59.3	60.7	n.a.	n.a.	67.2	n.a.	n.a.	n.a.				
Palau	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	52.5	54.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.				
Polynesia	3.7	3.6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	43.9	46.5	23.0	27.6	51.6	70.3	8.1	8.1				
American Samoa	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.				
Cook Islands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	53.0	55.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.				
French Polynesia	3.9	4.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	46.0	49.3	n.a.	n.a.	n.a.	n.a.	3.5	3.5			
Niue	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4.9	n.a.	5.3	42.9	45.5	25.4	31.3	51.3	70.3	n.a.	n.a.	
Samoa	3.5	2.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.			
Tokelau (Associate Member)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.			
Tonga	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	8.1	n.a.	17.3	n.a.	43.3	45.9	19.0	21.3	52.2	n.a.	n.a.	n.a.	n.a.	n.a.			
Tuvalu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	47.8	51.0	n.a.	n.a.	34.7	n.a.	n.a.	n.a.	n.a.			
NORTHERN AMERICA AND EUROPE	< 2.5	< 2.5	1.4	1.1	9.3	8.4	n.a.	n.a.	n.a.	n.a.	n.a.	26.7	29.0	15.4	17.8	n.a.	n.a.	7.0	7.0							
Northern America	< 2.5	< 2.5	1.0	1.0	9.9	8.8	0.4	2.7	2.6	8.0	8.8	34.1	36.7	10.6	12.9	25.5	34.7	7.9	7.9							
Bermuda	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.			

TABLE A1.1
(CONTINUED)

REGIONS/ SUBREGIONS/ COUNTRIES	PREVALENCE OF UNDERNOURISHMENT IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF MODERATE OR SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF WASTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF STUNTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF OVERWEIGHT IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF OBESITY IN THE ADULT POPULATION OLDER THAN 18 YEARS AND ADULT POPULATION 18 YEARS AND OLDER ⁴	PREVALENCE AMONG WOMEN OF REPRODUCITIVE AGE (15–49) ⁴	EXCLUSIVE BREASTFEEDING MONTHS OF INFANTS 0–5 AMONG BREASTFEEDING WOMEN ⁴	BIRTHWEIGHT PREVALENCE OF LOW BIRTHWEIGHT ⁴									
											2004–06	2016–18	2014–16	2016–18	2012	2015			
United States of America	< 2.5	< 2.5	1.1 ^c	1.0 ^c	10.5 ^c	9.2 ^c	0.4	2.1	3.5	6.0	9.4	34.7	37.3	10.9	13.3	25.5	34.7		
Europe	< 2.5	< 2.5	1.6	1.2	9.0	8.2	n.a.	n.a.	n.a.	n.a.	23.4	25.4	17.6	20.2	n.a.	n.a.	6.6	6.5	
Eastern Europe	< 2.5	< 2.5	1.2	1.0	11.0	10.5	n.a.	n.a.	n.a.	n.a.	23.9	25.8	22.1	24.2	n.a.	n.a.	6.2	6.1	
Belarus	3.0	< 2.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	24.6	26.6	20.4	22.6	
Greenland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Bulgaria	6.5	3.6	1.7	2.1	14.1	11.8	n.a.	n.a.	n.a.	n.a.	25.3	27.4	24.2	26.4	n.a.	n.a.	9.4	9.6	
Czechia	< 2.5	< 2.5	0.6	< 0.5	5.8	3.8	n.a.	n.a.	n.a.	n.a.	26.6	28.5	23.3	25.7	n.a.	n.a.	7.9	7.8	
Hungary	< 2.5	< 2.5	1.2	0.8	10.6	8.3	n.a.	n.a.	n.a.	n.a.	26.4	28.6	23.6	25.8	n.a.	n.a.	8.6	8.8	
Poland	< 2.5	< 2.5	1.7	0.7	8.7	5.3	n.a.	2.9	2.6	n.a.	23.4	25.6	23.5	25.7	n.a.	n.a.	5.7	5.9	
Republic of Moldova	n.a.	n.a.	1.6	2.8	20.0	25.4	n.a.	6.4	n.a.	4.9	n.a.	18.3	20.1	25.6	26.8	36.4	n.a.	5.0	5.0
Romania	< 2.5	< 2.5	5.5	4.0	19.2	14.7	n.a.	n.a.	n.a.	n.a.	n.a.	22.1	24.5	24.6	26.7	n.a.	n.a.	8.3	8.2
Russian Federation	< 2.5	< 2.5	< 0.5	< 0.5	8.2	6.2 ^c	n.a.	n.a.	n.a.	n.a.	n.a.	23.9	25.7	21.3	23.3	n.a.	n.a.	6.0	5.8
Slovakia	6.2	3.4	0.5	< 0.5	5.7	4.7	n.a.	n.a.	n.a.	n.a.	n.a.	20.4	22.4	24.5	26.6	n.a.	n.a.	8.0	7.6
Ukraine	< 2.5	3.5	1.8	1.8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	24.2	26.1	21.3	23.5	19.7	n.a.	5.4	5.6
Northern Europe	< 2.5	< 2.5	3.1	1.7	8.6	6.0	n.a.	n.a.	n.a.	n.a.	25.2	27.5	12.6	16.0	n.a.	n.a.	6.1	6.0	
Denmark	< 2.5	< 2.5	0.8	1.0	5.7	5.3	n.a.	n.a.	n.a.	n.a.	n.a.	19.8	21.3	13.4	16.3	n.a.	n.a.	5.3	5.3
Estonia	4.2	2.9	1.1	1.3	9.7	8.6	n.a.	n.a.	n.a.	n.a.	22.3	23.8	23.4	25.6	n.a.	n.a.	4.4	4.3	
Finland	< 2.5	< 2.5	2.3	2.0	9.3	8.3	n.a.	n.a.	n.a.	n.a.	23.2	24.9	13.1	15.9	n.a.	n.a.	4.2	4.1	
Iceland	< 2.5	< 2.5	1.7	1.5	6.4	6.7	n.a.	n.a.	n.a.	n.a.	21.3	23.1	13.2	16.1	n.a.	n.a.	3.9	4.2	
Ireland	< 2.5	< 2.5	3.6 ^d	2.8	9.5 ^d	6.6	n.a.	n.a.	n.a.	n.a.	23.9	26.9	12.2	14.8	n.a.	n.a.	5.3	5.9	
Latvia	< 2.5	< 2.5	1.4	1.2	10.4	10.0	n.a.	n.a.	n.a.	n.a.	24.2	25.7	22.9	25.1	n.a.	n.a.	4.5	4.5	
Lithuania	< 2.5	< 2.5	0.5	< 0.5	13.8	11.2	n.a.	n.a.	n.a.	n.a.	26.7	28.4	23.2	25.5	n.a.	n.a.	4.5	4.5	

**TABLE A1.1
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	PREVALENCE OF SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}	MODERATE OR SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ^{1,2,3}	PREVALENCE OF WASTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF STUNTING IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF OVERWEIGHT IN CHILDREN (UNDER 5 YEARS OF AGE) ⁴	PREVALENCE OF OBESITY IN THE (18 YEARS AND OLDER) ⁴	PREVALENCE AMONG WOMEN OF REPRODUCITIVE AGE (15-49) ⁴	EXCLUSIVE BREASTFEEDING MONTHS OF INFANTS 0-5 AMONG INFANTS 0-5 BIRTHWEIGHT PREVALENCE OF LOW BIRTHWEIGHT										
										2004-06	2016-18	2014-16	2016-18	2014-16	2018 ⁴	2012	2015		
	%	%	%	%	%	%	%	%	%						%	%	%		
Norway	< 2.5	< 2.5	1.1	1.1	5.0	5.1	n.a.	n.a.	n.a.	23.0	25.0	12.7	15.3	n.a.	n.a.	4.7	4.5		
Sweden	< 2.5	< 2.5	0.8	1.0	4.5	5.4	n.a.	n.a.	n.a.	20.4	22.1	12.8	15.4	n.a.	n.a.	3.8	2.4		
United Kingdom of Great Britain and Northern Ireland	< 2.5	< 2.5	4.0	1.8	9.3	5.6	n.a.	n.a.	n.a.	26.9	29.5	11.5	15.3	n.a.	n.a.	6.9	7.0		
Southern Europe	< 2.5	< 2.5	1.6	1.7	9.8	9.4	n.a.	n.a.	n.a.	22.8	24.6	15.8	18.6	n.a.	n.a.	7.2	7.3		
Albania	10.9	6.2	10.1	11.1	38.7	38.6	1.6	23.2	11.3	23.2	16.4	19.9	22.3	22.7	25.3	37.1	36.5	4.6	
Andorra	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	26.6	28.0	11.6	13.9	n.a.	n.a.	7.5	7.4		
Bosnia and Herzegovina	3.2	< 2.5	1.4	1.1	9.8	9.2	n.a.	8.9	n.a.	17.4	n.a.	17.7	19.4	27.1	29.4	18.2	n.a.	3.4	
Croatia	2.9	< 2.5	0.7	0.9	6.4	7.8	n.a.	n.a.	n.a.	n.a.	24.9	27.1	25.2	27.3	n.a.	n.a.	4.8	5.1	
Greece	< 2.5	< 2.5	2.3	2.8	16.1	17.4	n.a.	n.a.	n.a.	n.a.	25.4	27.4	13.1	15.9	n.a.	n.a.	8.7	8.7	
Italy	< 2.5	< 2.5	1.1	1.0	8.1	7.1	n.a.	n.a.	n.a.	n.a.	21.4	22.9	14.4	17.3	n.a.	n.a.	7.0	7.0	
Malta	< 2.5	< 2.5					n.a.	n.a.	n.a.	n.a.	29.5	31.0	13.7	16.4	n.a.	n.a.	7.0	6.3	
Montenegro	--	< 2.5	2.2	2.1	13.0	12.0	2.8	n.a.	9.4	n.a.	22.3	23.1	24.9	22.8	25.2	19.3	16.8	5.2	5.5
North Macedonia	6.1	3.2	3.7	3.2	14.3	13.2	n.a.	4.9	n.a.	12.4	n.a.	21.9	23.9	19.5	23.3	23.0	n.a.	8.8	9.1
Portugal	< 2.5	< 2.5	4.2	3.2	15.7	11.5	n.a.	n.a.	n.a.	n.a.	21.0	23.2	14.7	17.5	n.a.	n.a.	8.5	8.9	
Serbia	--	5.7	1.3	1.6	10.6	11.7	3.9	6.6	6.0	15.6	13.9	21.6	23.5	24.9	27.2	13.4	12.8	4.6	4.5
Slovenia	< 2.5	< 2.5					n.a.	n.a.	n.a.	n.a.	20.6	22.5	21.9	24.4	n.a.	n.a.	6.2	6.1	
Spain	< 2.5	< 2.5	1.2	1.5	7.1	7.5	n.a.	n.a.	n.a.	n.a.	25.0	27.1	13.8	16.6	n.a.	n.a.	8.2	8.3	
Western Europe	< 2.5	< 2.5	1.0	5.5	5.0	n.a.	n.a.	n.a.	n.a.	22.4	24.2	14.0	17.0	n.a.	n.a.	7.0	6.9		
Austria	< 2.5	< 2.5	1.1	1.2	5.7	4.4	n.a.	n.a.	n.a.	n.a.	20.1	21.9	14.4	17.3	n.a.	n.a.	6.9	6.5	
Belgium	< 2.5	< 2.5	3.1	3.6	9.2	10.3	n.a.	n.a.	n.a.	n.a.	22.9	24.5	13.4	16.2	n.a.	n.a.	6.9	7.3	
France	< 2.5	< 2.5	1.5	0.8	6.8	6.4	n.a.	n.a.	n.a.	n.a.	21.6	23.2	14.9	18.1	n.a.	n.a.	7.4	7.4	

TABLE A1.1
(CONTINUED)

REGIONS/ SUBREGIONS/ COUNTRIES	PREVALENCE OF UNDERNUTRITION IN THE TOTAL POPULATION ¹ , ² , ³										PREVALENCE OF SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ¹ , ² , ³						PREVALENCE OF MODERATE OR SEVERE FOOD INSECURITY IN THE TOTAL POPULATION ¹ , ² , ³						PREVALENCE OF WASTING IN CHILDREN (UNDER 5 YEARS OF AGE) STUNTING IN CHILDREN (UNDER 5 YEARS OF AGE) OVERWEIGHT IN CHILDREN (UNDER 5 YEARS OF AGE)						PREVALENIA AMONG ANEMIA AMONG WOMEN OF REPRODUCTIVE AGE (15-49)						PREVALENCE OF EXCLUSIVE BREASTFEEDING MONTHS OF AGE AMONG INFANTS 0-5						BIRTHWEIGHT PREVALENCE OF LOW					
	2004-06	2016-18	2014-16	2016-18	2014-16	2016-18	2018 ⁴	2012 ⁵	2018 ⁴	2012 ⁶	2016	2012	2016	2012 ⁶	2018 ⁷	2012	2016	2012 ⁶	2018 ⁷	2012	2016	2012 ⁶	2018 ⁷	2012	2016	2012 ⁶	2018 ⁷	2012	2016	2012 ⁶	2018 ⁷															
Germany	< 2.5	< 2.5	0.9	0.7	4.1	3.6	n.a.	n.a.	n.a.	n.a.	n.a.	23.7	25.7	13.4	16.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.															
Luxembourg	< 2.5	< 2.5	1.2	0.8	4.7	3.3	n.a.	n.a.	n.a.	n.a.	n.a.	22.4	24.2	13.3	16.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.															
Netherlands	< 2.5	< 2.5	1.5	1.3	5.5	4.3	n.a.	n.a.	n.a.	n.a.	n.a.	21.0	23.1	13.4	16.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.															
Switzerland	< 2.5	< 2.5	1.1	0.8	4.0	3.1	n.a.	n.a.	n.a.	n.a.	n.a.	19.6	21.2	15.1	18.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.															

¹ Regional estimates are included when more than 50 percent of population is covered. To reduce the margin of error, estimates are presented as three-year averages.

² FAO estimate of the percentage of people in the total population living in households where at least one adult has been found to be food insecure. To reduce the impact of year-to-year sampling variability, estimates are presented as three-year averages.

³ Country-level results are presented only for those countries for which estimates are based on official national data (see note c) or as provisional estimates, based on FAO data collected through the Gallup World Poll, for countries whose national relevant authorities provided permission to publish them. Note that consent to publish does not necessarily imply validation of the estimate by the national authorities involved and that the estimate is subject to revision as soon as suitable data from official national sources are available. Global, regional and subregional aggregates reflect data collected in approximately 150 countries.

⁴ For regional estimates, values correspond to the model predicted estimate for the year 2018. For countries, the latest data available from 2013 to 2018 are used.

⁵ For regional estimates, values correspond to the model predicted estimate for the year 2012. For countries, the latest data available from 2005 to 2012 are used.

⁶ Regional estimates are included when more than 50 percent of population is covered. For countries, the latest data available from 2005 to 2012 are used.

⁷ Regional estimates are included when more than 50 percent of population is covered. For countries, the latest data available from 2013 to 2018 are used.

* Wasting, stunting, and overweight under 5 years of age and low birthweight regional aggregates exclude Japan.

a. Consecutive low population coverage; interpret with caution.
b. The Central Agency for Public Mobilization & Statistics (CAPMAS) reports an estimate of severe food insecurity of 1.3 percent for 2015, based on HIES data, using the WFP consolidated approach for reporting indicators of food security. Note that the two estimates are not directly comparable due to different definitions of 'severe food insecurity'.
c. Based on official national data.
d. The Government of Ireland reports estimates of the "Proportion of the population at risk of food poverty" produced by the Central Statistics Office (CSO) and Economic and Social Research Institute (ESRI) as part of the Survey on Income and Social Conditions (SILC) 2015, as a proxy for SDG indicator 2.1.2. See <https://irelandsdg.geohive.ie/datasets/sdg-2-1-2-prevalence-of-moderate-or-severe-food-insecurity-in-the-population-based-on-the-food-insecurity-experience-scale-nuts-3-2015-ireland-sso-0si>

TABLE A1.2
PROGRESS TOWARDS THE SUSTAINABLE DEVELOPMENT GOALS (SDGs): NUMBER OF PEOPLE WHO ARE AFFECTED BY UNDERNOURISHMENT, MODERATE OR SEVERE FOOD INSECURITY AND SELECTED FORMS OF MALNUTRITION; NUMBER OF INFANTS EXCLUSIVELY BREASTFED AND NUMBER OF BABIES BORN WITH LOW BIRTHWEIGHT

REGIONS/ SUBREGIONS/ COUNTRIES	NUMBER OF PEOPLE UNDERNOURISHED ^{1,2}	NUMBER OF SEVERELY FOOD INSECURE PEOPLE ^{1,2}	NUMBER OF INSURECURE PEOPLE ^{1,2}	NUMBER OF CHILDREN AFFECTED BY WEIGHT (UNDER 5 YEARS OF AGE) AND WEIGHT (18 YEARS OF AGE) WHO ARE STUNTED	NUMBER OF CHILDREN (UNDER 5 YEARS OF AGE) WHO ARE OVERWEIGHT OR OBESIVE	NUMBER OF ADULTS (18 YEARS OF AGE) WHO ARE OVERWEIGHT OR OBESIVE	NUMBER OF WOMEN OF REPRODUCTIVE AGE (15-49) WHO ARE ANEMIA	NUMBER OF INFANTS 0-5 MONTHS OF AGE EXCLUSIVELY BREASTFED	NUMBER OF BABIES BORN WITH LOW BIRTHWEIGHT	2004-06	2016-18	2014-16	2016-18						
										2004-06	2016-18	2014-16	2016-18						
WORLD	940.5	809.9	584.6	654.1	1736.8	1915.1	49.5	165.8	149.0	36.7	40.1	563.7	672.3	552.2	613.2	49.7	56.6	20.9	20.5
Least Developed Countries	215.7	236.9	194.7	225.0	473.1	526.6	12.5	50.8	47.3	4.4	5.7	20.5	28.3	85.0	95.3	12.6	15.6	4.9	4.9
Land Locked Developing Countries	97.5	110.1	83.7	98.7	223.6	255.7	5.0	23.8	22.7	2.6	2.8	17.0	21.9	34.6	39.7	6.5	8.1	2.2	2.2
Small Island Developing States	12.5	11.8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7.3	8.7	4.9	5.3	0.4	0.4	0.1	0.1
Low-income countries	159.5	202.8	160.2	189.4	376.0	427.1	8.6	40.2	39.7	3.5	3.6	16.8	22.7	52.8	60.1	9.6	12.1	3.3	3.3
Lower-middle-income countries	479.1	409.1	307.1	324.4	853.7	907.3	36.0	109.4	96.8	11.3	12.1	114.9	145.3	308.8	333.4	24.5	30.0	13.9	13.5
Upper-middle-income countries	276.4	183.4	87.3	103.2	304.1	340.2	3.3	16.4	11.3	12.8	13.2	231.3	271.6	153.1	176.5	10.5	8.4	2.8	2.7
High-income countries	n.r.	n.r.	21.5	22.4	105.5	103.9	0.4 ^a	2.3	2.1 ^a	4.8	5.0 ^a	201.6	225.7	40.2	46.5	n.a.	n.a.	1.0	1.0
Low-income food-deficit countries	518.9	524.9	n.a.	n.a.	n.a.	n.a.	38.7	126.7	115.3	10.3	10.7	< 0.1	< 0.1	300.1	325.3	27.5	34.3	14.9	14.5
AFRICA	196.4	246.4	235.2	277.6	591.7	667.4	14.0	57.1	58.8	8.5	9.5	58.5	73.5	98.9	109.8	13.3	17.7	5.6	5.7
Northern Africa	9.6	16.5	18.9	21.3	58.4	72.1	2.4	4.9	4.9	2.5	3.0	29.1	35.5	17.2	18.6	2.2	2.5	0.7	0.7
Algeria	2.9	1.6					n.a.	0.5	n.a.	0.5	n.a.	6.0	7.4	3.5	3.8	0.2	n.a.	< 0.1	< 0.1
Egypt	4.2	4.4	8.8 ^b	9.8	25.9 ^b	35.1	1.1	2.9	2.7	1.9	1.9	14.2	17.1	6.5	6.7	1.3	0.9	n.a.	n.a.
Libya	n.a.	n.a.					n.a.	n.a.	n.a.	1.1	1.3	0.5	0.6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Morocco	1.7	1.2					n.a.	0.5	n.a.	0.3	n.a.	4.8	5.9	3.1	3.5	0.2	n.a.	0.1	0.1
Sudan	--	8.2	n.a.	n.a.	1.0	1.9	2.2	0.1	0.2	1.1	1.6	2.7	3.1	0.5	0.7	n.a.	n.a.		
Tunisia	0.6	0.5					n.a.	0.1	n.a.	0.1	n.a.	1.9	2.3	0.9	1.0	< 0.1	n.a.	< 0.1	< 0.1

**TABLE A1.2
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	NUMBER OF UNDERNOURISHED PEOPLE ^{1,2,3}	NUMBER OF SEVERELY OR MODERATELY OR INSURE FOOD INSECURE PEOPLE ^{1,2,3}	NUMBER OF CHILDREN <5 YEARS OF AGE WHO ARE STUNTED YEARS OF AGE) WHO ARE OVERWEIGHT YEARS OF AGE) WHO ARE OBESER	NUMBER OF CHILDREN <5 YEARS OF AGE AFFECTIONED BY WASTING (AGE 15-49) ANNEEMA	NUMBER OF WOMEN OF REPRODUCTIVE AGE (15-49) AFFFECTED BY OBESITY (18 YEARS AND OLDER) WHO ARE OVERWEIGHT (AGE 15-49) BREASTFEED 0-5 MONTHS OF AGE	NUMBER OF BABIES WITH LOW BIRTHWEIGHT														
							2004-06	2016-18	2014-16	2016-18	2018 ⁴	2012 ⁵	2018 ⁴	2012	2016	2012 ⁶	2018 ⁷	2012	2015	
Northern Africa (excluding Sudan)	9.6	8.3	15.6	17.6	48.4	59.6	n.a.	n.a.	n.a.	n.a.	28.1	33.9	14.5	15.5	1.8	1.7	0.5	0.5	0.5	0.5
Sub-Saharan Africa	177.3	229.9	216.3	256.3	533.4	595.3	11.6	52.2	53.9	6.0	6.5	30.5	39.5	81.8	91.2	11.0	15.3	4.9	5.0	
Eastern Africa	113.7	129.9	102.5	116.0	243.5	271.3	4.1	23.7	24.0	2.7	2.9	7.7	10.7	25.9	30.1	6.3	8.5	1.9	1.9	
Burundi	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.1	0.9	1.1	<0.1	<0.1	0.2	0.2	0.6	0.7	0.3	0.4	<0.1	<0.1	
Comoros	0.3	0.2	n.a.	n.a.	n.a.	n.a.	<0.1	n.a.	<0.1	n.a.	<0.1	<0.1	<0.1	<0.1	0.1	n.a.	<0.1	<0.1	<0.1	
Djibouti	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.1	n.a.	<0.1	n.a.	0.1	0.1	0.1	0.1	<0.1	n.a.	n.a.	n.a.	n.a.	
Eritrea	30.5	21.6					1.5	6.2	5.8	0.3	0.4	1.3	1.9	4.7	5.8	0.5	0.1	n.a.	n.a.	
Ethiopia	10.2	14.6	9.0 ^c	9.5 ^c	26.7 ^c	28.1 ^c	0.3	2.3	1.8	0.3	0.3	1.1	1.5	2.8	3.1	0.4	0.9	0.2	0.2	
Kenya	6.4	11.4	n.a.	n.a.	n.a.	n.a.	0.3	1.7	1.8	n.a.	<0.1	0.4	0.6	1.9	2.2	0.3	n.a.	0.1	0.1	
Madagascar	3.4	3.3	9.1 ^c	9.6 ^c	14.4 ^c	15.3 ^c	0.1	1.3	1.1	0.2	0.1	0.3	0.4	1.1	1.4	0.4	0.4	<0.1	<0.1	
Malawi	<0.1	<0.1	0.1	0.1	0.2	0.2	n.a.	n.a.	n.a.	n.a.	0.1	0.1	0.1	0.1	0.1	n.a.	<0.1	<0.1	<0.1	
Mauritius	7.8	8.3	11.1	12.6	17.8	20.4	n.a.	1.9	n.a.	0.3	n.a.	0.6	0.8	2.9	3.4	0.4	0.4	0.1	0.2	
Mozambique	4.0	4.5					<0.1	0.7	0.6	0.1	0.1	0.2	0.3	0.5	0.7	0.3	0.3	<0.1	<0.1	
Rwanda	n.a.	<0.1 ^c	<0.1 ^c	<0.1 ^c	n.a.	<0.1	n.a.	<0.1	n.a.	<0.1	n.a.	<0.1	<0.1	<0.1	n.a.	<0.1	n.a.	<0.1	<0.1	
Seychelles	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.6	n.a.	0.1	n.a.	0.3	0.4	1.0	1.1	<0.1	n.a.	n.a.	n.a.	n.a.	
Somalia	--	n.a.	n.a.	n.a.	n.a.	n.a.	0.5	n.a.	0.1	n.a.	n.a.	0.8	1.0	0.2	n.a.	n.a.	n.a.	n.a.	n.a.	
South Sudan	6.9	17.6	n.a.	n.a.	n.a.	0.3	2.4	2.2	0.4	0.3	0.6	0.8	2.3	2.6	0.9	1.1	n.a.	n.a.	n.a.	
Uganda	13.6	17.6					0.4	3.0	3.2	0.4	0.3	1.4	1.9	4.3	4.7	0.9	1.2	0.2	0.2	
United Republic of Tanzania	6.2	8.0					0.2	n.a.	1.1	n.a.	0.2	0.4	0.5	1.0	1.3	0.3	0.5	<0.1	<0.1	
Zambia	5.5	8.5	0.1	0.7	0.7	0.1	0.8	1.1	1.1	1.2	0.2	0.2	0.2	0.2	0.2	0.2	<0.1	<0.1	<0.1	

**TABLE A1.2
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	NUMBER OF PEOPLE UNDERNOURISHED	NUMBER OF SEVERELY FOOD INSECURE PEOPLE ^{1,2,3}	NUMBER OF MODERATELY OR SEVERELY FOOD INSECURE PEOPLE ^{1,2,3}	NUMBER OF CHILDREN (UNDER 5) AFFECTED BY WASTING	NUMBER OF CHILDREN (UNDER 5) AFFECTED BY AGE(1-49) WHO ARE STUNTED	NUMBER OF CHILDREN (UNDER 5) AFFECTED BY AGE(1-49) WHO ARE OVERWEIGHT	NUMBER OF ADULTS (18 YEARS AND OLDER) WHO ARE OBESEx	NUMBER OF WOMEN OF REPRODUCTIVE AGE (15-49) BY ANNEEMA EXCLUSIVELY WITH LOW BIRTHWEIGHT	NUMBER OF INFANTS 0-5 MONTHS OF AGE EXCLUSIVELY WITH LOW BIRTHWEIGHT	NUMBER OF BABIES BIRTHWEIGHT WITH LOW BIRTHWEIGHT	NUMBER OF INFANTS 0-5 MONTHS OF AGE EXCLUSIVELY WITH LOW BIRTHWEIGHT	NUMBER OF BABIES BIRTHWEIGHT WITH LOW BIRTHWEIGHT	NUMBER OF INFANTS 0-5 MONTHS OF AGE EXCLUSIVELY WITH LOW BIRTHWEIGHT	NUMBER OF BABIES BIRTHWEIGHT WITH LOW BIRTHWEIGHT	NUMBER OF INFANTS 0-5 MONTHS OF AGE EXCLUSIVELY WITH LOW BIRTHWEIGHT	NUMBER OF BABIES BIRTHWEIGHT WITH LOW BIRTHWEIGHT			
Middle Africa	36.3	43	n.a.	8.9	9.4	1.2	1.4	3.5	4.8	14.2	15.5	1.6	2.3	0.8	0.8	0.8			
Angola	10.7	7.4	6.2	n.a.	18.0	n.a.	0.3	n.a.	2.0	n.a.	0.2	0.5	0.7	2.4	2.7	n.a.	0.4	0.2	0.2
Cameroon	3.5	2.4	8.1	10.6	14.2	17.1	0.2	1.1	1.2	0.2	0.2	0.9	1.2	2.1	2.4	0.1	0.2	<0.1	0.1
Central African Republic	1.6	2.8	n.a.	n.a.	n.a.	n.a.	0.3	n.a.	<0.1	n.a.	0.1	0.2	0.5	0.6	0.1	n.a.	<0.1	<0.1	<0.1
Chad	3.9	5.6	n.a.	n.a.	n.a.	0.3	0.9	1.0	0.1	0.1	0.2	0.3	1.3	1.5	<0.1	<0.1	n.a.	n.a.	n.a.
Congo	1.5	2.1				0.1	0.2	0.2	<0.1	<0.1	0.2	0.2	0.5	0.6	<0.1	0.1	<0.1	<0.1	<0.1
Democratic Republic of the Congo	n.a.	n.a.	n.a.	n.a.	n.a.	1.1	5.3	5.7	0.6	0.6	1.5	2.0	7.0	7.4	1.0	1.5	0.3	0.4	
Equatorial Guinea	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.1	n.a.	<0.1	n.a.	<0.1	0.1	0.1	<0.1	n.a.	n.a.	n.a.	n.a.	
Gabon	0.2	0.2				n.a.	<0.1	n.a.	<0.1	n.a.	0.1	0.1	0.2	0.3	<0.1	n.a.	<0.1	<0.1	<0.1
Sao Tome and Principe	<0.1	<0.1	n.a.	n.a.	n.a.	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Southern Africa	3.6	5.4	15.4	20.0	30.6	34.9	0.2	2.0	2.0	0.8	0.9	8.9	10.2	4.2	4.4	n.a.	0.5	0.2	0.2
Botswana	0.6	0.6	0.8	0.9	1.4	1.6	n.a.	n.a.	n.a.	n.a.	0.2	0.2	0.2	0.2	<0.1	n.a.	<0.1	<0.1	<0.1
Eswatini	0.2	0.3	n.a.	0.4	n.a.	0.9	<0.1	0.1	<0.1	<0.1	0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lesotho	0.2	0.3	1.1	1.1	1.7	1.7	<0.1	0.1	0.1	<0.1	0.1	0.1	0.2	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Namibia	0.5	0.7	1.0	1.0	1.6	1.7	<0.1	n.a.	0.1	<0.1	0.2	0.2	0.2	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
South Africa	2.1	3.5	12.2	16.6	25.1	29.0	0.1	1.5	1.6	0.9	0.8	8.3	9.5	3.7	3.8	n.a.	0.4	0.2	0.2
Western Africa	33.2	51.6	51.6	160.2	177.2	5.1	17.7	18.5	1.3	1.3	10.3	13.8	37.4	41.2	2.7	4.2	2.0	2.1	
Benin	1.2	1.1				0.1	n.a.	0.6	n.a.	<0.1	0.4	0.5	1.2	1.3	0.1	0.2	<0.1	<0.1	<0.1
Burkina Faso	3.3	3.8	1.6 ^c	n.a.	7.4 ^c	n.a.	0.3	1.0	0.7	<0.1	0.1	0.3	0.4	1.9	2.1	0.2	0.4	<0.1	<0.1
Cabo Verde	<0.1	<0.1	n.a.	0.1 ^c	n.a.	0.2 ^c	n.a.	n.a.	n.a.	<0.1	<0.1	<0.1	<0.1	<0.1	n.a.	n.a.	n.a.	n.a.	
Côte d'Ivoire	3.7	4.6						0.2	1.0	0.8	0.1	0.8	1.0	2.5	2.9	0.1	0.2	0.1	0.1
Gambia	0.2	0.2	n.a.	0.7	n.a.	1.1	<0.1	0.1	<0.1	<0.1	0.1	0.1	0.2	0.3	<0.1	<0.1	<0.1	<0.1	

**TABLE A1.2
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	NUMBER OF PEOPLE UNDERNOURISHED	NUMBER OF SEVERELY FOOD INSECURE PEOPLE ^{1,2,3}	NUMBER OF MODERATELY OR SEVERELY FOOD INSECURE PEOPLE ^{1,2,3}	NUMBER OF CHILDREN (UNDER 5 AGE) AFFECTED BY WASTING	NUMBER OF CHILDREN (UNDER 5 AGE) WHO ARE STUNTED	NUMBER OF CHILDREN (UNDER 5 AGE) WHO ARE OVERWEIGHT	NUMBER OF ADULTS (18 YEARS AND OLDER) WHO ARE OBES	NUMBER OF WOMEN OF REPRODUCTIVE AGE (15-49) AFFECTED BY ANEMIA	EXCLUSIVELY BREASTFEEDING 0-5 MONTHS OF AGE	NUMBER OF BABIES BIRTHWEIGHT WITH LOW BIRTHWEIGHT	NUMBER OF INFANTS DEATHS 0-5 MONTHS OF AGE	BREASTFEED EXCLUSIVELY 0-5 MONTHS OF AGE	NUMBER OF INFANTS DEATHS 0-5 MONTHS OF AGE	BIRTHWEIGHT WITH LOW BIRTHWEIGHT	
	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)
Ghana	2.0	1.6	2.2 ^c	2.3 ^c	13.7 ^c	14.3 ^c	0.2	0.8	0.7	0.1	1.2	1.5	3.2	3.3	0.4
Guinea	2.1	2.1	5.0	5.9	8.8	9.4	0.2	0.6	0.6	0.1	0.3	0.4	1.4	1.5	0.1
Guinea-Bissau	0.3	0.5	n.a.	n.a.	n.a.	<0.1	0.1	0.1	0.1	0.1	0.2	0.2	<0.1	<0.1	<0.1
Liberia	1.3	1.8	2.8	2.9	3.8	4.1	<0.1	0.3	0.2	n.a.	<0.1	0.2	0.2	0.4	<0.1
Mali	1.4	1.2	n.a.	n.a.	n.a.	0.4	0.8	1.0	<0.1	0.1	0.4	0.5	1.9	2.0	0.1
Mauritania	0.4	0.5				0.1	0.1	0.2	<0.1	0.2	0.3	0.3	0.4	<0.1	0.1
Niger	2.1	3.6	6.2	11.1	13.2	17.8	0.4	1.6	1.7	0.1	<0.1	0.3	0.4	1.8	2.1
Nigeria	9.1	25.6	11.8 ^c	n.a.	66.0 ^c	n.a.	3.4	10.2	13.9	0.8	0.5	5.4	7.3	19.1	21.1
Senegal	2.4	1.8				0.2	0.4	0.4	<0.1	<0.1	0.4	0.6	1.8	1.9	0.2
Sierra Leone	2.1	1.9	4.5	5.5	6.0	6.9	0.1	0.5	0.4	0.1	0.1	0.2	0.3	0.7	0.8
Togo	1.5	1.3	2.5	2.5	5.0	5.3	0.1	0.3	0.3	<0.1	<0.1	0.2	0.3	0.8	0.9
Sub-Saharan Africa (including Sudan)	186.8	238.1	219.6	260.0	543.4	607.8	n.a.	n.a.	n.a.	n.a.	31.5	41.2	84.4	94.3	11.5
ASIA*	681.5	512.9	283.6	302.3	868.3	945.9	33.8	98.9	81.7	17.1	18.8	175.7	228.7	377.7	419.9
Central Asia	6.5	4.0	1.5	2.3	8.0	11.2	0.3	1.1	0.8	0.7	0.7	5.9	7.4	5.9	6.2
Kazakhstan	0.9	n.r.	0.2	0.4	1.2	1.7	0.1	0.2	0.2	0.2	0.2	2.1	2.5	1.4	0.1
Kyrgyzstan	0.5	0.4	0.3	0.3	1.3	1.4	<0.1	0.1	0.1	0.1	0.4	0.6	0.5	0.6	0.1
Tajikistan	n.a.	n.a.	0.5	0.9	1.6	2.6	0.1	0.3	0.2	0.1	<0.1	0.5	0.6	0.7	0.1
Turkmenistan	0.2	0.3	n.a.	n.a.	n.a.	<0.1	n.a.	0.1	n.a.	<0.1	0.5	0.6	0.5	<0.1	0.1
Uzbekistan	3.9	2.0					n.a.	n.a.	n.a.	n.a.	2.4	3.1	3.0	3.0	0.2

**TABLE A1.2
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	NUMBER OF PEOPLE UNDERNOURISHED	NUMBER OF SEVERELY FOOD INSECURE PEOPLE ^{1,2,3}	NUMBER OF MODERATELY OR SEVERELY FOOD INSECURE PEOPLE ^{1,2,3}	NUMBER OF CHILDREN (UNDER 5 YEARS OF AGE) AFFECTED BY WASTING (UNDER 5 YEARS OF AGE) AFFECTED BY STUNTING	NUMBER OF CHILDREN (UNDER 5 YEARS OF AGE) WHO ARE OVERWEIGHT AND OBESITY	NUMBER OF WOMEN (15-49) AFFECTED BY ANEMIA	NUMBER OF INFANTS EXCLUSIVELY BREASTFEED 0-5 MONTHS OF AGE WITH LOW BIRTHWEIGHT NUMBER OF BABIES					
								2004-06 (millions)	2016-18 (millions)	2014-16 (millions)	2016-18 (millions)	2012 ⁵ (millions)
Eastern Asia*	218.0	137.6	9.9	16.8	105.4	146.3	1.6	7.1	4.4	5.7	61.9	81.3
China	206.0	122.4			1.6	7.8	6.9	5.5	7.7	54.7	72.9	78.1
China, mainland	204.7	121.4			n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	95.0
Taiwan Province of China	1.1	0.8			n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4.7
China, Hong Kong SAR	n.r.	n.r.			n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
China, Macao SAR	<0.1	<0.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Democratic People's Republic of Korea	8.4	12.2	n.a.	n.a.	<0.1	0.5	0.3	<0.1	<0.1	1.1	1.3	2.0
Japan	n.r.	n.r.	0.5	0.8	3.0	3.6	n.a.	0.4	n.a.	4.1	4.7	5.2
Mongolia	0.8	0.4	0.1	0.2	0.6	0.8	<0.1	<0.1	<0.1	0.3	0.4	0.1
Republic of Korea	n.r.	0.1 ^c	0.1	2.4 ^c	2.8	n.a.	0.1	n.a.	0.2	n.a.	1.7	2.0
Eastern Asia (excluding China, mainland)	12.2	15.4	1.0	1.4	9.1	10.7	n.a.	n.a.	n.a.	<0.1	<0.1	<0.1
South-eastern Asia	103.6	61.2	26.3	33.0	118.4	131.9	5.0	16.5	14.4	3.3	4.4	21.7
Brunei Darussalam	n.r.	<0.1	n.a.	n.a.	n.a.	n.a.	<0.1	n.a.	<0.1	<0.1	<0.1	n.a.
Cambodia	2.7	2.6	2.3	7.6	7.2	0.2	0.7	0.6	<0.1	0.3	0.4	1.9
Indonesia	44.1	22.0	2.8 ^c	2.6 ^c	22.4 ^c	21.3 ^c	3.3	9.3	8.8	2.9	8.7	12.0
Lao People's Democratic Republic	1.6	1.1	n.a.	n.a.	n.a.	n.a.	0.3	n.a.	<0.1	n.a.	0.1	0.1
Malaysia	1.0	0.8					0.3	n.a.	0.5	n.a.	2.5	3.3
Myanmar	15.5	5.7	n.a.	n.a.	n.a.	n.a.	0.3	1.8	1.3	0.1	1.6	2.2
Philippines	14.1	13.9	11.4	15.8	46.2	55.1	0.8	3.7	3.8	0.5	2.9	3.8
Singapore	n.a.	n.a.	<0.1	0.1	0.2	0.2	n.a.	n.a.	n.a.	0.3	0.3	n.a.

**TABLE A1.2
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	NUMBER OF UNDERNOURISHED PEOPLE ^{1,2,3}	NUMBER OF SEVERELY FOOD INSECURE PEOPLE ^{1,2,3}	NUMBER OF CHILDREN (UNDER 5 YEARS OF AGE) WHO ARE STUNTED YEARS OF AGE WHO ARE OVERWEIGHT YEARS OF AGE WHO ARE STUNTED BY WASTING	NUMBER OF CHILDREN (UNDER 5 YEARS OF AGE) AFFECTED BY WASTING (AGE 15-49) ANEMIA	NUMBER OF WOMEN OF REPRODUCTIVE AGE (15-49) AFFECTED BY OBESITY (18 YEARS AND OLDER) WHO ARE OBES	NUMBER OF INFANTS 0-5 MONTHS OF AGE EXCLUSIVELY BREASTFEED WITH LOW BIRTHWEIGHT	NUMBER OF BABIES BORN WITH LOW BIRTHWEIGHT	2004-06		2014-16		2016-18		2018 ^a		2012 ^b		2016		2012 ^c		2018 ^d		2012		2015	
								(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)							
Thailand	8.2	5.4						0.2	0.7	0.4	0.4	0.3	4.3	5.8	4.8	5.6	0.1	0.2	<0.1	<0.1	<0.1	<0.1	n.a.	n.a.	<0.1	<0.1	
Timor-Leste	0.3	0.3	n.a.	n.a.	n.a.	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Viet Nam	15.3	8.8	1.6	2.2	15.4	13.8	0.5	1.7	1.9	0.3	0.4	1.0	1.5	5.4	6.3	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Southern Asia	334.0	277.7	222.8	223.9	562.2	578.1	25.8	69.5	57.9	5.3	5.5	46.9	62.5	218.5	234.2	16.9	19.3	10.3	9.8								
Afghanistan	8.3	10.6	5.2	6.5	15.2	19.3	0.5	n.a.	2.1	n.a.	0.3	0.5	0.7	2.4	3.2	n.a.	0.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Bangladesh	23.8	24.2	17.8	16.8	52.0	50.3	2.2	6.5	5.5	0.2	0.2	2.5	3.6	17.4	18.2	1.7	1.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	
Bhutan	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.1	n.a.	<0.1	n.a.	<0.1	n.a.	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
India	253.9	194.4						25.2	n.a.	46.0	n.a.	2.9	24.1	32.8	165.6	175.6	11.4	13.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Iran (Islamic Republic of)	4.3	4.0						n.a.	0.5	n.a.	n.a.	n.a.	12.0	14.7	6.4	7.2	0.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Maldives	<0.1	<0.1	n.a.	n.a.	n.a.	n.a.	<0.1	n.a.	<0.1	n.a.	<0.1	n.a.	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	n.a.	<0.1	<0.1	<0.1	<0.1	<0.1	
Nepal	4.1	2.5	2.5	2.3	8.4	9.3	0.3	1.3	1.0	<0.1	<0.1	0.5	0.7	2.6	2.8	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Pakistan	35.9	40.0					1.8	10.0	9.5	1.5	0.6	6.7	9.1	22.4	25.3	1.9	2.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sri Lanka	3.6	1.9					0.2	0.3	0.3	<0.1	<0.1	0.6	0.8	1.6	1.7	0.3	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Southern Asia (excluding India)	80.2	83.4	51.0	48.5	198.3	188.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	39.3	48.0	20.8	23.7	1.8	1.3	0.6	0.6							
Western Asia	19.5	32.3	23.1	26.4	74.3	78.4	1.1	4.6	4.2	2.2	2.5	0.4	0.5	0.2	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Azerbaijan	0.5	n.r.					<0.1	0.1	0.1	0.1	0.1	0.1	1.2	1.4	1.0	1.0	<0.1	<0.1	<0.1	<0.1	n.a.	<0.1	<0.1	<0.1	<0.1	<0.1	
Bahrain	n.a.	n.a.					n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.3	0.3	0.1	0.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cyprus	<0.1	<0.1					n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.2	0.2	0.1	0.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Georgia	0.3	0.3	0.3	1.2	1.3	n.a.	<0.1	n.a.	0.1	n.a.	0.1	n.a.	0.7	0.8	0.3	0.3	<0.1	n.a.	<0.1	<0.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Iraq	7.6	11.1		<0.1 ^c	0.7 ^c	n.a.	1.1	n.a.	0.6	n.a.	4.4	5.5	2.3	2.7	0.2	0.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Israel	n.r.	n.r.	<0.1 ^c	<0.1 ^c	0.7 ^c	n.a.	n.a.	n.a.	n.a.	n.a.	1.3	1.4	0.2	0.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

**TABLE A1.2
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	NUMBER OF PEOPLE UNDERNOURISHED										BIRTH RATE WITH LOW NUMBER OF BABIES	EXCLUSIVELY BREASTFEEDING 0-5 MONTHS OF AGE	NUMBER OF INFANTS WITH LOW WEIGHT
	2004-06 (millions)	2016-18 (millions)	2014-16 (millions)	2016-18 (millions)	2018 ⁴ (millions)	2012 ⁵ (millions)	2018 ⁴ (millions)	2012 (millions)	2016 (millions)	2012 ⁶ (millions)			
Jordan	0.4	1.2	n.r.	0.1	n.a.	0.1	n.a.	1.3	1.6	0.6	0.7	0.1	<0.1
Kuwait	n.r.	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.8	1.0	0.2	0.3	n.a.	<0.1
Lebanon	0.1	0.7	n.a.	n.a.	n.a.	n.a.	n.a.	1.0	1.2	0.4	0.5	n.a.	<0.1
Oman	0.3	0.3	n.a.	n.a.	<0.1	<0.1	0.1	<0.1	0.5	0.7	0.3	n.a.	<0.1
Palestine	n.a.	n.a.	n.a.	0.2 ^c	n.a.	1.3 ^c	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.1
Qatar	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.5	0.7	0.1	0.1	<0.1
Saudi Arabia	1.9	2.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.9	7.2	3.0	3.4	n.a.
Syrian Arab Republic	n.a.	n.a.	n.a.	n.a.	n.a.	0.7	n.a.	0.5	n.a.	2.9	3.5	1.6	0.2
Turkey	n.r.	n.r.	n.a.	0.1	0.8	0.7	0.6	0.7	14.8	17.6	5.9	6.5	0.6
United Arab Emirates	0.2	0.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.8	2.4	0.4	0.5	n.a.
Yemen	6.2	11.0	n.a.	n.a.	n.a.	0.6	1.7	1.8	0.1	0.1	1.5	2.0	4.0
Central Asia and Southern Asia	340.5	281.7	224.3	226.2	570.2	589.3	26.1	70.6	58.8	6.0	6.2	52.8	69.9
Eastern Asia and South-eastern Asia*	321.5	198.8	36.2	49.8	223.7	278.2	6.6	23.6	18.8	8.9	10.1	83.6	110.7
Western Asia and Northern Africa	29.1	48.8	42.0	47.6	132.7	150.5	3.5	9.6	9.1	4.7	5.5	68.4	83.6
LATIN AMERICA AND THE CARIBBEAN	51.0	41.5	n.a.	n.a.	n.a.	0.7	6.0	4.8	3.8	4.0	88.3	104.7	34.9
Caribbean	9.1	7.7	n.a.	n.a.	n.a.	0.1	0.4	0.3	0.2	0.2	5.5	6.6	3.2
Antigua and Barbuda	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.1	<0.1	<0.1	n.a.	n.a.
Bahamas	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.1	<0.1	<0.1	n.a.	<0.1
Barbados	<0.1	<0.1	n.a.	n.a.	n.a.	<0.1	n.a.	<0.1	0.1	<0.1	<0.1	n.a.	n.a.
Cuba	n.r.	n.r.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.2	2.4	0.7	0.1	<0.1

**TABLE A1.2
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	NUMBER OF UNDERNOURISHED PEOPLE ^{1,2,3}	NUMBER OF SEVERELY FOOD INSECURE PEOPLE ^{1,2,3}	NUMBER OF MODERATELY OR SEVERELY FOOD INSECURE PEOPLE ^{1,2,3}	NUMBER OF CHILDREN (UNDER 5 YEARS OF AGE) AFFECTED BY WASTING	NUMBER OF CHILDREN (UNDER 5 YEARS OF AGE) AFFECTED BY STUNTING	NUMBER OF CHILDREN (UNDER 5 YEARS OF AGE) WHO ARE OVERWEIGHT	NUMBER OF WOMEN (18 YEARS AND OLDER) WHO ARE OBESE	ANEMIA AGE (15-49) AFFECTED BY NUMBER OF INFANTS 0-5 MONTHS OF AGE EXCLUSIVELY BREASTFEED NUMBER OF BABIES WITH LOW BIRTHWEIGHT	2004-06 (millions)	2014-16 (millions)	2016-18 (millions)	2018 ^a (millions)	2012 ^b (millions)	2016 (millions)	2012 (millions)	2016 (millions)	2012 ^b (millions)	2018 ^c (millions)	2012 ^b (millions)	2016 (millions)	2012 ^b (millions)	2018 ^c (millions)
Dominica	<0.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2004-06 (millions)	2014-16 (millions)	2016-18 (millions)	2018 ^a (millions)	2012 ^b (millions)	2016 (millions)	2012 (millions)	2016 (millions)	2012 ^b (millions)	2018 ^c (millions)	2012 ^b (millions)	2016 (millions)	2012 ^b (millions)	2018 ^c (millions)
Grenada	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.														
Haiti	5.3	5.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.														
Jamaica	0.2	0.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.														
Puerto Rico	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.														
Saint Kitts and Nevis	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.														
Saint Lucia	n.a.	n.a.	<0.1 ^c	<0.1 ^c	<0.1 ^c	n.a.	n.a.	n.a.														
Saint Vincent and the Grenadines	<0.1	<0.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.														
Trinidad and Tobago	0.2	<0.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.														
Central America	12.3	10.8	18.2	55.5	56.2	0.2	2.6	2.1														
Belize	<0.1	<0.1	n.a.	n.a.	n.a.	<0.1	<0.1	n.a.														
Costa Rica	0.2	0.2	0.2	0.3	1.0	1.1	n.a.	<0.1														
El Salvador	0.6	0.6	0.9	0.8	2.7	2.5	<0.1	0.1														
Guatemala	2.1	2.6	2.5	2.8	7.0	7.4	<0.1	0.9														
Honduras	1.3	1.2	1.7	1.6	4.7	4.6	n.a.	0.2														
Mexico	6.0	4.7	11.3	11.5	35.9	36.2	0.2	1.6														
Nicaragua	1.3	1.1	n.a.	n.a.	0.1	n.a.	0.1	n.a.														
Panama	0.8	0.4	n.a.	0.1	n.a.	<0.1	n.a.	n.a.														
South America	29.6	23.1	25.0	34.9	99.1	130.8	0.4^a	3.0	2.3^a	2.5	2.6^a	57.4	67.7	24.8	26.9	2.4	n.a.	0.6	0.6			
Argentina	1.9	2.1	2.5	5.0	8.3	14.2	n.a.	n.a.	n.a.	n.a.	n.a.	7.6	8.7	1.7	2.0	0.2	n.a.	<0.1	<0.1			

**TABLE A1.2
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	NUMBER OF UNDERNOURISHED PEOPLE ^{1,2,3}	NUMBER OF FOOD SEVERELY AFFECTIONED BY WASTING (AGE) AFFECTIONED BY WASTING (UNDER 5 CHILDREN (YEARS OF AGE) ARE STUNTED YEARS OF AGE WHO ARE OVERWEIGHT YEARS OF AGE WHO ARE OBESE	NUMBER OF WOMEN OF REPRODUCTIVE AGE (15-49) BY ANEMIA	NUMBER OF INFANTS 0-5 MONTHS OF AGE EXCLUSIVELY BREASTFEED	NUMBER OF BABIES BIRTHWEIGHT WITH LOW BIRTHWEIGHT	2004-06 2016-18 2014-16 2016-18 2014-16 2018 ^a 2012 ^b 2018 ^c 2012 2016 2012 ^d 2018 ^e 2012 2015												
						(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)					
Bolivia (Plurinational State of)	2.8	1.9	<0.1	0.2	0.2	0.1	0.1	1.0	1.3	0.8	0.8	0.2	0.1	<0.1	<0.1			
Brazil	8.6	n.r.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	27.8	33.1	14.1	15.5	1.2	n.a.	0.3	0.2		
Chile	0.6	0.5	n.a.	0.6 ^c	n.a.	2.5 ^c	<0.1	<0.1	0.1	0.1	3.4	3.9	0.5	0.7	n.a.	<0.1	<0.1	
Colombia	4.2	2.4	n.a.	n.a.	n.a.	0.5	n.a.	0.2	n.a.	6.3	7.5	2.9	2.8	n.a.	n.a.	<0.1	<0.1	
Ecuador	2.3	1.3	1.1 ^c	1.2 ^c	3.8 ^c	3.9 ^c	<0.1	0.4	0.4	0.1	1.7	2.1	0.7	0.8	n.a.	n.a.	<0.1	<0.1
Guyana	<0.1	<0.1	n.a.	n.a.	n.a.	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	
Paraguay	0.7	0.7	<0.1	0.1	<0.1	0.1	0.1	0.1	0.1	0.7	0.9	0.3	0.4	<0.1	<0.1	<0.1	<0.1	
Peru	5.4	3.1	<0.1	n.a.	n.a.	n.a.	<0.1	0.5	0.4	0.2	0.2	3.4	4.0	1.6	1.6	0.4	<0.1	<0.1
Suriname	<0.1	<0.1	n.a.	n.a.	n.a.	<0.1	n.a.	<0.1	n.a.	0.1	0.1	<0.1	<0.1	<0.1	n.a.	<0.1	<0.1	
Uruguay	0.1	n.r.	0.2	0.3	0.7	0.9	n.a.	<0.1	n.a.	0.7	0.7	0.2	0.2	n.a.	n.a.	<0.1	<0.1	
Venezuela (Bolivarian Republic of)	2.8	6.8	n.a.	n.a.	n.a.	0.4	n.a.	0.2	n.a.	4.6	5.4	1.8	2.0	n.a.	n.a.	<0.1	<0.1	
OCEANIA	1.8	2.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7.0	8.1	1.3	1.5	n.a.	n.a.	<0.1	<0.1	
Australia and New Zealand	n.r.	n.r.	0.8	1.1	3.2	3.9	n.a.	n.a.	n.a.	6.0	6.8	0.6	0.6	n.a.	n.a.	<0.1	<0.1	
Australia	n.r.	n.r.	0.6	0.9	2.7	3.3	n.a.	n.a.	n.a.	5.0	5.7	0.4	0.5	n.a.	n.a.	<0.1	<0.1	
New Zealand	n.r.	n.r.	0.1	0.2	0.5	0.7	n.a.	n.a.	n.a.	1.0	1.1	0.1	0.1	n.a.	n.a.	<0.1	<0.1	
Oceania excluding Australia and New Zealand	n.a.	n.a.	n.a.	n.a.	n.a.	0.1	0.5	0.5	0.1	0.1	1.1	1.3	0.8	0.9	0.1	n.a.	<0.1	<0.1
Melanesia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.9	1.1	0.7	0.9	0.1	n.a.	<0.1	<0.1	
Fiji	<0.1	<0.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.2	0.2	0.1	0.1	n.a.	n.a.	n.a.	n.a.	
New Caledonia	<0.1	<0.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	

**TABLE A1.2
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	NUMBER OF PEOPLE UNDERNOURISHED	NUMBER OF SEVERELY FOOD SECURE PEOPLE ^{1,2,3}	NUMBER OF MODERATELY OR SEVERELY FOOD SECURE PEOPLE ^{1,2,3}	NUMBER OF CHILDREN (UNDER 5) AFFECTIONED BY WASTING (UNDER 5 YEARS OF AGE) AFFECTIONED BY AGE (1-5-49) ANEMIA	NUMBER OF WOMEN OF REPRODUCTIVE AGE (15-49) WHO ARE OBESIVE	NUMBER OF INFANTS 0-5 MONTHS OF AGE EXCLUSIVELY BREASTFEED	NUMBER OF BABIES BIRTHWEIGHT WITH LOW BIRTHWEIGHT										
								2004-06	2016-18	2014-16	2016-18	2018 ^a	2012 ^b	2018 ^c	2012 ^d	2016	
	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)					(millions)	(millions)	(millions)	(millions)	(millions)	(millions)
Papua New Guinea	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.					0.5	0.5	0.7	0.7	0.7	0.7
Solomon Islands	< 0.1	< 0.1	n.a.	n.a.	n.a.	< 0.1	n.a.	2004-06	2016-18	2014-16	2016-18	2018 ^a	2012 ^b	2018 ^c	2012 ^d	2016	2012
Vanuatu	< 0.1	< 0.1	n.a.	n.a.	n.a.	< 0.1	n.a.										
Nicronesia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.										
Kiribati	< 0.1	< 0.1	n.a.	n.a.	n.a.	n.a.	n.a.										
Marshall Islands	n.a.	n.a.	n.a.	n.a.	n.a.	< 0.1	n.a.										
Micronesia (Federated States of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.										
Nauru	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.										
Palau	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.										
Polynesia	< 0.1	< 0.1	n.a.	n.a.	n.a.	n.a.	n.a.										
American Samoa	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.										
Cook Islands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.										
French Polynesia	< 0.1	< 0.1	n.a.	n.a.	n.a.	n.a.	n.a.										
Niue	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.										
Samoa	< 0.1	< 0.1	n.a.	n.a.	n.a.	< 0.1	n.a.										
Tokelau (Associate Member)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.										
Tonga	n.a.	n.a.	n.a.	n.a.	n.a.	< 0.1	n.a.										
Tuvalu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.										
NORTHERN AMERICA AND EUROPE	n.r.	n.r.	15.3	12.5	101.9	92.7	n.a.										
Northern America	n.r.	n.r.	3.6	3.5	35.3	31.7	0.1	0.6	1.8	1.9	92.0	102.9	8.7	10.6	1.1	1.6	0.3
Bermuda	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

**TABLE A1.2
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	NUMBER OF PEOPLE UNDERNOURISHED	NUMBER OF SEVERELY FOOD SECURE PEOPLE ^{1,2,3}	NUMBER OF MODERATELY OR SEVERELY FOOD SECURE PEOPLE ^{1,2,3}	NUMBER OF CHILDREN (UNDER 5) AFFECTED BY WASTING (UNDER 5 YEARS OF AGE) AGE) AFFECTED BY WASTING	NUMBER OF CHILDREN (UNDER 5) AFFECTED BY STUNTING (UNDER 5 YEARS OF AGE) AGE) AFFECTED BY STUNTING	NUMBER OF CHILDREN (UNDER 5) AFFECTED BY OVERWEIGHT (UNDER 5 YEARS OF AGE) WHO ARE OVERWEIGHT	NUMBER OF WOMEN OF REPRODUCTIVE AGE (15-49) BY ANEMIA	NUMBER OF INFANTS 0-5 MONTHS OF AGE EXCLUSIVELY BREASTFEED	NUMBER OF BABIES BIRTHWEIGHT WITH LOW BIRTHWEIGHT	
United States of America	n.r.	n.r.	3.4 ^c	3.3 ^c	33.5 ^c	29.9 ^c	0.1	0.4	0.7	1.2
Europe	n.r.	n.r.	11.7	9.1	66.6	61.0	n.a.	n.a.	n.a.	141.1
Eastern Europe	n.r.	n.r.	3.5	2.8	32.3	30.8	n.a.	n.a.	n.a.	57.5
Belarus	0.3	n.r.	0.2 ^c	n.a.	1.8 ^c	n.a.	n.a.	n.a.	n.a.	1.9
Greenland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Bulgaria	0.5	0.3	0.1	0.1	1.0	0.8	n.a.	n.a.	n.a.	1.5
Czechia	n.r.	n.r.	0.1	<0.1	0.6	0.4	n.a.	n.a.	n.a.	2.3
Hungary	n.r.	n.r.	0.1	0.1	1.0	0.8	n.a.	n.a.	n.a.	2.2
Poland	n.r.	n.r.	0.6	0.3	3.3	2.0	n.a.	0.1	n.a.	7.3
Republic of Moldova	n.a.	n.a.	0.1	0.1	0.8	1.0	n.a.	<0.1	n.a.	0.5
Romania	n.r.	n.r.	1.1	0.8	3.8	2.9	n.a.	n.a.	n.a.	3.9
Russian Federation	n.r.	n.r.	0.5	0.4 ^c	11.8	8.9 ^c	n.a.	n.a.	n.a.	27.8
Slovakia	0.3	0.2	<0.1	<0.1	0.3	0.3	n.a.	n.a.	n.a.	0.9
Ukraine	n.r.	1.5	0.8	0.8	n.a.	n.a.	n.a.	n.a.	n.a.	9.1
Northern Europe	n.r.	3.2	1.7	8.8	6.3	n.a.	n.a.	n.a.	19.8	22.1
Denmark	n.r.	n.r.	<0.1	0.1	0.3	0.3	n.a.	n.a.	n.a.	0.9
Estonia	<0.1	<0.1	<0.1	0.1	0.1	0.1	n.a.	n.a.	n.a.	0.2
Finland	n.r.	n.r.	0.1	0.1	0.5	0.5	n.a.	n.a.	n.a.	1.0
Iceland	n.r.	n.r.	<0.1	<0.1	<0.1	<0.1	n.a.	n.a.	n.a.	0.1
Ireland	n.r.	n.r.	0.2 ^d	0.1	0.4 ^d	0.3	n.a.	n.a.	n.a.	0.8
Latvia	n.r.	n.r.	<0.1	<0.1	0.2	0.2	n.a.	n.a.	n.a.	0.4

**TABLE A1.2
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	NUMBER OF PEOPLE UNDERRNOURISHED										NUMBER OF PEOPLE INSECURE FOOD SEVERELY OR MODERATELY INSECURE PEOPLE ^{1,2,3}										NUMBER OF CHILDREN UNDER 5 YEARS OF AGE AFFECTIONED BY WASTING (UNDER 5 YEARS OF CHILDREN WHO ARE STUNTED ARE OVERWEIGHT CHILDREN (UNDER 5 YEARS OF AGE) WHO ARE OVERWEIGHT NUMBER OF ADULTS (18 YEARS AND OLDER) WHO ARE OBESE NUMBER OF WOMEN OF REPRODUCTIVE AGE (15-49) BY ANAEMIA EXCLUSIVELY BREASTFEED 0-5 MONTHS OF INFANTS WITH LOW BIRTHWEIGHT NUMBER OF BABIES					
	2004-06	2016-18	2014-16	2016-18	2014-16	2016-18	2018 ^a	2012 ^c	2018 ^a	2012 ^c	2016	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016	
Lithuania	n.r.	n.r.	<0.1	<0.1	0.4	0.3	n.a.	n.a.	n.a.	n.a.	0.7	0.7	0.2	0.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Norway	n.r.	n.r.	0.1	0.1	0.3	0.3	n.a.	n.a.	n.a.	n.a.	0.9	1.0	0.1	0.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sweden	n.r.	n.r.	0.1	0.1	0.4	0.5	n.a.	n.a.	n.a.	n.a.	1.5	1.7	0.3	0.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
United Kingdom of Great Britain and Northern Ireland	n.r.	n.r.	2.6	1.2	6.1	3.7	n.a.	n.a.	n.a.	n.a.	13.3	15.0	1.7	2.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Southern Europe	n.r.	n.r.	2.5	2.6	14.9	n.a.	n.a.	n.a.	n.a.	29.0	31.6	5.6	6.2	n.a.	n.a.	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Albania	0.3	0.2	0.3	1.1	1.1	<0.1	<0.1	<0.1	<0.1	0.5	0.5	0.2	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Andorra	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Bosnia and Herzegovina	0.1	n.r.	<0.1	<0.1	0.3	0.3	n.a.	<0.1	n.a.	<0.1	n.a.	0.5	0.6	0.3	0.3	<0.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Croatia	0.1	n.r.	<0.1	<0.1	0.3	0.3	n.a.	n.a.	n.a.	n.a.	0.9	0.9	0.2	0.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Greece	n.r.	n.r.	0.3	0.3	1.8	1.9	n.a.	n.a.	n.a.	n.a.	2.3	2.5	0.3	0.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Italy	n.r.	n.r.	0.7	0.6	4.8	4.2	n.a.	n.a.	n.a.	n.a.	10.8	11.7	1.9	2.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Malta	n.r.	n.r.	--	n.r.	<0.1	0.1	0.1	<0.1	n.a.	<0.1	0.1	0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Montenegro	--	n.r.	<0.1	<0.1	0.1	0.1	<0.1	n.a.	<0.1	n.a.	<0.1	0.1	0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
North Macedonia	0.1	<0.1	0.1	0.1	0.3	0.3	n.a.	<0.1	n.a.	<0.1	n.a.	0.4	0.4	0.1	0.1	<0.1	<0.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Portugal	n.r.	n.r.	0.4	0.3	1.6	1.2	n.a.	n.a.	n.a.	n.a.	1.8	2.0	0.4	0.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Serbia	--	0.5	0.1	0.1	0.9	1.0	<0.1	<0.1	<0.1	0.1	0.1	1.6	1.8	0.5	0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Slovenia	n.r.	n.r.	--	n.r.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.4	0.4	0.1	0.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Spain	n.r.	n.r.	0.5	0.7	3.3	3.5	n.a.	n.a.	n.a.	n.a.	9.6	10.5	1.5	1.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Western Europe	n.r.	n.r.	2.5	1.9	10.6	9.7	n.a.	n.a.	n.a.	n.a.	34.8	38.1	6.0	7.0	n.a.	n.a.	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Austria	n.r.	n.r.	0.1	0.1	0.5	0.4	n.a.	n.a.	n.a.	n.a.	1.4	1.5	0.3	0.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Belgium	n.r.	n.r.	0.4	0.4	1.0	1.2	n.a.	n.a.	n.a.	n.a.	2.0	2.2	0.3	0.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	

**TABLE A1.2
(CONTINUED)**

REGIONS/ SUBREGIONS/ COUNTRIES	NUMBER OF PEOPLE UNDERNOURISHED	NUMBER OF CHILDREN (UNDER 5 AGE) AFFECTED BY WASTING (UNDER 5 YEARS OF AGE) AFFECTED BY WASTING	NUMBER OF CHILDREN (UNDER 5 AGE) WHO ARE OVERWEIGHT YEARS OF AGE WHO ARE OBESE	NUMBER OF WOMEN OF REPRODUCTIVE AGE (15-49) AFFECTED BY ANEMIA	NUMBER OF INFANTS 0-5 MONTHS OF AGE EXCLUSIVELY BREASTFEED	NUMBER OF BABIES WITH LOW BIRTHWEIGHT	2004-06 2016-18 2014-16 2016-18 2014-16 2016-18					
							(millions)	(millions)	(millions)	(millions)	(millions)	(millions)
France	n.r.	n.r.	1.0	0.5	4.4	4.1	n.a.	n.a.	n.a.	n.a.	10.8	11.9
Germany	n.r.	n.r.	0.8	0.6	3.4	3.0	n.a.	n.a.	n.a.	n.a.	16.4	17.8
Luxembourg	n.r.	n.r.	< 0.1	< 0.1	< 0.1	< 0.1	n.a.	n.a.	n.a.	n.a.	0.1	< 0.1
Netherlands	n.r.	n.r.	0.3	0.2	0.9	0.7	n.a.	n.a.	n.a.	n.a.	2.8	3.1
Switzerland	n.r.	n.r.	0.1	0.1	0.3	0.3	n.a.	n.a.	n.a.	n.a.	1.3	1.4

¹ Regional estimates are included when more than 50 percent of population is covered. To reduce the margin of error, estimates are presented as three-year averages.

² FAO estimates of the number of people living in households where at least one adult has been found to be food insecure. To reduce the impact of year-to-year sampling variability, estimates are presented as three-year averages.

³ Country-level results are presented only for those countries for which estimates are based on official national data (see note c) or as provisional estimates, based on FAO data collected through the Gallup World Poll, for countries whose national relevant authorities provided permission to publish them. Note that consent to publish does not necessarily imply validation of the estimate by the national authorities involved and that the estimate is subject to revision as soon as suitable data from official national sources are available. Global, regional and subregional aggregates reflect data collected in approximately 150 countries.

⁴ For regional estimates, values correspond to the model predicted estimate for the year 2018. For countries, the latest data available from 2013 to 2018 are used.

⁵ For regional estimates, values correspond to the model predicted estimate for the year 2012. For countries, the latest data available from 2005 to 2012 are used.

⁶ Regional estimates are included when more than 50 percent of population is covered. For countries, the latest data available from 2005 to 2012 are used.

⁷ Regional estimates are included when more than 50 percent of population is covered. For countries, the latest data available from 2013 to 2018 are used.

* Wasting, stunting, and overweight under 5 years of age and low birthweight regional aggregates exclude Japan.

a. Consecutive low population coverage; interpret with caution.

b. The Central Agency for Public Mobilization & Statistics (CAPMAS) reports an estimate of severe food insecurity of 1.3 percent for 2015, based on HIECS data, using the WFP consolidated approach for reporting indicators of food security. Note that the two estimates are not directly comparable due to different definitions of "severe food insecurity".

c. Based on official national data.

d. The Government of Ireland reports estimates of the "Proportion of the population at risk of food poverty" produced by the Central Statistics Office (CSO) and Economic and Social Research Institute (ESRI) as part of the Survey on Income and Social Conditions (SISC) 2015, as a proxy for SDG indicator 2.1.2. See <https://fileadmin.gachive.ie/datasets/sdg-2-1-2-prevalence-of-moderate-or-severe-food-insecurity-in-the-population-based-on-the-food-insecurity-experience-scale-nuts-3-2015-ireland-cso-osi>

n.a. = data not available.
n.r. = data not reported.

< 0.1 = less than 100 000 people.

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ANNEX 1B. METHODOLOGICAL NOTES TO STATISTICAL TABLES UNDERNOURISHMENT

Definition: Undernourishment is defined as the condition of an individual whose habitual food consumption is insufficient to provide, on average, the amount of dietary energy required to maintain a normal, active, healthy life.

How it is reported: The indicator is reported as a prevalence and is denominated as “prevalence of undernourishment” (PoU), which is an estimate of the percentage of individuals in the total population that are in a condition of undernourishment. National estimates are reported as three-year moving averages, to control for the low reliability of some of the underlying parameters, due for example to difficulties in capturing the year-to-year variation in food commodity stocks, one of the components of the annual food balance sheets, for which complete, reliable information is very scarce. Regional and global aggregates, on the other hand, are reported as annual estimates, on account of the fact that possible estimation errors are expected not to be correlated across countries.

Methodology: To compute an estimate of the prevalence of undernourishment in a population, the probability distribution of habitual dietary energy intake levels (expressed in kcal per person per day) for the average individual is modelled as a parametric probability density function (pdf), $f(x)$. The indicator is obtained as the cumulative probability that the habitual dietary energy intake (x) is below the minimum dietary energy requirements (MDER) (i.e., the lowest limit of the range of energy requirements for the population’s representative average individual) as in the formula below:

$$PoU = \int_{x < MDER} f(x|\theta) dx,$$

where θ is a vector of parameters that characterizes the pdf. The distribution is assumed to be lognormal, and thus fully characterized by only two parameters: the mean dietary energy consumption (DEC), and its coefficient of variation (CV). In a few exceptional cases, a three-parameter skew-normal or skew-lognormal distribution is considered.¹

Data sources: Different data sources are used to estimate the different parameters of the model.

Minimum dietary energy requirement (MDER): Human energy requirements for an individual in a given sex/age class are determined on the basis of normative requirements for basic metabolic rate (BMR) per kilogram of body mass, multiplied by the ideal weights that a healthy person of that class may have, given his or her height, and then multiplied by a coefficient of physical activity level (PAL) to take into account physical activity.² Given that both healthy BMIs and PALs vary among active and healthy individuals of the same sex and age, a range of energy requirements applies to each sex and age group of the population. The MDER for the average individual in the population, that is the parameter used in the PoU formula, is obtained as the weighted average of the lower bounds of the energy requirement ranges for each sex and age group, using the shares of the population in each sex and age group as weights.

Information on the population structure by sex and age is available for most countries in the world and for each year from the UN Department of Economic and Social Affairs (DESA) Population Prospects, revised every two years. This edition of SOFI uses the 2017 revision of the World Population Prospects.³

Information on the median height in each sex and age group for a given country is derived from a recent demographic and health survey (DHS) or from other surveys that collect anthropometry data on children and adults. Even if such surveys do not refer to the same year for which the PoU is estimated, the impact of possible small intervening changes in median heights over the years on PoU estimates are expected to be negligible.

Dietary energy consumption (DEC), coefficient of variation (CV) and skewness (Skew): When reliable data on food consumption are available from nationally representative household surveys that collect information on food consumption (such as, Living Standard Measurement Surveys or Household Incomes and Expenditure Surveys), the parameters that describe the distribution of average daily dietary energy requirement in the population can be estimated directly.

However, only very few countries conduct such surveys on an annual basis. This necessitates estimating them indirectly, or imputing them for the years when no suitable survey data are available. In such cases, DEC values are estimated from the dietary energy supply (DES) reported in the Food Balance Sheets (FBS), compiled by FAO for most countries in the world (see <http://www.fao.org/economic/ess/fbs/en>). This year, the FBS series were updated for the following 53 countries with the largest number of undernourished people, bringing them up to date through 2017: Afghanistan, Algeria, Angola, Bangladesh, Bolivia (Plurinational State of), Burkina Faso, Cambodia, Cameroon, Central African Republic, Chad, China (mainland), Colombia, Congo, Côte d'Ivoire, Democratic People's Republic of Korea, Democratic Republic of the Congo, Ecuador, Ethiopia, Guatemala, Guinea, Haiti, India, Indonesia, Iraq, Kenya, Madagascar, Malawi, Mexico, Mozambique, Myanmar, Nepal, Niger, Nigeria, Pakistan, Peru, Philippines, Rwanda, Senegal, Sierra Leone, South Africa, Sri Lanka, Sudan, Syrian Arab Republic, Tajikistan, Thailand, Uganda, United Republic of Tanzania, Uzbekistan, Venezuela (Bolivarian Republic of), Viet Nam, Yemen, Zambia and Zimbabwe.

In addition, FBS series for 28 European high-income countries were updated through 2016.

FBS are of no use to estimate the CV, as they provide no information on the *distribution* of food consumption within a population. In the past FAO had made attempts at estimating the CV as a function of macroeconomic variables, such as per capita GDP, inequality in income

(captured by the Gini index) and an index of the relative price of food.⁴ However, the ability to correctly project the CV of habitual food consumption in a population with such model is questionable, due to the sparsity of data on the Gini index and to reservations on the way in which the index of the relative price of food is compiled. It was therefore decided to revert to a simpler (and arguably more robust) method to linearly interpolate values of the CVs in the years between surveys. The main drawback of such modelling choice is that, when only one survey is available over the monitored period, the resulting value of the CV is kept constant over the entire period of assessment, and in any case from the year of last available survey up to the year 2015. Possible changes over time in the ability to access food by different strata of the population that are not fully reflected in changes in the average national food consumption are therefore not captured in PoU estimates.

PoU projections for 2018: Using the methods described above, PoU estimates are produced for all countries for which reliable FBS data are available up to 2017.

To generate national level three-year averages for 2016–18 and annual values at regional and global level in 2018, projections are needed.

As in the past editions of SOFI, PoU estimates for the current year are obtained by separately projecting each of the model's parameters, and by applying the PoU formula presented above to the projected parameters.

Projection of the DEC. The latest available data from national food balance sheets for most countries refer to a year between 2013 and 2017. To estimate a value of DEC for up to 2018, data on the per capita availability of cereals and meats, available from FAO's Trade and Markets Division,⁵ are used to estimate the likely rates of change in per capita dietary energy availability from 2013, 2014, 2015, 2016 or 2017 (depending on the country) to 2018. Such rates of change are then applied to the latest available DEC values to project them up to 2018.

Projection of the CV. Until recently, the CV estimated for a country from last available food consumption survey data was always projected ahead with no change. Since 2014, however, FIES data provide evidence on recent changes in the extent of severe food insecurity that might closely reflect changes in the PoU. To the extent that such changes in PoU are not explained by changes in average food supplies, they can thus be used to infer the likely changes in the CV that might have occurred in the most recent year. Analysis of the combined set of historic PoU estimates reveals that, on average, and once differences in DEC and MDER have been controlled for, CVs explain about one-third of the differences in PoU across time and space. Possible changes in the CV from 2017 to 2018, to be considered in addition to projected changes in DEC described above, are thus imputed based on the results of an analysis of FIES data. For each country for which FIES data are available, the CV is revised by the amount that would generate one-third of a percentage point change in the PoU for each observed percentage point change in FI_{sev}. For all other countries, the CV is kept constant to the estimated 2017 value.

Projection of the MDER. The MDER in 2018 is based on the projected population structure from the World Population Prospects (2017 revision, medium variant).

Challenges and limitations: While formally the state of being undernourished or not is a condition that applies to individuals, given the data usually available on a large scale it is impossible to reliably identify which individuals, in a certain group are actually undernourished. Through the statistical model described above, the indicator can only be computed with reference to a population or a group of individuals for which a representative sample is available. The prevalence of undernourishment is thus an estimate of the percentage of individuals in that group that are in such condition and cannot be further disaggregated.

Due to the probabilistic nature of the inference and the margins of uncertainty associated with estimates of each of the parameters in the model,

the precision of the PoU estimates is generally low. While it is not possible to formally compute margins of error around PoU estimates, these are expected to likely exceed 5 percent in most cases. For this reason, FAO does not consider PoU estimates that result to be lower than 2.5 percent as sufficiently reliable to be reported.

References:

- FAO. 1996. *The Sixth World Food Survey*, pp. 114–143. Rome.
- FAO. 2014. *Advances in hunger measurement: traditional FAO methods and recent innovations*. FAO Statistics Division Working Paper No. 14-04. Rome.
- FAO. 2014. *Refinements to the FAO methodology for estimating the prevalence of undernourishment indicator*. FAO Statistics Division Working Paper No. 14-05. Rome.
- L. Naiken. 2002. Keynote paper: FAO methodology for estimating the prevalence of undernourishment. In: FAO. *Proceedings: Measurement and Assessment of Food Deprivation and Undernutrition International Scientific Symposium, Rome, 26–28 June 2002*. Rome.

FOOD INSECURITY AS MEASURED BY THE FOOD INSECURITY EXPERIENCE SCALE (FIES)

Definition: Food insecurity as measured by this indicator refers to limited **access to food**, at the level of individuals or households, due to lack of money or other resources. The severity of food insecurity is measured using data collected with the **Food Insecurity Experience Scale survey module** (FIES-SM), a set of eight questions asking individual or households to self-report conditions and experiences typically associated with limited access to food.

Using sophisticated statistical techniques based on the Rasch measurement model, the information obtained in a survey is validated for internal consistency and converted into a quantitative measure along a scale of severity, ranging from low to high. Based on their responses to the FIES-SM items, the individuals or households interviewed in

a nationally representative survey of the population are assigned a probability to be in one of three classes: food secure or only marginally insecure; moderately food insecure; and severely food insecure as defined by two globally set thresholds. Based on FIES data collected over three years from 2014 to 2016, FAO has established the FIES reference scale, which is used as the global standard for experience-based food-insecurity measures (**Box 3**), and to set the two reference thresholds of severity.

SDG Indicator 2.1.2 is obtained as the cumulated probability to be in either one of the two classes of moderate and severe food insecurity. A separate indicator (FI_{sev}) is computed by considering only the severe food-insecurity class.

How it is reported: In this report, FAO provides estimates of food insecurity at two different levels of severity: moderate or severe food insecurity ($FI_{mod+sev}$) and severe food insecurity (FI_{sev}). For each of these two levels, two estimates are reported:

- the **prevalence (%) of individuals** in the population living in households where at least one adult was found to be food insecure;
- the estimated **number of individuals** in the population living in households where at least one adult was found to be food insecure.

Data source: Since 2014, the eight-question FIES survey module has been applied in nationally representative samples of the adult population (defined as aged 15 or older) in more than 140 countries included in the Gallup® World Poll (GWP), covering 90 percent of the world population. In most countries, samples include about 1 000 individuals, with larger samples of 3 000 individuals in India and 5 000 in mainland China.

For Burkina Faso, Cabo Verde, Canada, Chile, Ecuador, Ghana, Indonesia, Israel, Kenya, Malawi, Nigeria, Palestine, Republic of Korea (2014 and 2015), Russian Federation (2016, 2017 and 2018), Saint Lucia, Seychelles, and United States of America, national government survey

data were used to calculate the prevalence estimates of food insecurity by applying FAO's statistical methods to adjust national results to the same global reference standard.

Methodology: The data were validated and used to construct a scale of food-insecurity severity using the Rasch model, which postulates that the probability of observing an affirmative answer by respondent i to question j is a logistic function of the distance, on an underlying scale of severity, between the position of the respondent, a_i , and that of the item, b_j .

$$Prob(X_{i,j} = \text{Yes}) = \frac{\exp(a_i - b_j)}{1 + \exp(a_i - b_j)}$$

By applying the Rasch model to the FIES data, it is possible to estimate the probability of being food insecure ($p_{i,L}$) at each level of severity of food insecurity L (moderate or severe, or severe), for each respondent i , with $0 < p_{i,L} < 1$.

The **prevalence of food insecurity** at each level of severity (FI_L) in the population is computed as the weighted sum of the probability of being severely food insecure for all respondents (i) in a sample:

$$FI_L = \sum p_{i,L} w_i$$

where w_i are post-stratification weights that indicate the proportion of individuals or households in the national population represented by each record in the sample.

As only individuals aged 15 or more are sampled in the GWP, the prevalence estimates directly produced from these data refer to the population 15 years and older. To arrive at the **prevalence and number of individuals (of all ages) in the population**, an estimate is required of the number of people living in the households where at least one adult is estimated to be food insecure. This involves a multistep procedure detailed in Annex II of the *Voices of the hungry technical report* (see link in the "References" section, below).

Regional and global aggregates of food insecurity at moderate or severe, and severe levels, FI_L , are computed as:

$$FI_{L,r} = \frac{\sum_c FI_{L,c} \times N_c}{\sum_c N_c}$$

where r indicates the region, $FI_{L,c}$ is the value of FI at level L estimated for country c in the region and N_c is the corresponding population size. When no estimate of FI_L is available for a country, it is assumed to be equal to the population-weighted average of the estimated values of the remaining countries in the same region. A regional aggregate is produced only if the countries for which an estimate is available cover at least 50 percent of the region's population.

Universal thresholds are defined on the FIES global standard scale (a set of item parameter values based on results from all countries covered by the GWP in 2014–16) and converted into corresponding values on local scales. The process of calibrating each country's scale against the FIES global standard can be referred to as **equating**, and permits the production of **internationally comparable** measures of food-insecurity severity for individual respondents, as well as comparable national prevalence rates.

The problem stems from the fact that, when defined as a *latent* trait, the severity of food insecurity has no absolute reference against which it could be evaluated. The Rasch model allows to identify the relative position that the various items occupy on a scale that is denominated in logit units, but whose "zero" is arbitrarily set, usually to correspond to the mean estimated severity. This implies that the zero of the scale changes in each application. To produce comparable measures over time and across different populations requires establishing a common scale to use as a reference, and finding the formula needed to convert measures across different scales. As it is the case for converting measures of temperature across difference measuring scales (such as Celsius and Fahrenheit) this requires

the identification of a number of "anchoring" points. In the FIES methodology, these anchoring points are the severity levels associated with the items whose *relative* position on the scale of severity can be considered equal to that of the corresponding items on the global reference scale. The "mapping" of the measures from one scale to the other is then obtained by finding the formula that equates the mean and the standard deviations of the common items' severity levels.

Challenges and limitations: When food-insecurity prevalence estimates are based on FIES data collected in the GWP, with national sample sizes of about 1 000 in most countries, confidence intervals rarely exceed 20 percent of the measured prevalence (that is, prevalence rates of 50 percent would have margins of error of up to plus or minus 5 percent). Confidence intervals are likely to be much smaller, however, when national prevalence rates are estimated using larger samples and for estimates referring to aggregates of several countries. To reduce the impact of year-to-year sampling variability, country-level estimates are presented as three-year averages, computed as averages of all available years in the considered triennia.

Research by a joint team from FAO, IFAD, WFP and UNICEF is ongoing to further refine the current methodology. The team is exploring possible issues related to the reference period when questionnaires with different reference periods are used to collect data, and studying robust ways to limit the potential risk of inducing a bias, when adjusting country results to the global reference scale, by further accommodating possible differences in interpretation of the FIES items in different languages or cultural contexts.

References:

- FAO. 2016. *Methods for estimating comparable rates of food insecurity experienced by adults throughout the world*. Rome.
- FAO. 2018. Voices of the hungry. In: FAO [online]. Rome. www.fao.org/in-action/voices-of-the-hungry

STUNTING, WASTING AND OVERWEIGHT IN CHILDREN UNDER FIVE YEARS OF AGE

Definition of stunting: Height/length (cm) for age (months) < -2 SD of the 2006 WHO Child Growth Standards median. Low height-for-age is an indicator that reflects the cumulative effects of undernutrition and infections since and even before birth. It may be the result of long-term nutritional deprivation, recurrent infections and lack of water and sanitation infrastructures.

How is stunting reported: The percentage of children aged 0–59 months who are below -2 standard deviation (SD) from the median height-for-age of the 2006 WHO Child Growth Standards.

Definition of wasting: Weight (kg) for height/length (cm) < -2 SD of the 2006 WHO Child Growth Standards median. Low weight-for-height is an indicator of acute weight loss or a failure to gain weight and can be consequence of insufficient food intake and/or an incidence of infectious diseases, especially diarrhoea.

How is wasting reported: The percentage of children aged 0–59 months who are below -2 SD from the median weight-for-height of the 2006 WHO Child Growth Standards.

Definition of childhood overweight: Weight (kg) for height/length (cm) > +2 SD of the 2006 WHO Child Growth Standards median. This indicator reflects excessive weight gain for height generally due to energy intakes exceeding children's energy requirements.

How is the childhood overweight reported: The percentage of children aged 0–59 months who are over +2 SD from the median weight-for-height of the WHO Child Growth Standards.

Data source: UNICEF, WHO and International Bank for Reconstruction and Development/World Bank. 2019. *UNICEF-WHO-The World Bank: Joint child malnutrition estimates - Levels and trends* (March 2019 edition) [online]. <https://data.unicef.org/topic/nutrition; www.who.int/nutgrowthdb/estimates; https://data.worldbank.org>

Methodology: National household surveys (MICS, DHS, national nutrition surveys, etc.) and national nutrition surveillance systems are the preferred primary data sources for child nutrition indicators. For entry in the database, they must be nationally representative, population-based surveys which present results based on the WHO Child Growth standards or provide access to the raw data enabling reanalysis.

A weighted analysis was carried out to account for the different country populations and ensure that the influence in the regional trend analysis of a country's survey estimate was proportional to the country's population. The population weights were derived from the UN Population Prospects, revision 2017. For each data point, the respective under-five population estimate for the specific survey year was obtained. If a survey was performed over an extended period, for example November 2013 to April 2014, the mean year in which most of the fieldwork was completed (in this case 2014) was used as the year from which to choose the respective population estimate. Weights of countries with single data points were derived by dividing the under-five population at the time of the survey by the sum of the countries' mean population in the whole region. For countries with multiple data points the weights were calculated by dividing the mean of the country's under-five population (over the observed years) by the sum of those mean populations of countries within the whole region.

A linear mixed-effect model was applied for each region or income group, using logistic transform of prevalence and results back-transformed to original scale. The final models were then used to project the trend of malnutrition in children from 1990 to 2018. Using the resulting prevalence estimates (after back-transformation), the total numbers affected were calculated by multiplying the prevalence and lower and upper limits of the confidence intervals by the subregional population derived from the UN population estimates.

Variables: region, subregion, country, survey year, sample size, minimum and maximum age surveyed, prevalence of stunting, prevalence of

wasting, prevalence of severe wasting, prevalence of overweight, country population of under five years of age.

Challenges and limitations: The recommended periodicity for countries to report on stunting, overweight and wasting is every three to five years; however, for some countries data are available less frequently. While every effort has been made to maximize the comparability of statistics across countries and over time, country data may differ in terms of data collection methods, population coverage and estimation methods used. Survey estimates come with levels of uncertainty due to both sampling errors and non-sampling errors (technical measurement errors, recording errors, etc.). Neither of the two sources of error has been fully taken into account for deriving estimates at country or regional and global levels.

For the prevalence of wasting, as surveys are generally carried out during a specific period of the year, the estimates can be affected by seasonality. Seasonal factors related to wasting include food availability (e.g. preharvest periods) and disease (rainy season and diarrhoea, malaria, etc.), while natural disasters and conflicts can also show real shifts in trends that would need to be treated differently than a seasonal variation. Hence, country years estimates for wasting may not necessarily be comparable over time. Consequently, only the most recent (2018) estimates are provided.

References:

- UNICEF, WHO and International Bank for Reconstruction and Development/World Bank. 2019. *UNICEF-WHO-The World Bank: Joint child malnutrition estimates - Levels and trends* (March 2019 edition) [online]. <https://data.unicef.org/topic/nutrition; www.who.int/nutgrowthdb/estimates; https://data.worldbank.org>
- WHO. 2010. *Nutrition Landscape Information System (NLIS) country profile indicators: interpretation guide*. Geneva, Switzerland.
- WHO. 2014. *Comprehensive implementation plan on maternal, infant and young child nutrition*. Geneva, Switzerland.

EXCLUSIVE BREASTFEEDING

Definition: Exclusive breastfeeding for infants < six months of age is defined as receiving only breast milk and no additional food or drink, not even water. Exclusive breastfeeding is a cornerstone of child survival and is the best food for newborns, as breast milk shapes the baby's microbiome, strengthens the immune system, and reduces the risk of developing chronic diseases.

Breastfeeding also benefits mothers by preventing postpartum haemorrhage and promoting uterine involution, decreasing risk of iron-deficiency anaemia, reducing the risk of various types of cancer and providing psychological benefits.

How exclusive breastfeeding is reported: Percentage of infants aged 0–5 months who are fed exclusively on breast milk with no additional food or drink, not even water, in the 24 hours preceding the survey.

Data source: UNICEF. 2019. Infant and Young Child Feeding. In: *UNICEF Data: Monitoring the Situation of Children and Women* [online]. New York, USA. <https://data.unicef.org/topic/nutrition/infant-and-young-child-feeding>

Methodology:

Infants 0–5 months of age who received only breastmilk during the previous day

Infants 0–5 months of age

This indicator includes breastfeeding by a wet nurse and feeding expressed breast milk.

The indicator is based on a recall of the previous day's feeding to a cross-section of infants 0–5 months of age.

In 2012, the regional and global exclusive breastfeeding estimates were generated using the most recent estimate available for each country between 2005 and 2012. Similarly, 2018 estimates were developed using the most recent estimate available for each country between 2013

and 2018. Global and regional estimates were calculated as weighted averages of the prevalence of exclusive breastfeeding in each country, using the total number of births from the World Population Prospects, 2017 revision (2012 for the baseline and 2018 for the current) as weights. Estimates are presented only where the available data are representative of at least 50 percent of corresponding regions' total number of births, unless otherwise noted.

Challenges and limitations: While a high proportion of countries collect data for exclusive breastfeeding, data are lacking in high-income countries in particular. The recommended periodicity of reporting on exclusive breastfeeding is every three to five years. However, for some countries, data are reported less frequently, meaning changes in feeding patterns are often not detected for several years after the change occurs.

Regional and global averages may be affected depending on which countries had data available for the periods considered in this report.

Using the previous day's feeding as a basis may cause the proportion of exclusively breastfed infants to be overestimated as some infants who may have been given other liquids or foods irregularly may not have received these in the day before the survey.

References:

- UNICEF. 2019. Infant and young child feeding: exclusive breastfeeding, predominant breastfeeding. In: *UNICEF Data: Monitoring the Situation of Children and Women* [online]. New York, USA. <https://data.unicef.org/topic/nutrition/infant-and-young-child-feeding>
- WHO. 2008. *Indicators for assessing infant and young child feeding practices. Part 1: Definitions*. Geneva, Switzerland.
- WHO. 2010. *Nutrition Landscape Information System (NLIS) country profile indicators: interpretation guide*. Geneva, Switzerland.
- WHO. 2014. *Comprehensive implementation plan on maternal, infant and young child nutrition*. Geneva, Switzerland.

LOW BIRTHWEIGHT

Definition: Low birthweight is defined as a weight at birth of less than 2 500 grams (less than 5.51 lbs), regardless of gestational age. A newborn's weight at birth is an important marker of maternal and foetal health and nutrition.

How is low birthweight reported: The percentage of newborns weighing less than 2 500 grams (less than 5.51 lbs) at birth.

Data source: UNICEF and WHO. 2019. *Low birthweight estimates, 2019*. [Cited 10 May 2019]. <https://data.unicef.org/topic/nutrition/low-birthweight>; <https://www.who.int/nutgrowthdb>

Methodology: Nationally representative estimates of low birthweight prevalence can be derived from a range of sources, broadly defined as national administrative data or representative household surveys. National administrative data are those coming from national systems including Civil Registration and Vital Statistics (CRVS) systems, national Health Management Information Systems (HMIS) and birth registries. National household surveys which contain information about birthweight as well as key related indicators including maternal perception of size at birth (MICS, DHS) are also an important source of low birthweight data especially in contexts where many births are unweighed and/or data heaping is a problem. Prior to entry into the country data set, country data are reviewed for coverage and quality and adjusted where the source is a household survey. Administrative data are categorized as (i) high coverage, if representing ≥ 90 percent of live births; (ii) medium coverage, if representing 80–90 percent of live births; or (iii) not included, if covering < 80 percent of live births. To be included in the data set, survey data need to have:

- i. a birthweight in the data set for at minimum 30 percent of the sample;
- ii. a minimum of 200 birthweights in the data set;
- iii. no indication of severe data heaping – this means that: a) ≤ 55 percent of all birthweights

- can fall on the three most frequent birthweights (i.e. if 3 000 g, 3 500 g and 2 500 g were the three most frequent birthweights, when added together, they have to make up ≤ 55 percent of all birthweights in the data set); b) ≤ 10 percent of all birthweights ≥ 4 500 g; c) ≤ 5 percent of birthweights on tail ends of 500 g and 5 000 g; and*
- iv. undergo an adjustment for missing birthweights and heaping.⁶

Modelling methods were applied to the accepted (and for household survey data, accepted and adjusted) country data to generate annual country estimates from 2000 to 2015, with methods varying by availability and type of input data as follows:

- ▶ **b-spline:** data for countries with ≥ 8 data points from higher coverage administrative sources with ≥ 1 prior to 2005 and ≥ 1 more point more recent than 2010 are smoothed with b-spline regression to generate annual low birthweight estimates. A b-spline regression model was used to predict the standard error and calculate 95 percent confidence intervals for the country-level low birthweight estimates. These low birthweight estimates follow very closely those included in the countries' own administrative reports.
- ▶ **Hierarchical regression:** data for countries not meeting requirements for b-spline but with ≥ 1 low birthweight data point from any source meeting inclusion criteria are fitted into a model using covariates to generate annual low birthweight estimates, as well as uncertainty ranges, using a bootstrap approach. The model includes natural log of neonatal mortality rate; the proportion of children underweight (weight-for-age z-score below minus two standard deviations from median weight for age of reference population); data type (higher quality administrative, lower quality administrative, household survey); UN region (e.g. Southern Asia, Caribbean); and a country-specific random effect. These low birthweight estimates may vary substantially from estimates reported by countries in administrative and survey reports, especially given that the household survey estimates

are adjusted for missing birthweights and heaping, while survey reports often present a low birthweight estimate just for the children with a birthweight and with no adjustment for data heaping.

- ▶ **No estimate:** countries for which low birthweight input data were not available and/or did not meet inclusion criteria are indicated in the database as "no estimate". A total of 54 countries in the current country database were reported as having "no estimate". Despite not presenting an estimate for these individual 54 countries, annual low birthweight estimates were derived for them using the hierarchical regression methods detailed above but used only to input into regional and global estimates.

Modelled annual country estimates are used to generate regional and global estimates in 2000–2015. Global estimates are derived by summing the estimated number of live births weighing less than 2 500 g for 195⁷ countries with an estimate in the United Nations regional grouping for each year and dividing by all live births in each year in those 195 countries. Regional estimates are similarly derived, based on countries in each regional grouping. To obtain the global and regional level estimates of uncertainty, 1 000 low birthweight point estimates were made for each country for each year using either b-spline (by randomly sampling from a normal distribution plotted using the calculated standard error) or hierarchical regression approach (using a bootstrap approach). The country low birthweight estimates for each of the 1 000 samples were summed at worldwide or regional level and the 2.5th and 97.5th centiles of the resulting distributions were used as the confidence intervals.

Challenges and limitations: A major limitation of monitoring low birthweight globally is the lack of birthweight data for many of the world's children. There is a notable bias among the unweighted, with those born to poorer, less educated, rural mothers being less likely to have a birthweight when compared with their richer, urban counterparts with more highly educated mothers.⁸ As the characteristics of the unweighted are risk factors

for having a low birthweight, estimates that do not well represent these children may be lower than the true value. Furthermore, poor quality of available data with regard to excessive heaping on multiples of 500 g or 100 g exists in the majority of available data from LMIC⁹ and can further bias low birthweight estimates. The methods applied to adjust for missing birthweights and heaping for survey estimates in the current database¹⁰ are meant to address the problem, however there were a total of 54 countries for which it was not possible to generate a reliable birthweight estimate. In addition, the confidence limits of the regional and global estimates may be artificially small given that about half of the modelled countries had a country-specific effect generated at random for each bootstrap prediction, some of which were positive and others negative, making the relative uncertainty at the regional and global level tend to be less than that at the individual country level.

References:

- A.K. Blanc and T. Wardlaw. 2005. Monitoring low birth weight: An evaluation of international estimates and an updated estimation procedure. *Bulletin World Health Organization*, 83(3): 178–185.
- H. Blencowe, J. Krusevec, M. de Onis, R.E. Black, X. An, G.A. Stevens, E. Borghi, C. Hayashi, D. Estevez, L. Cegolon, S. Shiekh, V.P. Hardy, J.E. Lawn and S. Cousens. 2019. National, regional, and worldwide estimates of low birthweight in 2015, with trends from 2000: a systematic analysis. *The Lancet Global Health*, 15 May 2019 [online]. [http://dx.doi.org/10.1016/S2214-109X\(18\)30565-5](http://dx.doi.org/10.1016/S2214-109X(18)30565-5)

ADULT OBESITY

Definition: BMI $\geq 30.0 \text{ kg/m}^2$. The body mass index (BMI) is the ratio of weight-to-height commonly used to classify the nutritional status of adults. It is calculated as the body weight in kilograms divided by the square of the body height in meters (kg/m^2). Obesity includes individuals with BMI equal or higher than $30 \text{ kg}/\text{m}^2$.

How is the indicator reported: Percentage of population of 18 years of age and over with BMI $\geq 30.0 \text{ kg}/\text{m}^2$ standardized by age and weighted by sex.

Data source: WHO. 2019. Global Health Observatory (GHO) data repository. In: *World Health Organization* [online]. Geneva, Switzerland. [Cited 10 May 2019] <http://apps.who.int/gho/data/node.main.A900A?lang=en>

Methodology: A Bayesian hierarchical model was applied to selected population-based studies that had measured height and weight in adults aged 18 years and older to estimate trends from 1975 to 2014 in mean BMI and in the prevalence of BMI categories (underweight, overweight and obesity). The sample included 1 698 population-based studies with more than 19.2 million participants aged 18 years or older, measured in 186 countries. The model incorporated nonlinear time trends and age patterns; national versus subnational and community representativeness; and whether data covered both rural and urban areas versus only one of them. The model also included covariates that help predict BMI, including national income, proportion of population living in urban areas, mean number of years of education, and summary measures of availability of different food types for human consumption.

Challenges and limitations: Some countries had few data sources and only 42 percent of included sources reported data for people older than 70 years.

References:

- NCD Risk Factor Collaboration (NCD-RisC). 2016. Trends in adult body-mass index in 200 countries from 1975 to 2014: a pooled analysis of 1698 population-based measurement studies with 19.2 million participants. *The Lancet*, 387(10026): 1377–1396.
- WHO. 2010. *Nutrition Landscape Information System (NLIS) country profile indicators: interpretation guide*. Geneva, Switzerland.

ANAEMIA IN WOMEN OF REPRODUCTIVE AGE

Definition: [Haemoglobin] < 110g/litre for pregnant women; [Haemoglobin] < 120g/litre for non-pregnant women. Anaemia is defined as a haemoglobin concentration below a specified cutoff point, which can change according to the age, sex, physiological status, smoking habits and altitude at which the population being assessed lives.

How is it reported: Percentage of women of reproductive age (15 to 49 years old) with haemoglobin concentration below 110g/litre for pregnant women and below 120 g/litre for non-pregnant women.

Data sources:

WHO. 2018. Prevalence of anaemia in women of reproductive age (%) (Global strategy for women's, children's and adolescents' health). In: *Global Health Observatory indicator views* [online]. Geneva, Switzerland. [Cited 10 may 2019]. <http://apps.who.int/gho/data/node.imr.PREVANEMIA?lang=en>

WHO. 2018. Micronutrients database. In: *Vitamin and Mineral Nutrition Information System (VMNIS)* [online]. Geneva, Switzerland. [Cited 10 may 2019]. www.who.int/vmnis/database

Methodology: National representative surveys, summary statistics from WHO's Vitamin and Mineral Nutrition Information Systems and, summary statistics reported by other national and international agencies.

Data for non-pregnant women and pregnant women were summed and weighted by the prevalence of pregnancy to generate one value for all women of reproductive age. Data were adjusted by altitude and, when available, smoking status.

Trends were modelled over time as a linear trend plus a smooth nonlinear trend, at national, regional, and global levels. The model used a weighted average of various bell-shaped densities to estimate full haemoglobin distributions, which might themselves be skewed.

The estimates are also informed by covariates that help predict haemoglobin concentrations, including maternal education, proportion of population in urban areas, mean latitude, prevalence of sickle cell disorders and thalassaemia and mean BMI. All covariates were available for every country and year, except the prevalence of sickle cell disorders and thalassaemia, which was assumed as constant over time during the analysis period for each country.

Challenges and limitations: Despite a high proportion of countries having nationally representative survey data available for anaemia, there is still a lack of reporting on this indicator, especially in high-income countries. As a result, the estimates may not capture the full variation across countries and regions, trending to "shrink" towards global means when data are sparse.

References:

- G.A. Stevens, M.M. Finucane, L.M. De-Regil, C.J. Paciorek, S.R. Flaxman, F. Branca, J.P. Peña-Rosas, Z.A. Bhutta and M. Ezzati. 2013. Global, regional, and national trends in haemoglobin concentration and prevalence of total and severe anaemia in children and pregnant and non-pregnant women for 1995–2011: a systematic analysis of population-representative data. *Lancet Global Health*, 1(1): e16–25.
- WHO. 2010. *Nutrition Landscape Information System (NLIS) country profile indicators: interpretation guide*. Geneva, Switzerland.
- WHO. 2014. *Comprehensive implementation plan on maternal, infant and young child nutrition*. Geneva, Switzerland.
- WHO. 2015. *The Global prevalence of anaemia in 2011*. Geneva, Switzerland.

ANNEX 2

METHODOLOGIES PART 1

A. Food insecurity compared with other important indicators of human development

This section provides additional details about the analysis presented in Box 4 “How do estimates of food insecurity compare with other important indicators of human development?” of Section 1.1. Spearman’s rank correlations were computed between the national prevalence of food insecurity at moderate or severe levels (as three-year average in the period 2016–2018) and the most recent value available for other selected development indicators. Table A2.1 summarizes the source and description for each of these, in alphabetical order.

B. Gender gap in accessing food

This section provides additional details about the analysis performed in the section “Gender differences in food insecurity” of Section 1.1.

B1. Prevalence of moderate or severe food insecurity among adults by gender

Figure 14 is derived using data collected by FAO. These data are collected at individual level. Each respondent (adult – 15 years or older) answers the FIES survey module by making reference to his/her own individual food-insecurity condition. For this reason, it is possible to disaggregate the results of food insecurity by male and female respondents. To do so, first, the possible presence of differential item functioning (DIF) between male and female respondents was checked, to make sure that differences between men and women in food-insecurity levels was not due to the fact that they may experience in a different way the same food-security conditions or that they may interpret the same question in a different way.

Results (not shown) point to no significant DIF between men and women. Based on this result, prevalence rates of food insecurity among men and women are calculated by applying different weighted raw score distributions (one for men and one for women) to the same probabilities of food insecurity, calculated at country level based on raw score parameters and errors obtained by the application of the Rasch model. This computation was performed for each year of data for each country. The results shown in the graph are based on the three-year-averaged country results in the period 2016–2018.

B2. Regression analysis

The text following Figure 14 in the report describes an analysis that aims at better understanding the determinants of gender gaps in accessing food, once controlling for other factors. The analysis is performed by pooling together individual-level FIES data collected by FAO in 145 countries, from 2014 to 2017, with the purpose of assessing the extent of any differences in the food-insecurity status of men and women, after controlling for socio-economic factors. A logistic regression is applied using the food-insecurity status as a dependent variable, established by considering the cross-country comparable probability of being food insecure at moderate or severe level for each country. If the probability is larger than 50 percent, the individual is classified as “food insecure” and the dependent variable takes the value of 1, otherwise it assumes a value of 0. Gender, area of residence (rural or small town versus large city or suburbs), poverty status, and education level of the respondents are included as independent variables. The year of data collection (between 2014 and 2017) is also included as a covariate. Results show that, after controlling for area of residence, poverty status and education level of the respondents, the odds of being food insecure are still approximately 10 percent higher for women than for men.

ANNEX 2

TABLE A2.1
DEFINITION OF VARIABLES AND SOURCES

Variable	Source	Description
Age dependency ratio	World Bank, WDI	Age dependency ratio is the ratio of dependents (people younger than 15 or older than 64) to the working-age population (those aged 15–64).
Basic drinking water services	WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP)	The percentage of people using at least basic water services. Basic drinking water services are defined as drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip. Improved water sources include piped water, boreholes or tube wells, protected dug wells, protected springs, and packaged or delivered water.
Basic sanitation services	WHO-UNICEF JMP	The percentage of people using at least basic sanitation services, that is, improved sanitation facilities that are not shared with other households. Improved sanitation facilities include flush/pour flush to piped sewer systems, septic tanks or pit latrines; as well as ventilated improved pit latrines, composting toilets or pit latrines with slabs.
GDP per capita	World Bank	GDP per capita based on purchasing power parity (PPP). PPP GDP is the gross domestic product converted to international dollars using purchasing power parity rates. Data are expressed in current international dollars, based on the 2011 International Comparison Program (ICP) round.
Gender Development Index (GDI)	UNDP	Measures gender gaps in human development achievements by accounting for disparities between women and men in three basic dimensions of human development – health, knowledge and living standards using the same component indicators as in the Human Development Index (HDI).
Gini index income inequality	World Bank	Measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution.
Health expenditure per capita	WHO-World Bank	Current expenditure on health per capita expressed in international dollars at purchasing power parity (PPP).
Human capital index	World Bank	Calculates the contributions of health and education to worker productivity. The final index score ranges from zero to one and measures the productivity as a future worker of a child born today relative to the benchmark of full health and complete education.
Labour force participation rate	ILO-World Bank	Labour force participation rate is the proportion of the population aged 15–64 that is economically active: all people who supply labour for the production of goods and services during a specified period.
Life expectancy at birth	WHO	The number of years a newborn would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.
Literacy rate - adult total (%)	UNESCO	Percentage of population aged 15 years and over who can both read and write with understanding a short simple statement about their everyday life.
Mortality rate, under 5	UN Inter-agency Group for Child Mortality Estimation	An estimate of the number of babies that will die before reaching the age of five years, out of each 1 000 who were born alive.
Political Stability and Absence of Violence	The Worldwide Governance Indicators	Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism.
Poverty headcount (%)	World Bank	Poverty headcount ratio at USD 1.90 a day is the percentage of the population living on less than USD 1.90 a day at 2011 international prices.
Rural population (%)	World Bank	People living in rural areas as defined by national statistical offices. It is calculated as the difference between total population and urban population.

SOURCE: FAO.

C. Macro-data analyses on the association between food insecurity and malnutrition

This section refers to the analysis in Section 1.3 entitled “Links between food insecurity and various forms of malnutrition at the country level”. **Table A2.2** presents the variables used in this analysis.

C1. Model specification

A series of n linear regression models were considered using Y_n (the nutrition outcome of interest) as response variable, and the log-odds of the prevalence of moderate or severe food insecurity in the population (FI), prevalence of undernourishment (PoU) and extreme poverty rate (POV) as covariates. See the function below. Coefficients were standardized to allow comparability between the results of different regression models. **Table A2.3** provides additional regression results in addition to **Table 5** in Section 1.3.

$$\begin{aligned} \text{Log}_e(Y_n) = & \beta_0 + \beta_1 \text{Log}_e\left(\frac{FI}{1-FI}\right) + \beta_2 \text{Log}_e\left(\frac{PoU}{1-PoU}\right) \\ & + \beta_3 \text{Log}_e\left(\frac{POV}{1-POV}\right) \end{aligned}$$

For a full description of the methodology and results, see: M. Del Grossi, A. Sattar, C. Alvarez-Sanchez, A. Ishaq, S. Viviani, J. Feng, F. Yassin and C. Cafiero. forthcoming. *The relevance of food security for nutrition: an empirical analysis at country level*. Technical Paper. Rome, FAO.

D. Microdata analyses on the association between food insecurity and malnutrition

This section provides additional details about the analyses presented in the subsection of Section 1.3 entitled “Links between food insecurity and various forms of malnutrition at the household and individual levels”.

D1. Data sets

The data sets used in the analyses were the following: Brazil 2006 Demographic and Health

Survey (DHS); Mexico 2012 National Health and Nutrition Survey (ENSANUT, by its Spanish acronym); United States 2013/14 National Health and Nutrition Survey; Kenya 2015/16 Integrated Household Budget Survey; Nepal 2016 DHS; Malawi 2016/17 Fourth Integrated Household Survey; Nigeria 2015/16 General Household Survey – Panel Wave 3 (Post Planting); Pakistan 2010 Panel Household Survey.

N.B. The Brazil data set includes adult anthropometry data for women only.

D2. Definition of variables

Food insecurity was constructed as a dichotomous variable ($FI_{mod+sev}$ or food secure/mildly food insecure), based on experience-based food-insecurity scales data from each data set. Each country’s food-insecurity scale was equated to the global reference scale following the FIES methodology (**Box 3**) to produce a cross-country comparable measure of food insecurity.

All the dependent variables were dichotomous (presence/absence of specific form of malnutrition). WHO Child Growth Standards and official cut-points were used for constructing the child and school-age children and adolescent anthropometric indicators. BMI cut-offs from WHO were used for constructing overweight and obesity indicators for adults.

Tables A2.4 and **A2.5** present a brief description of each of the malnutrition indicators and the dependent variables.

D3. Model specification

Logistic regression equations were used to estimate the likelihood of an individual being malnourished given the food-insecurity status of their household. Regressions were estimated for each malnutrition outcome considered, while controlling for cluster (household) effects and relevant covariates (described below). For each country and outcome variable, alternative model specifications with various combinations of covariates and interaction terms were tried.

Tables 6 and **7** report the results of the models with the lowest Akaike information criterion (AIC) and Bayesian information criterion (BIC). ➤

ANNEX 2

TABLE A2.2
DEFINITION OF VARIABLES AND SOURCES

Variable	Source	Period	Description
Undernourishment (PoU)	FAO Statistics Division	2014–2016	Percentage of individuals in the total population that are in a condition of undernourishment (%).
Food insecurity (FI)	FAO Statistics Division	2014–2016	Percentage of individuals in the population living in households where at least one adult was found to be moderately or severely food insecure (%).
Extreme poverty (POV)	World Bank	Last available value from 2013–2017	Poverty headcount ratio at USD 1.90 a day, 2011 PPP (% of the population).
Stunting (Y_4)	UNICEF-WHO-World Bank Group Joint Child Malnutrition Estimates 2019	Last available value from 2013–2017	Percentage of children aged 0–59 months who are below -2 standard deviations (SD) from the median height-for-age of the 2006 WHO Child Growth Standards (%).
Wasting (Y_5)	UNICEF-WHO-World Bank Group Joint Child Malnutrition Estimates 2019	Last available value from 2013–2017	Percentage of children aged 0–59 months who are below -2 SD from the median weight-for-height of the 2006 WHO Child Growth Standards (%).
Overweight in school-age children and adolescents (Y_2)	Global Health Observatory, WHO	2016	Percentage of children aged 5–19 years with BMI > 1 SD of the median according to the WHO growth reference for school-age children and adolescents (%).
Overweight in children less than five years of age (Y_3)	Global Health Observatory, WHO	Last available value from 2012–2018	Percentage of children aged 0–59 months who are above +2 SD from the median weight-for-height of the 2006 WHO Child Growth Standards (%).
Adult obesity (Y_1)	Global Health Observatory, WHO	2016	Percentage of population of 18 years of age and above with BMI $\geq 30.0 \text{ kg/m}^2$ standardized by age and weighted by sex (%).
Anaemia (Y_6)	Global strategy for women's, children's and adolescents' health, WHO	2016	Percentage of women of reproductive age (15 to 49 years old) with haemoglobin concentration below 110g/litre for pregnant women and below 120 g/litre for non-pregnant women (%).

SOURCE: M. Del Grossi, A. Sattar, C. Alvarez-Sánchez, A. Ishaq, S. Viviani, J. Feng, F. Yassin and C. Cafiero. forthcoming. *The relevance of food security for nutrition: an empirical analysis at country level*. Technical Paper. Rome, FAO.

TABLE A2.3
RESULTS

Dependent variable	Sample size (no. of countries)	β_1	β_2	β_3	Condition Index (C.I.)	Adj. R ²
Adult obesity	86	0.308 (0.031)	-0.379 (0.002)	-0.635 (0.000)	7.8	0.471
Overweight in school-age children and adolescents	86	-0.033 (0.813)	-0.279 (0.016)	-0.470 (0.000)	7.8	0.495
Overweight in children less than five years of age	47	-0.132 (0.503)	-0.064 (0.675)	-0.438 (0.041)	6.2	0.298
Stunting	43	0.001 (0.995)	0.222 (0.077)	0.638 (0.001)	6.3	0.592
Wasting	43	-0.035 (0.885)	0.305 (0.096)	0.211 (0.404)	6.3	0.127
Anaemia	87	0.404 (0.011)	0.161 (0.214)	0.090 (0.542)	7.8	0.343

NOTES: β_1 to β_3 : Standardized Coefficients; C.I.: highest Condition Index from collinearity diagnostics; Adj. R²: Adjusted R Square.

SOURCE: M. Del Grossi, A. Sattar, C. Alvarez-Sánchez, A. Ishaq, S. Viviani, J. Feng, F. Yassin and C. Cafiero. forthcoming. *The relevance of food security for nutrition: an empirical analysis at country level*. Technical Paper. Rome, FAO.

TABLE A2.4
MALNUTRITION INDICATORS BY AGE/SEX CLASS (DEPENDENT VARIABLES)

Age/sex class	Variable	Description
Children < 5 years old	Stunting	Height/length-for-age < -2 SD of the median of the 2006 WHO Child Growth Standards.
	Wasting	Weight-for-height/length < -2 SD of the median of the 2006 WHO Child Growth Standards.
	Overweight	Weight-for-height/length > 2 SD of the median of the 2006 WHO Child Growth Standards.
School-age children and adolescents (5–19 years old)	Overweight	BMI-for-age z-score > 1 SD of the median of the WHO growth reference for school-age children and adolescents.
Adults (18 years old and older)	Obesity	BMI $\geq 30 \text{ kg/m}^2$ standardized by age and weighted by sex.
Women 15–49 years old	Anaemia	Non-pregnant women: haemoglobin < 120 g/litre Pregnant women: haemoglobin < 110 g/litre.

SOURCE: A. Ishaq, C. Alvarez-Sánchez, M. Del Grossi, S. Viviani, J. Feng, F. Yassin, A. Kepple, A. Sattar and C. Cafiero. forthcoming. *The relevance of household food security for nutrition: an empirical analysis based on survey data*. Technical Paper. Rome, FAO.

» Whenever possible, analyses were conducted controlling for age, sex, income/consumption expenditure/wealth status (depending on what data was available in the survey), dependency ratio/household size, and area of residence. Ethnicity was also controlled for in all the analyses with the Brazil, Mexico, Nepal and United States of America data sets. The following covariates were used for controlling in selected analyses: maternal/caregiver education (stunting, wasting, child overweight, and overweight and obesity in school-age children and adolescents), own education (overweight and obesity in school-age

children and adolescents and adult obesity), access to clean drinking water and access to basic sanitation facilities (stunting, wasting, anaemia), overweight mother (child overweight), and number of pregnancies (anaemia).

For a full description of the methodology and results, see: A. Ishaq, C. Alvarez-Sánchez, M. Del Grossi, S. Viviani, J. Feng, F. Yassin, A. Kepple, A. Sattar and C. Cafiero. forthcoming. *The relevance of household food security for nutrition: an empirical analysis based on survey data*. Technical Paper. Rome, FAO.

ANNEX 2

**TABLE A2.5
INDEPENDENT VARIABLES**

Variable	Description
Food insecurity (FI _(mod+sev))	Food insecurity _(mod+sev) is defined for this analysis as a probability equal to 0.5 or higher of a household being food insecure at moderate or severe level.
Age	For children < 5 years old, age was categorized into four groups: (0, 2), (2, 3), (3, 4) and (4, 5). For individuals 5 years old and older, age in years (as a continuous variable) was used.
Access to basic drinking water services	Basic drinking water services are defined by WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) as drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip. Improved water sources include piped water, boreholes or tube wells, protected dug wells, protected springs, and packaged or delivered water.
Access to basic sanitation services	Basic sanitation services are defined by WHO/UNICEF JMP as improved sanitation facilities that are not shared with other households. Improved sanitation facilities include flush/pour flush to piped sewer systems, septic tanks or pit latrines; as well as ventilated improved pit latrines, composting toilets or pit latrines with slabs.
Area of residence	Area of residence is defined as urban or rural, as indicated in the survey.
Dependency ratio	Ratio of dependents (people younger than 15 or older than 64) to the working-age population (those aged 15–64).
Education level of individual	Education of the individual was categorized in four levels: no education or primary not completed; primary completed; secondary completed; tertiary completed.
Education level of mother/guardian of child (5 years old)	Education of the mother/guardian was categorized in four levels: no education or primary not completed; primary completed; secondary completed; tertiary completed.
Ethnicity	For the United States of America, ethnicity is defined as being White, Black, Hispanic, Asian, or other. For Brazil, it is defined as skin colour being white, black/brown, or yellow/indigenous. For Mexico, it is defined as speaking an indigenous language or not. For Nepal, it is defined as being Brahman, Terai, Dalit, Newar, Janajati, or Muslim.
Household size	Number of household members.
Number of pregnancies	Number of times a woman has been pregnant.
Overweight mother	Maternal overweight is equal to one if the child has an overweight mother (BMI ≥ 25).
Region	Regions (at which survey samples are still representative).
Sex	Sex is defined as male or female.
Welfare measures: income/expenditure/ wealth (based on survey availability)	Depending on the data availability, the welfare measures can be income per capita per day in 2011 PPP (Brazil and United States of America); consumption expenditure per capita per day in 2011 PPP (Kenya, Nigeria and Pakistan); or wealth indices (Mexico and Nepal).

SOURCE: A. Ishaq, C. Alvarez-Sánchez, M. Del Grossi, S. Viviani, J. Feng, F. Yassin, A. Kepple, A. Sattar and C. Cafiero. forthcoming. *The relevance of household food security for nutrition: an empirical analysis based on survey data*. Technical Paper. Rome, FAO.

ANNEX 3

PoU CHANGE POINT DEFINITIONS, METHODOLOGY AND COUNTRY LISTS

A. Definition of economic slowdown and downturn

Economic slowdowns and downturns have been identified using the real annual rate of per capita GDP growth at constant 2010 prices, expressed in US dollars.¹¹ The change in country per capita growth across two successive years is computed to obtain a simple difference in growth. Thus, a slowdown is identified when per capita growth in the current year is positive but lower in magnitude compared with the previous year. Downturns are defined when the difference in per capita growth between two periods is negative. Furthermore, information on the frequency of economic slowdowns and downturns is provided by the number of consecutive years when a country experienced either of the two.

B. PoU change point analysis and methodology

A change point refers to the statistically significant change in the prevalence of undernourishment over time. In this report the focus is on increasing change points, i.e. a statistically significant and positive increase in the prevalence of undernourishment over two consecutive years. Change points in the PoU time series were identified by applying the multiple structural changes model proposed by Bai and Perron (1998).¹² This involves finding the “best” combination of n possible breaks

subject to the constraint that distance between break intervals should be above a minimum length. Here “best” means minimum sum of squared residuals from an OLS regression of PoU on a set of dummies indicating the timing of the breaks. A minimum break interval of three years was imposed in the identification of the optimal segmentation. PoU in years 2005–2018 was used to identify change points between years 2006–2017. An additional constraint has been used to identify the relevant change points, i.e. only those characterized by a subsequent increasing tendency (estimated by an ordinary least squares method) for two consecutive years.

The change point analysis consists in identifying increasing PoU change points that correspond to the occurrence of an economic slowdown or downturn in low- and middle-income countries. Economic slowdowns and downturns are identified when they occur in one of the two years before the PoU change point, for instance, between 2013–2014 or 2014–2015 if the PoU change point occurs in 2015. [Figure 24](#) shows the number of countries with PoU change points in correspondence with economic slowdowns or downturns by year (2006–2017). [Table A3.1](#) lists 96 increases in PoU change point occurred in 65 countries in correspondence with economic slowdowns and downturns between years 2011–2017.

In order to identify low- and middle-income countries, the 2017 World Bank classification is used. Although Argentina and Panama are classified as high income countries in 2017 ([Table A3.1](#)) they are included in the analysis since they have been classified as upper-middle-income countries for the majority of the time (at least five out of seven years during the period 2011–2017).

TABLE A3.1
COUNTRIES WITH AN INCREASE IN PoU CHANGE POINT CORRESPONDING TO ECONOMIC SLOWDOWNS OR DOWNTURNS, YEARS 2011–2017

Year	Country	Region	Income group
2011	Belarus	Europe	Upper-middle-income
2011	Central African Republic	Africa	Low-income
2011	Jordan	Asia	Upper-middle-income
2011	Lebanon	Asia	Upper-middle-income
2011	Liberia	Africa	Low-income
2011	Thailand	Asia	Upper-middle-income
2012	Brazil	Latin America and the Caribbean	Upper-middle-income
2012	Ecuador	Latin America and the Caribbean	Upper-middle-income
2012	Guinea-Bissau	Africa	Low-income
2012	Malawi	Africa	Low-income
2012	Zimbabwe	Africa	Low-income
2013	Botswana	Africa	Upper-middle-income
2013	Burkina Faso	Africa	Low-income
2013	Mongolia	Asia	Lower-middle-income
2013	Uganda	Africa	Low-income
2013	Uzbekistan	Asia	Lower-middle-income
2014	Burundi	Africa	Low-income
2014	Central African Republic	Africa	Low-income
2014	Eritrea	Africa	Low-income
2014	Indonesia	Asia	Lower-middle-income
2014	Kazakhstan	Asia	Upper-middle-income
2014	Mauritania	Africa	Lower-middle-income
2014	Panama	Latin America and the Caribbean	High-income
2014	Turkey	Asia	Upper-middle-income
2014	Ukraine	Europe	Lower-middle-income
2014	Venezuela (Bolivarian Republic of)	Latin America and the Caribbean	Upper-middle-income
2014	Yemen	Asia	Low-income
2015	Argentina	Latin America and the Caribbean	High-income
2015	Benin	Africa	Low-income
2015	Bolivia (Plurinational State of)	Latin America and the Caribbean	Lower-middle-income
2015	Cameroon	Africa	Lower-middle-income
2015	China	Asia	Upper-middle-income
2015	Congo	Africa	Lower-middle-income
2015	Côte d'Ivoire	Africa	Lower-middle-income
2015	Gabon	Africa	Upper-middle-income
2015	Kenya	Africa	Lower-middle-income
2015	Malaysia	Asia	Upper-middle-income
2015	Mali	Africa	Low-income
2015	Morocco	Africa	Lower-middle-income
2015	Mozambique	Africa	Low-income
2015	Niger	Africa	Low-income
2015	Nigeria	Africa	Lower-middle-income
2015	South Africa	Africa	Upper-middle-income
2015	Togo	Africa	Low-income
2015	Turkmenistan	Asia	Upper-middle-income
2015	United Republic of Tanzania	Africa	Low-income
2015	Zambia	Africa	Lower-middle-income
2015	Zimbabwe	Africa	Low-income

**TABLE A3.1
(CONTINUED)**

Year	Country	Region	Income group
2016	Argentina	Latin America and the Caribbean	High-income
2016	Armenia	Asia	Upper-middle-income
2016	Cameroon	Africa	Lower-middle-income
2016	Gabon	Africa	Upper-middle-income
2016	Gambia	Africa	Low-income
2016	Georgia	Asia	Lower-middle-income
2016	Jordan	Asia	Upper-middle-income
2016	Kazakhstan	Asia	Upper-middle-income
2016	Kyrgyzstan	Asia	Lower-middle-income
2016	Mali	Africa	Low-income
2016	Mauritania	Africa	Lower-middle-income
2016	Mauritius	Africa	Upper-middle-income
2016	Mongolia	Asia	Lower-middle-income
2016	Nicaragua	Latin America and the Caribbean	Lower-middle-income
2016	Niger	Africa	Low-income
2016	Nigeria	Africa	Lower-middle-income
2016	Panama	Latin America and the Caribbean	High-income
2016	Sao Tome and Principe	Africa	Lower-middle-income
2016	Suriname	Latin America and the Caribbean	Upper-middle-income
2016	Tajikistan	Asia	Low-income
2016	Tonga	Oceania	Upper-middle-income
2016	Turkey	Asia	Upper-middle-income
2016	Turkmenistan	Asia	Upper-middle-income
2016	Ukraine	Europe	Lower-middle-income
2016	Vanuatu	Oceania	Lower-middle-income
2016	Venezuela (Bolivarian Republic of)	Latin America and the Caribbean	Upper-middle-income
2017	Armenia	Asia	Upper-middle-income
2017	Cabo Verde	Africa	Lower-middle-income
2017	Cameroon	Africa	Lower-middle-income
2017	Costa Rica	Latin America and the Caribbean	Upper-middle-income
2017	Egypt	Africa	Lower-middle-income
2017	Gambia	Africa	Low-income
2017	Guatemala	Latin America and the Caribbean	Upper-middle-income
2017	Guinea	Africa	Low-income
2017	Guyana	Latin America and the Caribbean	Upper-middle-income
2017	Malaysia	Asia	Upper-middle-income
2017	Mongolia	Asia	Lower-middle-income
2017	Myanmar	Asia	Lower-middle-income
2017	Nicaragua	Latin America and the Caribbean	Lower-middle income
2017	Niger	Africa	Low-income
2017	Nigeria	Africa	Lower-middle-income
2017	Panama	Latin America and the Caribbean	High-income
2017	Samoa	Oceania	Upper-middle-income
2017	Sao Tome and Principe	Africa	Lower-middle-income
2017	Suriname	Latin America and the Caribbean	Upper-middle-income
2017	Tonga	Oceania	Upper-middle-income
2017	Turkey	Asia	Upper-middle-income
2017	Turkmenistan	Asia	Upper-middle-income

SOURCES: FAO for PoU; for economic slowdowns and downturns, UN. 2019. National Accounts – Analysis of Main Aggregates. In: *UNSTATS* [online]. New York, USA. [Cited 6 May 2019]. <https://unstats.un.org/unsd/snaama>

C. List of countries outside the confidence interval in the analysis of PoU change and economic growth

In [Figure 25](#) the difference in PoU between 2011 and 2017 is plotted against economic growth between the same years. Economic growth is the percentage change in real GDP per capita (constant 2010 USD prices) between 2011 and 2017, with the GDP deflator used to deflate growth in per capita GDP. Economic growth is computed using real per capita GDP comparing two points in time, 2011 and 2017, as:

$$\frac{\text{per capita } \text{GDP}_{2017} - \text{per capita } \text{GDP}_{2011}}{\text{per capita } \text{GDP}_{2011}} * 100$$

Country names are only reported in the figure for countries falling outside the 95 percent confidence interval, indicating countries whose values are more dispersed around the mean, i.e. higher or lower than predicted by economic growth. Low-income countries falling inside the 95 percent confidence interval are Benin, Burkina Faso, Burundi, Gambia, Guinea, Haiti, Liberia, Nepal, Sierra Leone and Yemen. Lower-middle-income countries falling in the 95 percent confidence interval are Bangladesh, Bhutan, Cambodia, Cameroon, Côte d'Ivoire, Djibouti, Egypt, India, Indonesia, Kiribati, Kyrgyzstan, Lao People's Democratic Republic, Lesotho, Morocco, Myanmar, Pakistan, Syrian Arab Republic, Tunisia, Ukraine, Uzbekistan, Vanuatu and Viet Nam. Upper-middle-income countries falling in the 95 percent confidence interval are Albania, Armenia, Belarus, Belize, Bosnia and Herzegovina, Botswana, Bulgaria, China, Costa Rica, Cuba, Ecuador, Fiji, Gabon, Guatemala, Guyana, Iran (Islamic Republic of), Jordan, Kazakhstan, Lebanon, Malaysia, Maldives, Marshall Islands, Mexico, Montenegro, North Macedonia, Paraguay, Peru, Romania, Russian Federation, Saint Vincent and the Grenadines, Samoa, Serbia, South Africa, Thailand, Tonga and Tuvalu.

D. List of countries outside the confidence interval in the extreme poverty analysis

[Figure 31](#) shows the correlation between extreme poverty and PoU (graph A) and extreme poverty and stunting (graph B). Country names are only reported for countries falling outside the 95 percent confidence interval, indicating countries whose values are more dispersed

around the mean, i.e. higher or lower than predicted by extreme poverty.

In [Figure 31](#) (graph A), countries falling inside the 95 percent confidence interval are: Albania, Algeria, Armenia, Bangladesh, Burkina Faso, Burundi, Costa Rica, Côte d'Ivoire, Democratic Republic of the Congo, Ecuador, Egypt, Ethiopia, Gambia, Georgia, Guinea, Guinea-Bissau, Honduras, India, Indonesia, Iran (Islamic Republic of), Lao People's Democratic Republic, Malaysia, Mauritania, Mozambique, Myanmar, Niger, Sierra Leone, Tajikistan, Tunisia and Ukraine.

In [Figure 31](#) (graph B), countries falling inside the 95 percent confidence interval are: Albania, Benin, Cameroon, Chad, Democratic Republic of the Congo, El Salvador, Gambia, Guinea, Kazakhstan, Kyrgyzstan, Liberia, Madagascar, Malawi, Montenegro, Rwanda, Sierra Leone, Solomon Islands, South Africa, Tajikistan, Thailand, Turkey, Uganda, United Republic of Tanzania, Zambia and Zimbabwe.

E. List of countries with imputed values for PoU

The analyses include some countries with imputed PoU. PoU is imputed whenever official data on DEC and/or CV are missing for that country. When unofficial estimates of DEC and CV are available, these are used to derive an estimate of the PoU to be included in the aggregates. When no estimates of DEC or CV are available, the PoU is imputed to the population-weighted average of the estimated values of the remaining countries in the same region. In both cases, although the country estimates are not disseminated by FAO, they are used to compute regional and global numbers and for other analytical purposes.

List of countries with imputed PoU:

[Figure 24](#): Burundi, Eritrea, Tajikistan, and Tonga.

[Figure 25](#): Bhutan, Burundi, Comoros, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Grenada, Marshall Islands, Micronesia (Federated States of), Papua New Guinea, Republic of Moldova, Syrian Arab Republic, Tajikistan, Tonga, and Tuvalu.

[Figure 31](#): Bhutan, Burundi, Comoros, Democratic Republic of the Congo, Micronesia (Federated States of), Republic of Moldova, Saint Lucia, Tajikistan, Tonga, and Tuvalu.

ANNEX 4

ECONOMIC GROWTH AND CHANGE IN PoU BETWEEN 2011 AND 2017

A. Evidence of statistical correlation between economic downturns and PoU between the years 2011 and 2017: model specification and results

To explore whether the recent observed increases in the prevalence of undernourishment (PoU) are statistically associated with economic slowdowns and downturns, an analysis was undertaken on the relationship between changes in PoU and economic growth between 2011 and 2017. No attempt was made to model the complex mechanism and the diverse pathways by which economic growth and hunger are linked. This would require modelling the complex relationships between economic, social, anthropometric and policy variables, and assessing the intricate feedback routes between them. Instead, the analysis focuses on a reduced form of this complex system and attempts to assess the correlation between hunger and economic performance – i.e. fast rates of growth, slowdowns and downturns. The results complement those of the PoU change point analysis (see [Figure 24](#) and Annex 3) and provide evidence that the relationship between economic downturns and PoU between the years of 2011 and 2017 is more than one of simple corresponding occurrence. Only economic downturns are considered (not slowdowns) for the reasons explained below.

The relationship between changes in PoU and economic growth between 2011 and 2017 is analysed based on the approach of Headey (2013),¹³ focusing on low- and middle-income countries. The approach involves a series of Ordinary Least Squares (OLS) regression analyses ([Table A4.2](#)) showing the correlation between the difference in the PoU and real per capita GDP growth between 2011 and 2017.

The years selected for this analysis (2011 and 2017) correspond to the recent period in which there are notable observed increases in PoU. As highlighted in Part 1 of this report and the two previous editions of the report, the prevalence of undernourishment and the number of undernourished people in the world began to increase at the aggregate world level in 2016. However, for many countries, especially low- and lower-middle-income countries, as well as countries affected by conflict and adverse climate events, undernourishment had already been on the rise as early as 2011. For this reason, the starting year of the analysis is the earliest year in which a notable number of countries first began to experience a rise in hunger, i.e. 2011, and the aim is to determine whether there is a statistical correlation between the rise in PoU and economic growth during this period (2011 and 2017).¹⁴

However, for comparability and to test the robustness of the results, the same analysis was also carried out using the period between 2000 and 2006, as well as the longer period between 2000 and 2017. The results show consistency in that the estimated coefficient of economic growth is negative and statistically significant across all three periods and specifications, although the coefficient is higher in magnitude between years 2011 and 2017, as expected. As suggested by Hendry (1995),¹⁵ when analysing long time periods it is necessary to exclude years of

structural breaks in the economy in order not to affect the average results. For this reason, when doing the additional robustness checks in analysing the two seven-year periods of 2000–2006 and 2011–2017, the years marked by high volatility related to the global food price crisis and global financial crisis are omitted, i.e. 2007–2010 (see [Figure 22](#) and [Box 10](#) on the global food crisis and the global financial crisis of this period).

The dependent variable of the analysis is specified as the change in PoU between the years 2011 and 2017. It is a continuous variable having negative and positive values.¹⁶ The PoU is a measure of chronic undernourishment, so by definition changes in PoU occur slowly over time. For this reason, rather than focusing on a year-on-year setting, this analysis measures difference in PoU at two points that are far enough apart to allow for a sufficient change over time.

By definition the PoU is computed and smoothed over time and there is limited year-on-year variation in estimated values. In fact, PoU annual point estimates are calculated as a three-year moving average (for instance, PoU in 2015 refers to the average PoU for 2014–2016, PoU in 2016 refers to the average for 2015–2017).¹⁷ Thus, there is a two-year overlap in the PoU year-on-year time series, if all years are considered. Instead, by comparing the change in PoU between 2011 and 2017, there is a sufficient time lapse to identify variations. Given this choice, the analysis is focused on economic downturns only, since three points in time are needed to also capture economic slowdowns. An alternative specification for sensitivity analysis was also tested in which only years 2011, 2013, 2015 and 2017 are included, so that there is only a one-year overlap in the time series. This yielded similar results to those reported below.¹⁸

The independent variable – economic growth – is the percentage change in real GDP per capita (constant 2010 USD prices) between 2011 and 2017, with the GDP deflator used to deflate growth in per capita GDP. Economic growth is

computed using real per capita GDP comparing two points in time, 2011 and 2017, as:

$$\frac{\text{per capita GDP}_{2017} - \text{per capita GDP}_{2011}}{\text{per capita GDP}_{2011}} * 100$$

Real per capita GDP are from the UNSTAT website. An indicator of influence of outliers (*dfbetas*) was computed to identify outlier countries. The following countries with *dfbetas* greater than 0.17 were excluded from the analysis: Angola, Libya, Nauru, Somalia and Timor-Leste.¹⁹

An additional sensitivity analysis was carried out using a logistic model with a dependent dummy variable equal to 1 for PoU increases between 2011 and 2017 and equal to zero otherwise. The results confirm the statistical significance of the relationship between increases in PoU and changes in real per capita GDP during the period analysed.

[Tables A4.1](#) and [A4.2](#) provide the descriptive statistics and econometric results, respectively.

Considering the changes in PoU between 2011 and 2017, there are number of countries that do not show an increase in PoU between the two periods. As shown by the descriptive statistics ([Table A4.1](#)), 38 percent of the low- and middle-income countries (49 out of 130 countries) show an increase in PoU between 2011 and 2017, whereas 63 percent of the countries (81 out of 130) do not show an increase in PoU between these two years.

B. Evidence of statistical association between changes in PoU between 2011 and 2017 and other drivers behind recent rise in prevalence of undernutrition: model specification and results

Additional regression analyses were run to explore the statistical association between changes in PoU between the years 2011 and 2017 (dependent variable) and the three main drivers

of PoU: economic downturns (analysed in this report), as well as conflict and climate extremes (analysed in previous report editions, 2017 and 2018, respectively).

The specification of the dependent variable is the same as explained above. Three dummy variables are used as regressors to capture the effects of these three drivers:

- ▶ **Economic downturns:** a dummy variable equal to one if a country experiences negative economic growth between the years 2011 and 2017. Economic growth is computed in the same way as explained above.
- ▶ **Climate variability and extremes:** a dummy variable equal to one for countries with part of national cereal production or yield variance explained by climate factors for the period 2011–2016, as analysed and defined in the 2018 edition of this report.²⁰ Climate vulnerability is identified for countries whose national cereal production and yield variance are highly and statistically significantly associated with temperature, rainfall and vegetation growth.

A country's climate vulnerability is defined over the period 2011–2016 and does not change over this time.

- ▶ **Conflict:** a dummy variable equal to one if a country is affected by conflict during 2011–2017, as analysed and defined in the 2017 edition of this report.²¹ In addition to this, as SOFI 2017 analysed conflict only up until 2015 and more recent data are now available, this information is updated for the years 2016 and 2017 using the Uppsala Conflict Data Program (UCDP). In this analysis, countries affected by conflict are defined as low- and middle-income countries and territories that have experienced conflict for at least five consecutive years between 2011–2017, and that have suffered 500 or more battle deaths during this period.²²

Table A4.3 below reports the econometric results. Furthermore, in order to see how changes in PoU during 2011 and 2017 vary by the level of a country's income, **Tables A4.4a** and **A4.4b** present the interaction between the three drivers and the three dummies denoting the level of a country's income (low; lower-middle; upper-middle).

ANNEX 4

**TABLE A4.1
DESCRIPTIVE STATISTICS OF PoU AND ECONOMIC GROWTH BETWEEN 2011 AND 2017**

Variables	Observations	Mean	Std. Dev.	Min	Max
PoU					
Change in PoU between year 2011 and 2017	130	0.41	4.91	-10.52	27.48
Countries with increase in PoU between years 2011 and 2017	130	0.38	0.49	0	1
Economic growth					
Economic growth between 2011 and 2017 (GDP deflator, 2010 constant prices)	130	12.34	17.88	-54.64	49.95
Conflict and climate vulnerability					
Countries affected by conflict, 2011–2017	130	0.17	0.38	0	1
Countries with vulnerability to climate extremes, 2011–2016	120	0.35	0.48	0	1
Commodity dependence					
Low commodity-export- and low commodity-import-dependent	129	0.25	0.43	0	1
Low commodity-export- and high commodity-import-dependent	129	0.19	0.40	0	1
High commodity-export- and low commodity-import-dependent	129	0.25	0.43	0	1
High commodity-export- and high commodity-import-dependent	129	0.31	0.46	0	1
Country income					
Low-income countries	130	0.25	0.44	0	1
Lower-middle-income countries	130	0.34	0.48	0	1
Upper-middle-income countries	130	0.41	0.49	0	1

NOTES: Information on vulnerability to climate was not available for the following countries: Grenada, Maldives, Marshall Islands, Mauritius, Micronesia (Federated States of), Saint Lucia, Saint Vincent and the Grenadines, Sao Tome and Principe, Tonga, and Tuvalu. Information on commodity dependence is not available for South Sudan.

SOURCES: FAO elaboration based on FAO data for PoU and CPI inflation; on the National Accounts Main Aggregates Database, United Nations Statistics Division for economic growth; on FAO, IFAD, UNICEF, WFP and WHO. 2017. *The State of Food Security and Nutrition in the World 2017. Building resilience for peace and food security*. Rome, FAO and FAO, IFAD, UNICEF, WFP and WHO. 2018. *The State of Food Security and Nutrition in the World 2018. Building climate resilience for food security and nutrition*. Rome, FAO for countries affected by conflict and by climate vulnerability, respectively; on UNCTAD data for commodity dependence; on World Bank classification for the Gini index and the level of a country's income.

TABLE A4.2
REGRESSION OF THE CHANGE IN PoU AND ECONOMIC GROWTH BETWEEN 2011 AND 2017

Variables	PoU change							
Economic growth between 2011 and 2017 (GDP deflator)	-0.152***	-0.159***	-0.141***	-0.155***	-0.151***	-0.150***	-0.149***	-0.149***
Country typology								
I. Region								
Africa vs. Latin America and the Caribbean (reference category)		1.336						
(1.138)								
Asia vs. Latin America and the Caribbean (reference category)		1.780*						
(0.954)								
Oceania/Eastern Europe vs. Latin America and the Caribbean (reference category)		-0.04						
(0.898)								
II. Country income								
Lower-middle-income vs. low-income countries (reference category)		-2.664***						
(1.016)								
Upper-middle-income vs. low-income countries (reference category)		-2.114**						
(1.065)								
III. Commodity dependence								
Low commodity-export- and high commodity-import- vs. low commodity-export- and low commodity-import-dependent countries (reference category)		0.797						
(0.711)								
High commodity-export- and low commodity-import- vs. low commodity-export- and low commodity-import-dependent countries (reference category)		0.337						
(0.965)								
High commodity-export- and high commodity-import- vs. low commodity-export- and low commodity-import-dependent countries (reference category)		1.465*						
(0.732)								

**TABLE A4.2
(CONTINUED)**

Variables	PoU change
Low-income food-deficit countries	1.867*** (0.784)
High commodity-export-dependent countries	0.758 (0.648)
High commodity-import-dependent countries	1.170* (0.700)
Net food importers	1.650** (0.669)
Constant	2.293*** (0.634) 1.387 3.913*** (0.924) (1.109) 1.689*** (0.662) 1.540*** (0.557) 1.841*** (0.586) 1.662** (0.713) 1.086 (0.695)
Observations	130 130 130 130 130 130 130 130 130
R-squared	0.309 0.331 0.353 0.339 0.343 0.314 0.323 0.332

NOTES: Statistical significance is reported for p-value < 0.01 (**), p-value < 0.05 (**) and p-value < 0.1 (*). Standard errors are in parenthesis.

SOURCES: FAO elaboration based on FAO data for PoU; on the National Accounts Main Aggregates Database, United Nations Statistics Division for economic growth; on UNCTAD data for commodity dependence; on World Bank classification for a country's income.

**TABLE A4.3
REGRESSION OF THE CHANGE IN PoU BETWEEN 2011 AND 2017 AND THE THREE DRIVERS OF PoU INCREASE**

Variables	PoU change
Economic downturns (negative economic growth between 2011 and 2017)	5.141*** (1.718) 5.107*** (1.580)
Countries with vulnerability to climate extremes, 2011–2016	2.436** (1.085) 2.346** (0.924)
Countries affected by conflict, 2011–2017	2.939* (1.638) 2.248* (1.347)
Constant	-0.379 -0.451 -0.0855 -1.640*** (0.360) (0.393) (0.389) (0.484)
Observations	130 120 130 120
R-squared	0.144 0.057 0.051 0.255

NOTES: Statistical significance is reported for p-value < 0.01 (**), p-value < 0.05 (**) and p-value < 0.1 (*). Standard errors are in parenthesis.

SOURCES: FAO elaboration based on FAO data for PoU; on the National Accounts Main Aggregates Database, United Nations Statistics Division for economic slowdowns and downturns; on FAO, IFAD, UNICEF, WFP and WHO. 2017. *The State of Food Security and Nutrition in the World 2017. Building resilience for peace and food security*. Rome, FAO and FAO, IFAD, UNICEF, WFP and WHO. 2018. *The State of Food Security and Nutrition in the World 2018. Building climate resilience for food security and nutrition*. Rome, FAO for countries affected by conflict and by climate vulnerability, respectively.

TABLE A4.4a

ESTIMATED COEFFICIENTS OF THE REGRESSIONS BETWEEN THE CHANGE IN PoU (BETWEEN 2011 AND 2017) AND THE THREE DRIVERS OF PoU – DRIVERS REGRESSED SEPARATELY FOR EACH INCOME GROUP

		(1) Economic downturns	(2) Climate vulnerability	(3) Conflict
1)	Low-income	6.411* (3.783)	5.427** (2.243)	8.126** (3.187)
2)	Lower-middle-income	1.274 (1.111)	0.421 (0.792)	1.135 (1.464)
3)	Upper-middle-income	5.630** (2.168)	0.145 (1.506)	-1.557 (1.306)

TABLE A4.4b

ESTIMATED COEFFICIENTS OF THE REGRESSIONS BETWEEN THE CHANGE IN PoU (BETWEEN 2011 AND 2017) AND THE THREE DRIVERS OF PoU – DRIVERS REGRESSED TOGETHER FOR EACH INCOME GROUP

		(1) Economic downturns	(2) Climate vulnerability	(3) Conflict
1)	Low-income	4.451* (2.592)	4.887** (1.939)	5.531*** (2.073)
2)	Lower-middle-income	1.074 (1.582)	0.674 (0.827)	0.850 (1.565)
3)	Upper-middle-income	6.296*** (2.133)	-0.694 (1.145)	0.0191 (1.263)

NOTES: The tables report only key estimated coefficients of interest, i.e. the PoU change for countries that experience a given shock (downturn, climate or conflict) in a given income group (low, lower-middle or upper-middle), compared with the PoU change for countries in the same income group that do not experience that specific shock (reference category). Table A4.4a reports the estimated coefficient from nine different model specifications, where each driver is regressed separately for each income group. The estimated coefficients that are included but not reported in each model specification include: two dummies for the level of country income, a dummy for each driver of PoU change (either economic downturns, climate vulnerability or conflict), and two interaction terms between the driver of interest and each of the two dummies denoting the level of country income. Estimated coefficients in Table A4.4b derive from three model specifications that show the association between the PoU change and the three drivers regressed together for low-income countries (row 1), for lower-middle-income countries (row 2) and for upper-middle-income countries (row 3). Robust standard errors are in parentheses. Statistical significance is reported for p-value < 0.01 (***)¹, p-value < 0.05 (**) and p-value < 0.1 (*).

SOURCES: FAO elaboration based on FAO data for PoU; on the National Accounts Main Aggregates Database, United Nations Statistics Division for economic slowdowns and downturns; on FAO, IFAD, UNICEF, WFP and WHO. 2017. *The State of Food Security and Nutrition in the World 2017. Building resilience for peace and food security*. Rome, FAO and FAO, IFAD, UNICEF, WFP and WHO. 2018. *The State of Food Security and Nutrition in the World 2018. Building climate resilience for food security and nutrition*. Rome, FAO for countries affected by conflict and by climate vulnerability, respectively; on World Bank classification for the level of a country's income.

ANNEX 5

THE MAIN DRIVERS OF CRISIS-LEVEL ACUTE FOOD INSECURITY IN 2018

Table A5.1 is an extended version of **Table 8**, which reports information on 33 countries affected by food crises in 2018 in correspondence with significant economic shocks as analysed in the *Global Report on Food Crises 2019*.

TABLE A5.1
COUNTRIES AND TERRITORIES WITH FOOD CRISES IN CORRESPONDENCE WITH ECONOMIC SHOCKS, 2018

REGION	COUNTRY	DRIVERS OF FOOD CRISES (main driver in orange)			DESCRIPTION	DOWNTURN	SLOWDOWN	NUMBER (millions) PEOPLE IN IPC/CH PHASE 3 AND 4	
		ECONOMIC SHOCKS	CONFLICT	CLIMATE				IPC/CH PHASE 3 (Crisis)	IPC/CH PHASE 4 (Emergency)
AFRICA	Burundi	●	●	●	Economic downturn (consequent to the 2015 political crisis); food-import dependence.	●	●	1.7	n.a.
	Cameroon	●	●	●	High food prices; low livestock prices; low purchasing power especially for pastoralists.	●	●	0.5	0
	Central African Republic	●	●		High food prices.	●	●	1.4	0.5
	Chad	●	●	●	Decreased wages; low purchasing power; low livestock prices.	●	●	1	0
	Democratic Republic of the Congo	●	●	●	Decreased wages; high food prices; export restriction from Zambia.	●	●	9.7	3.4
	Djibouti	●	●	●	High food prices.	●	●	0.15	n.a.
	Eswatini	●		●	Unemployment; sluggish economic growth.		●	0.1	0.1
	Kenya	●	●	●	High food prices; income inequality.	●	●	2.6	n.a.
	Madagascar	●		●	High food and fuel prices; low purchasing power.	●	●	1.1	0.4
	Malawi	●		●	High food prices; low wages and labour opportunities.	●	●	2.9	0.4
	Mozambique	●		●	High food prices.	●	●	1.4	0.4

**TABLE A5.1
(CONTINUED)**

REGION	COUNTRY	DRIVERS OF FOOD CRISES (main driver in orange)			ECONOMIC SHOCKS	DESCRIPTION	DOWNTURN	SLOWDOWN	NUMBER (millions) PEOPLE IN IPC/CH PHASE 3 AND 4	
		ECONOMIC SHOCKS	CONFLICT	CLIMATE					IPC/CH PHASE 3 (Crisis)	IPC/CH PHASE 4 (Emergency)
AFRICA	Niger	•	•	•		Low livestock prices; low purchasing power especially for pastoralists.	•	•	0.8	0
	Nigeria	•	•	•		High food prices; low purchasing power.	•	•	5.1	0.2
	South Sudan	•	•	•		Hyperinflation; currency depreciation.	•	•	4.4	1.7
	Sudan	•	•	•		Downturn; currency depreciation; high inflation; lack of income-earning opportunities.	•	•	5.6	0.6
	Uganda	•	•	•		High food prices.	•	•	1.1	n.a.
	Zambia	•		•		High food prices; currency depreciation.	•	•	0.9	0.3
	Zimbabwe	•		•		Currency depreciation; high food prices; lack of labour opportunities.	•	•	1.9	n.a.
ASIA	Afghanistan	•	•	•		Unemployment.	•	•	7.7	2.9
	Iraq	•	•			Low purchasing power; limited economic opportunities.	•	•	2.5	n.a.
	Jordan	•	•			High food prices.		•	0.1	n.a.
	Lebanon	•	•			High food prices.		•	0.5	n.a.
	Myanmar	•	•	•		High food prices.	•	•	0.8	n.a.
	Pakistan	•		•		Decreased wages; high food prices.		•	2	n.a.
	Palestine	•	•			Low purchasing power; unemployment.	•	•	1.7	n.a.
	Syrian Arab Republic	•	•	•		Unemployment; low purchasing power; high commodity prices.		•	6.5	n.a.
	Turkey	•	•			High food prices; weak currency.	•	•	0.2	n.a.
	Yemen	•	•	•		Downturn; currency depreciation; food import dependence; high food prices; limited job opportunities.	•	•	10.9	5
EASTERN EUROPE	Ukraine	•	•			Low purchasing power; high food prices; unemployment.		•	1.1	n.a.
LATIN AMERICA AND THE CARIBBEAN	El Salvador	•		•		High food prices.	•	•	0.2	0
	Guatemala	•		•		High food prices.	•	•	0.6	0.2
	Haiti	•	•	•		Low purchasing power; high prices of food import commodities (maize vegetable oil); low demand for agricultural labour.	•	•	1.9	0.4
	Honduras	•		•		High food prices.	•	•	0.4	0.1
									79.5	16.6
										96.5

NOTES: Countries affected by food crises in 2018 where economic shocks are a driver of acute food insecurity as identified by the *Global Report on Food Crises 2019* (GRFC). Information on economic shocks as drivers of food crises was not available in the GRFC 2019 for Jordan, Lebanon, Myanmar and Turkey. For these countries the information is obtained from the FAO Global Information and Early Warning System (GIEWS) Country briefs referring to the year 2018. Economic slowdowns and downturns are identified when they either occur in years 2015–2016 or 2016–2017 and are computed using the annual rate of per capita growth at constant prices.
 SOURCE: FAO elaboration based on FSIIN. 2019. *Global Report on Food Crises 2019* [online]. [Cited 24 April 2019]. http://www.fsinplatform.org/sites/default/files/resources/files/GRFC_2019-Full_Report.pdf and for economic slowdowns and downturns, UN. 2019. National Accounts – Analysis of Main Aggregates. In: UNSTATS [online]. New York, USA. [Cited 6 May 2019]. <https://unstats.un.org/unsd/snaama> and for additional information on economic shocks, FAO. 2019. GIEWS - Global Information and Early Warning System. In: FAO [online]. Rome. [Cited 19 June 2019]. <http://www.fao.org/giews/en>

ANNEX 6

COMMODITY DEPENDENCE DEFINITIONS AND COUNTRY LISTS

A. Definition of commodity dependence

Commodity dependence is identified by applying the criterion proposed by UNCTAD and FAO (2017)²³ and Nkurunziza, Tsowou and Cazzaniga (2017).²⁴ A country is considered a commodity-dependent country when it experiences a dependence on primary commodity export revenues, a dependence on primary commodity imports, or both. In particular, commodity-export dependence is defined as the ratio of exports of primary commodities (agricultural products; minerals; ores and metals; and oil) to total merchandise exports in monetary terms. These export primary commodities are classified according to the Standard International Trade Classification (SITC), that is, i.e. SITC 0 + 1 + 2 + 3 + 4 + 68 + 667 + 971. When a country's export-dependence ratio is higher than the average, which is 0.60 for the sample of low- and middle-income countries during years 1995–2017, a country is considered as high commodity-export dependent.

Commodity-import dependence is defined as the ratio of imports of food (SITC 0 + 1 + 22 + 4) and fuels (SITC 3) to total merchandise imports in monetary terms. When a country has a share of imports higher than the average, which is 0.30 for low- and middle-income countries, it is defined as a high commodity-import dependent country.

The data used to compute commodity dependence ratios are taken from UNCTADstat which provides yearly information on exports and

imports by product in thousands of USD.²⁵ The analysis in Part 2 of the report is undertaken on low- and middle-income countries as overall they report higher levels of food insecurity and malnutrition. The analysis focuses on 129 low- and middle-income countries for which data on commodity dependence and PoU are available across the years of analysis. The period of commodity price booms reported in Table 9 refers to years 2003–2011 (excluding years 2008–2009 of declining price trends).

A1. A typology of primary commodity dependence: definition and list of countries

Following the classification proposed by UNCTAD and FAO (2017),²⁶ Table A6.1 classifies countries in four groups according to their commodity-export and commodity-import dependence ratios as measured during years 1995–2017.

Table A6.2 shows the list of countries in the four groups following the criteria reported in Table A6.1. In each of these groups countries are listed according to the level of country's income, as established by the World Bank classification.²⁷

A2. Net food importers

According to the UNCTAD definition, countries are defined as net food-importing when they have a negative average food trade balance in the years from 2013 to 2015. Food refers to the category "food, basic excluding tea, coffee, cocoa and spices" corresponding to SITC 0 + 22 + 4 less 07.

TABLE A6.1
DEFINITION OF COUNTRY COMMODITY-EXPORT AND COMMODITY-IMPORT DEPENDENCE

Low commodity-dependent countries: Commodity-export dependence ≤ 0.60 Commodity-import dependence ≤ 0.30	High commodity-import- and low commodity-export-dependent countries: Commodity-export dependence ≤ 0.60 Commodity-import dependence > 0.30
Low commodity-import- and high commodity-export-dependent countries: Commodity-export dependence > 0.60 Commodity-import dependence ≤ 0.30	High commodity-import- and high commodity-export-dependent countries: Commodity-export dependence > 0.60 Commodity-import dependence > 0.30

SOURCE: FAO elaboration based on UNCTAD data on commodity dependence.

TABLE A6.2
COUNTRIES AND TERRITORIES BY TYPOLOGY OF PRIMARY COMMODITY DEPENDENCE (1995–2017)

A. Low commodity-dependent (low import and low export) countries (LOW CD = 32)	B. High commodity-import- and low commodity-export-dependent countries (HI-LE = 25)	C. High commodity-export- and low commodity-import-dependent countries (HE-LI = 34)	D. High commodity-dependent (high import and high export) countries (HE-HI = 43)
Low-income Liberia	Low-income Comoros Democratic People's Republic of Korea Haiti Madagascar Nepal	Low-income Burundi Chad Ethiopia Malawi Rwanda Uganda United Republic of Tanzania Zimbabwe	Low-income Afghanistan Benin Burkina Faso Central African Republic Democratic Republic of the Congo Eritrea Gambia Guinea Guinea-Bissau Mali Mozambique Niger Senegal Sierra Leone Somalia Syrian Arab Republic Tajikistan Togo Yemen
Lower-middle-income Bangladesh Bhutan Cambodia Djibouti Egypt El Salvador Honduras India Indonesia Lesotho Philippines Sri Lanka Tunisia Vanuatu Viet Nam	Lower-middle-income Cabo Verde Eswatini Georgia Lao People's Democratic Republic Morocco Nicaragua Pakistan Republic of Moldova Ukraine West Bank and Gaza	Lower-middle-income Angola Bolivia (Plurinational State of) Democratic Republic of the Congo Ghana Kenya Myanmar Nigeria Sudan Uzbekistan Zambia	Lower-middle-income Cameroon Côte d'Ivoire Kiribati Kyrgyzstan Mauritania Micronesia (Federated States of) Mongolia Papua New Guinea Sao Tome and Principe Solomon Islands Timor-Leste
Upper-middle-income Brazil Bulgaria China Costa Rica Dominican Republic Guatemala North Macedonia Malaysia Marshall Islands Mexico Romania Serbia South Africa Thailand Turkey Tuvalu	Upper-middle-income Albania Belarus Bosnia and Herzegovina Dominica Grenada Jordan Lebanon Mauritius Saint Vincent and the Grenadines Samoa	Upper-middle-income Algeria Azerbaijan Botswana Colombia Ecuador Equatorial Guinea Gabon Iran (Islamic Republic of) Kazakhstan Libya Namibia Paraguay Peru Russian Federation Turkmenistan Venezuela (Bolivarian Republic of)	Upper-middle-income Armenia Belize Cuba Fiji Guyana Iraq Jamaica Maldives Montenegro Nauru Saint Lucia Suriname Tonga

SOURCE: FAO elaboration based on UNCTAD data on commodity dependence and on the World Bank classification for the level of a country's income.

B. Countries with vulnerability to hunger and food crises

Vulnerability refers to low- and middle-income countries that in recent years (2011–2017) reported a PoU change point increase, which denotes a significant increase in undernourishment, or experienced a food crisis in correspondence with economic shocks in 2018, as attested by the *Global Report on Food Crises 2019*. Out of the 134 countries analysed in Part 2 of this report, 86 countries listed in **Table A6.3** experienced either a PoU change point increase between 2011 and 2017

(column G) or a food crisis in 2018 (column H), or both. It is also indicated whether countries are commodity dependent (columns E and F), the number of economic slowdowns or downturns experienced during 2011–2017 (I and J), and the severity of the latter (column K) given by the number of consecutive years with downturns. Finally, combining information from the last two year editions of this report,²⁸ **Table A6.3** reports if countries have suffered from conflict and/or protracted crisis (columns L and M), and if they were vulnerable to climate in terms of production and yields (column N).

TABLE A6.3
COUNTRIES WITH ECONOMIC SLOWDOWNS OR DOWNTURNS IN CORRESPONDENCE TO AN INCREASE IN PoU CHANGE POINT AND/OR Affected BY FOOD CRISSES

A. COUNTRIES WITH ECONOMIC SLOWDOWNS / DOWNTURNS IN CORRESPONDENCE TO AN INCREASE IN PoU (CHANGE POINT) AND/OR Affected BY FOOD CRISSES	REGION	INCOME	COMMODITY DEPENDENCE	VULNERABILITY TO HUNGER	ECONOMIC SLOWDOWNS/ DOWNTURNS			OTHER KEY DRIVERS					
					D. Income classification (WB)	E. Net food-importing developing countries	F. Commodity dependence	G. PoU change point during 2011–2017	H. Food crisis country in 2018	I. Number of slowdowns 2011–2017	J. Number of downturns 2011–2017	K. Number of consecutive downturns in 2011–2017	L. Conflict-affected countries 2011–2017*
Burundi	AFRICA	Eastern Africa	Low-income	1	HE-LI	1	1	2	2	1	0	1	0
Eritrea				1	HE-HI	1	0	1	1	1	0	1	0
Madagascar				1	LE-HI	1	1	0	2	1	0	0	1
Malawi				0	HE-LI	1	1	1	2	1	0	0	1
Mozambique				1	HE-HI	1	1	2	0	1	0	0	1
Rwanda				1	HE-LI	1	0	2	0	1	0	0	1
South Sudan				–	–	0	1	1	2	1	1	1	0
Uganda				0	HE-LI	1	1	2	2	1	1	0	1
United Republic of Tanzania				0	HE-LI	1	0	3	0	1	0	0	0
Zimbabwe				1	HE-LI	1	1	1	3	3	0	1	1
Djibuti	Lower-middle-income		LOW CD	1	LOW CD	0	1	1	0	1	0	1	0
Kenya				1	HE-LI	1	1	3	0	1	0	1	0
Zambia				0	HE-LI	1	0	3	1	1	0	0	1
Mauritius	Upper-middle-income		LE-HI	1	LE-HI	1	0	2	0	1	0	0	0

**TABLE A6.3
(CONTINUED)**

Region		Income	Commodity Dependence	Vulnerability to Hunger	Economic Slowdowns/Downturns			Other Key Drivers				
B. Region	C. Subregion	D. Income classification (WB)	E. Net food-importing developing countries	F. Commodity dependence	G. PoU change point during 2011–2017	H. Food crisis country in 2018	I. Number of slowdowns 2011–2017	J. Number of downturns 2011–2017	K. Number of consecutive downturns in 2011–2017	L. Conflict-affected countries 2011–2017*	M. Countries in protracted crisis 2011–2015**	N. Vulnerability to climate-sensitive production and/or yields 2011–2016***
A. COUNTRIES WITH ECONOMIC SLOWDOWNS/DOWNTURNS IN CORRESPONDENCE TO AN INCREASE IN PoU (CHANGE POINT) AND/OR Affected BY FOOD CRISIS	AFRICA	Low-income	1	HE-HI	1	1	2	1	1	1	1	1
Central African Republic			1	HE-LI	1	1	1	3	2	0	1	0
Chad			1	HE-HI	1	1	2	1	1	1	1	1
Democratic Republic of the Congo			1	HE-HI	1	1	1	0	1	1	0	1
Cameroon			1	HE-HI	1	1	1	0	1	1	0	1
Congo			1	HE-LI	1	0	0	4	1	0	0	0
Sao Tome and Principe			1	HE-HI	1	0	3	0	1	0	0	0
Gabon			1	HE-LI	1	0	2	2	2	0	0	0
Egypt			1	LOW CD	1	0	1	2	1	1	0	1
Morocco			0	LE-HI	1	0	3	0	1	0	0	0
Sudan			1	HE-LI	0	1	2	2	2	1	1	0
Libya	AFRICA	Upper-middle-income	1	HE-LI	1	0	0	2	1	1	0	0
Eswatini			1	LE-HI	0	1	2	1	1	0	0	1
Botswana			1	HE-LI	1	0	3	1	1	0	0	1
South Africa			0	LOW CD	1	0	2	2	2	0	0	0
Benin			1	HE-HI	1	0	1	0	1	0	0	1
Burkina Faso			1	HE-HI	1	0	1	0	1	0	0	1
Gambia			1	HE-HI	1	0	1	3	1	0	0	0
Guinea			1	HE-HI	1	0	2	0	1	0	0	1
Guinea-Bissau			0	HE-HI	1	0	1	2	1	0	0	0
Liberia			1	LOW CD	1	0	1	1	1	1	1	1
Mali			1	HE-HI	1	0	3	0	1	1	0	0

**TABLE A6.3
(CONTINUED)**

REGION	INCOME	COMMODITY DEPENDENCE	VULNERABILITY TO HUNGER	ECONOMIC SLOWDOWNS/DOWNTURNS			OTHER KEY DRIVERS						
				D. Income classification (WB)	E. Net food-importing developing countries	F. Commodity dependence	G. PoU change point during 2011–2017	H. Food crisis country in 2018	I. Number of slowdowns 2011–2017	J. Number of downturns 2011–2017	K. Number of consecutive downturns in 2011–2017	L. Conflict-affected countries 2011–2017*	M. Countries in protracted crisis 2011–2015**
A. COUNTRIES WITH ECONOMIC SLOWDOWNS/DOWNTURNS IN CORRESPONDENCE TO AN INCREASE IN PoU (CHANGE POINT) AND/OR Affected BY FOOD CRISIS	B. Region	C. Subregion											
	AFRICA	Western Africa	Low-income	1	HE-HI	1	1	3	1	1	0	1	0
				1	HE-HI	1	0	1	0	1	0	0	0
				1	LE-HI	1	0	1	3	3	0	0	0
			Lower-middle-income	1	HE-HI	1	1	2	1	1	0	0	1
				0	HE-HI	1	0	2	1	1	0	0	1
				1	HE-LI	1	1	1	2	2	1	0	0
	LATIN AMERICA AND THE CARIBBEAN	Caribbean	Low-income	1	LE-HI	0	1	2	2	1	0	1	1
				1	LOW CD	0	1	2	0	1	0	0	0
		Central America	Lower-middle-income	0	LOW CD	0	1	2	0	1	0	0	1
				0	LE-HI	1	1	2	0	1	0	0	0
			Upper-middle-income	0	LOW CD	1	0	3	0	1	0	0	1
		South America	Upper-middle-income	0	LOW CD	1	1	2	0	1	0	0	0
				0	HE-LI	1	0	2	0	1	0	0	0
				0	HE-HI	1	0	2	0	1	0	0	1
			Lower-middle-income	0	HE-LI	1	0	2	1	1	0	0	1
				0	LOW CD	1	0	1	2	2	0	0	1
				0	HE-LI	1	0	1	2	2	0	0	0

**TABLE A6.3
(CONTINUED)**

Region	Income	Commodity Dependence	Vulnerability to Hunger	Economic Slowdowns/ Downturns		Other Key Drivers								
				B. Region	C. Subregion	D. Income classification (WB)	E. Net food-importing developing countries	F. Commodity dependence	G. PoU change point during 2011–2017	H. Food crisis country in 2018	I. Number of slowdowns 2011–2017	J. Number of downturns 2011–2017	K. Number of consecutive downturns in 2011–2017	L. Conflict-affected countries 2011–2017*
ASIA	Lower-middle-income	Tajikistan	Low-income	1	HE-HI	1	0	2	0	1	0	0	0	0
		Kyrgyzstan	Lower-middle-income	1	HE-HI	1	0	1	1	1	0	0	0	0
		Uzbekistan	Central Asia	1	HE-LI	1	0	2	0	1	0	0	0	0
		Kazakhstan	Upper-middle-income	1	HE-LI	1	0	2	1	1	0	0	0	0
		Turkmenistan	Upper-middle-income	1	HE-LI	1	0	2	0	1	0	0	0	0
		Mongolia	Lower-middle-income	1	HE-HI	1	0	1	1	1	0	0	0	0
		China	Eastern Asia	Upper-middle-income	1	LOW CD	1	0	1	0	1	0	0	0
		Indonesia		0	LOW CD	1	0	1	0	1	0	0	0	0
		Myanmar	South-eastern Asia	Lower-middle-income	0	HE-LI	1	1	1	0	1	1	0	0
		Timor-Leste		1	HE-HI	1	0	1	4	2	0	0	0	0
SOUTHERN ASIA	Lower-middle-income	Viet Nam		0	LOW CD	1	0	2	0	1	0	0	0	0
		Malaysia	Upper-middle-income	0	LOW CD	1	0	3	0	1	0	0	0	1
		Thailand	Upper-middle-income	0	LOW CD	1	0	2	0	1	1	0	0	0
		Afghanistan	Low-income	1	HE-HI	0	1	1	3	2	1	1	1	1
		Bangladesh		1	LOW CD	0	1	1	0	1	0	0	0	1
		Pakistan	Southern Asia	1	LE-HI	0	1	0	0	1	1	0	0	0
		Sri Lanka		1	LOW CD	1	0	2	0	1	0	0	0	0
		Syrian Arab Republic	Low-income	1	HE-HI	1	1	0	1	1	1	1	1	1
		Yemen		1	HE-HI	1	1	0	3	2	1	1	1	1
		Georgia	Western Asia	1	LE-HI	1	0	2	0	1	0	0	0	1
WESTERN ASIA	Lower-middle-income	Palestine		1	LE-HI	0	1	2	2	2	0	0	0	0
		Armenia	Upper-middle-income	1	HE-HI	1	0	2	1	1	0	0	0	0
		Iraq		1	HE-HI	1	1	0	2	1	1	0	0	0

**TABLE A6.3
(CONTINUED)**

A. COUNTRIES WITH ECONOMIC SLOWDOWNS/ DOWNTURNS IN CORRESPONDENCE TO AN INCREASE IN PoU (CHANGE POINT) AND/OR AFFECTED BY FOOD CRISIS	B. Region	C. Subregion	D. Income classification (Wb)	REGION		INCOME		COMMODITY DEPENDENCE		VULNERABILITY TO HUNGER		ECONOMIC SLOWDOWNS/ DOWNTURNS		OTHER KEY DRIVERS	
				Region	Subregion	Income	CD	Dependence	Change point	Food crisis country	Number of slowdowns	Number of downturns	Number of consecutive downturns	Conflict-affected countries	Countries in protracted crisis
Jordan	ASIA	Western Asia	Upper-middle-income	1	LE-HI	1	1	0	0	3	2	0	0	0	0
Lebanon				1	LE-HI	1	0	0	2	1	0	0	0	0	0
Turkey				0	LOW CD	1	0	3	0	1	1	0	0	0	0
Ukraine	EUROPE	Eastern Europe	Lower-middle-income	0	LE-HI	1	1	1	2	2	1	0	0	0	0
Belarus				0	LE-HI	1	0	1	1	1	1	0	0	0	0
Albania				1	LE-HI	1	0	1	0	1	0	0	0	0	0
Vanuatu	OCEANIA	Melanesia	Lower-middle-income	1	LOW CD	1	0	0	2	1	0	0	0	0	0
Samoa				1	LE-HI	1	0	1	2	1	0	0	0	0	0
Tonga				1	HE-HI	1	0	2	1	1	0	0	0	0	0

NOTES: Column F shows the classification of country by typology of primary commodity dependence listed in Table A6.2; LOW CD refers to countries with low commodity dependence; LE-HI to countries with low commodity-export and high commodity-import dependence; HE-LI to countries with high commodity-export and low commodity-import dependence; and HE-HI to countries with high commodity-export and high commodity-import dependence. * Conflicts are defined and analysed as in the 2017 edition of this report that informs on years 1995–2015 (see FAO, IFAD, UNICEF, WFP and WHO. 2017. *The State of Food Security and Nutrition in the World 2017. Building resilience for peace and food security*, Annex 2, p. 102. Rome, FAO). In order to focus on years 2011–2017, information on conflict is updated for years 2016 and 2017 using the most recent data from the Uppsala Conflict Data Program (UCDP). ** Countries in protracted crisis are defined and analysed as in the 2017 edition of this report (see FAO, IFAD, UNICEF, WFP and WHO. 2017. *The State of Food Security and Nutrition in the World 2017. Building resilience for peace and food security*, Annex 2, p. 102. Rome, FAO). *** Countries with vulnerability to climate extremes are analysed and defined as in the 2018 edition of this report (see FAO, IFAD, UNICEF, WFP and WHO. 2018. *The State of Food Security and Nutrition in the World 2018. Building climate resilience for food security and nutrition*, Annexes 2 and 3. Rome, FAO).

SOURCES: FAO elaborations based on FAO data for PoU; on the National Accounts Main Aggregates Database, United Nations Statistics Division for economic slowdowns and downturns; on the 2017 edition of this report for information on conflict and protracted crises and the 2018 edition of this report for information on climate vulnerability; on UNCTAD data for commodity dependence; on World Bank classification for the level of a country's income; on the *Global Report on Food Crises 2019* for information on food crises.

ANNEX 7

GLOSSARY

Acute food insecurity

Food insecurity found in a specified area at a specific point in time and of a severity that threatens lives or livelihoods, or both, regardless of the causes, context or duration. Has relevance in providing strategic guidance to actions that focus on short-term objectives to prevent, mitigate or decrease severe food insecurity that threatens lives or livelihoods.²⁹

Anthropometry

Use of human body measurements to obtain information about nutritional status.

Balance of payments

Refers to all economic transactions made by individuals, firms and government between the residents of a country and the rest of the world in a particular period of time.

Chronic food insecurity

Food insecurity that persists over time mainly due to structural causes. Can include seasonal food insecurity found in periods with non-exceptional conditions. Has relevance in providing strategic guidance to actions that focus on the medium- and long-term improvement of the quality and quantity of food consumption for an active and healthy life.³⁰

Commodity dependence

In this report it refers to commodity-export and -import dependence experienced by low- and middle-income countries. Commodity-export dependence is defined as the ratio of exports of primary commodities (agricultural products, minerals, ores and metals, and oil) to total merchandise exports in monetary terms. Commodity-import dependence is defined as the ratio of imports of food to total merchandise

imports in monetary terms. A country is considered as high commodity dependent when its export-dependence ratio is higher than 60 percent and/or its import-dependence ratio is higher than 30 percent.

Commodity price boom

It refers to the rise in many primary commodity prices, for instance food, oil, metals and the like, during the early 2000s. In this report, the years of the commodity price boom include the period 2003–2011, excluding years 2008 and 2009 where there was a sharp downturn in prices.

Countercyclical policy

In the context of an economic downturn or slowdown, countercyclical policies are all those policy measures aimed at counteracting the negative socio-economic effects of the economic downturn or slowdown.

Dietary energy intake

The energy content of food consumed.

Dietary energy supply (DES)

Food available for human consumption, expressed in kilocalories per person per day (kcal/person/day). At the country level, it is calculated as the food remaining for human use after deduction of all non-food utilizations (i.e. food = production + imports + stock withdrawals – exports – industrial use – animal feed – seed – wastage – additions to stock). Wastage includes loss of usable products occurring along distribution chains from farm gate (or port of import) up to retail level.

Double-duty actions

Double-duty actions include interventions, programmes and policies that have the potential to simultaneously reduce the risk or burden of both undernutrition (including wasting, stunting

and micronutrient deficiency or insufficiency) and overweight, obesity or diet-related NCDs (including type 2 diabetes, cardiovascular disease and some cancers). Double-duty actions leverage the coexistence of multiple forms of malnutrition and their shared drivers to offer integrated solutions.

Economic downturn

Refers to a period of decline in economic activity or negative growth as measured by the growth rate in real GDP. It is a synonym for economic recession, a temporary or short-term downturn in economic growth, usually occurring over at least two consecutive quarters of decline. In the analyses and figures presented in this report, an economic downturn is identified using the year as a period of reference.

Economic shock

An unexpected or unpredictable event that is external to the specific economy and can either harm or boost it. A global financial crisis causing bank lending or credit to fall, or an economic downturn in a major trading partner of a country reflect demand-side shocks that can have multiple effects on spending and investment. A steep rise in oil and gas prices, natural disasters that result in sharp falls in production, or conflict that disrupts trade and production, are examples of supply-side shocks.

Economic slowdown

Refers to economic activity that is growing at a slower pace compared with the previous period. An economic slowdown occurs when real GDP growth declines from one period of time to another but it is still positive. In the analyses and figures presented in this report, an economic slowdown is identified using the year as the period of reference, although it is usually measured in quarters of a year.

Elasticity

Refers to the extent to which a variable is responsive to a change in another variable (e.g. income elasticity of poverty). In the econometric analyses presented in this report it is calculated as the percent change in the dependent variable after a unit change in the independent variable(s).

Extreme poverty

Refers to the percentage of people living on less than USD 1.90 a day (2011 PPP prices) in a country in a given year.

Fiscal space

The budgetary room that allows a government to provide resources for public purposes without undermining fiscal sustainability, i.e. the ability of a government to sustain its current spending, tax and other policies without threatening government solvency or defaulting on some of its liabilities.

Food Insecurity Experience Scale

An experience-based food security scale used to produce a measure of access to food at different levels of severity that can be compared across contexts. It relies on data obtained by asking people, directly in surveys, about the occurrence of conditions and behaviours that are known to reflect constrained access to food.

Food security

A situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Based on this definition, four food security dimensions can be identified: food availability, economic and physical access to food, food utilization, and stability over time.

Food security dimensions

Refers to the four dimensions of food security:

- a. **Availability** – This dimension addresses whether or not food is actually or potentially physically present, including aspects of production, food reserves, markets and transportation, and wild foods.
- b. **Access** – If food is actually or potentially physically present, the next question is whether or not households and individuals have sufficient access to that food.
- c. **Utilization** – If food is available and households have adequate access to it, the next question is whether or not households are maximizing the consumption of adequate nutrition and energy. Sufficient energy

and nutrient intake by individuals is the result of good care and feeding practices, food preparation, dietary diversity and intra-household distribution of food.

Combined with good biological utilization of food consumed, this determines the nutritional status of individuals.

d. **Stability** – If the dimensions of availability, access and utilization are sufficiently met, stability is the condition in which the whole system is stable, thus ensuring that households are food secure at all times. Stability issues can refer to short-term instability (which can lead to acute food insecurity) or medium-to long-term instability (which can lead to chronic food insecurity). Climatic, economic, social and political factors can all be a source of instability.

Food systems

The entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption and disposal of food products. Food systems comprise all food products that originate from crop and livestock production, forestry, fisheries and aquaculture, as well as the broader economic, societal and natural environments in which these diverse production systems are embedded.

Foreign direct investment

Refers to a category of investment where the objective is to establish a lasting interest by a resident enterprise in one economy (direct investor) in an enterprise (direct investment enterprise) that is resident in an economy different from the one of the direct investor. It implies the existence of a long-term relationship between the direct investor and the direct investment enterprise and a significant degree of influence on the management of the enterprise.

Gini index

Refers to the World Bank estimate and measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal

distribution. It is expressed as a percentage where 0 represents perfect equality and 100 perfect inequality.

Global financial crisis

An economic shock occurred in 2009, the result of a financial meltdown that originated in developed countries. This had serious implications for the real economy and affected several parts of the world simultaneously, including developing countries.

Global food crisis

An episode of a sharp increase in international agricultural commodity prices between 2007 and early 2008 – in the summer of 2008, these prices reached their highest level in thirty years, before declining in the second half of 2008.

Healthy diet

A balanced, diverse and appropriate selection of foods eaten over a period of time. A healthy diet ensures that the needs for macronutrients (proteins, fats and carbohydrates including dietary fibres) and essential micronutrients (vitamins, minerals and trace elements) are met specific to the person's gender, age, physical activity level and physiological state. For diets to be healthy: 1) daily needs of energy, vitamins and minerals should be met, but energy intake should not exceed needs; 2) consumption of fruit and vegetables is over 400 g per day; 3) intake of saturated fats is less than 10 percent of total energy intake; 4) intake of trans-fats is less than 1 percent of total energy intake; 5) intake of free sugars is less than 10 percent of total energy intake or, preferably, less than 5 percent; 6) intake of salt is less than 5 grams per day.

A healthy diet **for infants and young children** is similar to that for adults, but the following elements are also important: 1) Infants should be breastfed exclusively during the first 6 months of life; 2) Infants should be breastfed continuously until 2 years of age and beyond; 3) From 6 months of age, breast milk should be complemented with a variety of adequate, safe and nutrient-dense foods. Salt and sugars should not be added to complementary foods.

Hunger

Hunger is an uncomfortable or painful physical sensation caused by insufficient consumption of dietary energy. In this report, the term hunger is synonymous with chronic undernourishment.

Macronutrients

These are the proteins, carbohydrates and fats available to be used for energy; measured in grams.

Malnutrition

An abnormal physiological condition caused by inadequate, unbalanced or excessive consumption of macronutrients and/or micronutrients.

Malnutrition includes undernutrition (child stunting and wasting and vitamin and mineral deficiencies) as well as overweight and obesity.

Marginalization

It refers to the process of pushing particular groups of people – usually minorities such as indigenous people or rural women – to the edge of society by not allowing them to have an active participation, identity or place in society.

Micronutrients

Vitamins, minerals and other substances that are required by the body in small amounts; measured in milligrams or micrograms.

Moderate food insecurity

The level of severity of food insecurity, based on the Food Insecurity Experience Scale, at which people face uncertainties about their ability to obtain food and have been forced to reduce, at times during the year, the quality and/or quantity of food they consume due to lack of money or other resources. It thus refers to a lack of consistent access to food, which diminishes dietary quality, disrupts normal eating patterns, and can have negative consequences for nutrition, health and well-being.

Multiple burden of malnutrition

The coexistence of forms of undernutrition (child stunting and wasting and vitamin and mineral deficiencies) with overweight and obesity in the same country, community, household or individual.

Net food importers

Refers to countries or territories where the value of imports of basic foodstuffs outweighs the value of exports of basic foodstuffs. Net food importers experienced a negative average food trade balance from years 2013 to 2015 (for definition, see UNCTAD and FAO. 2017),³¹ where food refers to the basic food category excluding tea, coffee, cocoa and spices.

Nutrition security

A situation that exists when secure access to an appropriately nutritious diet is coupled with a sanitary environment and adequate health services and care, in order to ensure a healthy and active life for all household members. Nutrition security differs from food security in that it also considers the aspects of adequate caregiving practices, health and hygiene, in addition to dietary adequacy.

Nutrition-sensitive intervention

An action designed to address the underlying determinants of nutrition (which include household food security, care for mothers and children, and primary healthcare and sanitation) but not necessarily having nutrition as the predominant goal.

Nutritional status

The physiological state of an individual that results from the relationship between nutrient intake and requirements and the body's ability to digest, absorb and use these nutrients.

Overweight and obesity

Body weight that is above normal for height as a result of an excessive accumulation of fat. It is usually a manifestation of expending less energy than is consumed. In adults, overweight is defined as a BMI of 25 kg/m^2 or more, and obesity as a BMI of 30 kg/m^2 or more. In children under five years of age, overweight is defined as weight-for-height greater than 2 standard deviations above the WHO Child Growth Standards median, and obesity as weight-for-height greater than 3 standard deviations above the WHO Child Growth Standards median.

Prevalence of undernourishment

An estimate of the proportion of the population that lacks enough dietary energy for a healthy, active life. It is FAO's traditional indicator used to monitor hunger at the global and regional level, as well as Sustainable Development Goal Indicator 2.1.1.

Resilience

Resilience is the ability of individuals, households, communities, cities, institutions, systems and societies to prevent, resist, absorb, adapt, respond and recover positively, efficiently and effectively when faced with a wide range of risks, while maintaining an acceptable level of functioning and without compromising long-term prospects for sustainable development, peace and security, human rights and well-being for all.³²

Risk

The probability or likelihood of occurrence of hazardous events or trends multiplied by the impacts if these events or trends occur. Risk to food insecurity is the probability of food insecurity resulting from interactions between a natural or human-induced hazard/shock/stress and vulnerable conditions.

Severe food insecurity

The level of severity of food insecurity at which people have likely run out of food, experienced hunger and, at the most extreme, gone for days without eating, putting their health and well-being at grave risk, based on the Food Insecurity Experience Scale.

Shared prosperity

Refers to the average annual growth in income or consumption of the poorest 40 percent of the population (the bottom 40) within each country.³³ It implies that if shared prosperity in a country is positive, the poor are getting richer. This concept is summarized by the **shared prosperity premium** that is the difference between the annual income or consumption growth rate of the poorest (the bottom 40) and the annual growth rate of people at the mean of the income or consumption distribution. A positive premium indicates that the poorest 40 percent are getting a larger share of the overall income in the economy.

Structural transformation

Structural transformation is both a cause and an effect of economic growth. It involves a change in the composition of the economy away from a reliance on agriculture and towards industry and services, rising involvement in international trade, growing rural–urban migration and urbanization. It leads to profound political, cultural, social and environmental stresses, which must be managed for long-term sustainability.

Stunting

Low height-for-age, reflecting a past episode or episodes of sustained undernutrition. In children under five years of age, stunting is defined height-for-age less than -2 standard deviations below the WHO Child Growth Standards median.

Terms of trade

Refers to the ratio between a country's export prices over its import prices. It can be interpreted as the units of exports required to purchase a single unit of import.

Undernourishment

Undernourishment is defined as the condition in which an individual's habitual food consumption is insufficient to provide the amount of dietary energy required to maintain a normal, active, healthy life. For the purposes of this report, hunger is defined as being synonymous with chronic undernourishment.

Undernutrition

The outcome of poor nutritional intake in terms of quantity and/or quality, and/or poor absorption and/or poor biological use of nutrients consumed as a result of repeated instances of disease. It includes being underweight for one's age, too short for one's age (stunted), dangerously thin for one's height (suffering from wasting) and deficient in vitamins and minerals (micronutrient deficiency).

Vulnerability

The conditions determined by physical, social, economic and environmental factors or

processes that increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.³⁴ Vulnerability to food insecurity is the range of conditions that increases the susceptibility of a household to the impact on food security in case of a shock or hazard.

Wasting

Low weight-for-height, generally the result of weight loss associated with a recent period of inadequate dietary energy intake and/or disease. In children under five years of age, wasting is defined as weight-for-height less than -2 standard deviations below the WHO Child Growth Standards median.

NOTES

NOTES TO PART 1

1 All statistical series published in *The State of Food Security and Nutrition in the World* are carefully revised prior to publication of each new edition to reflect all new information that FAO has received since the release of the previous edition. The process implies possible backward revisions of the entire series and readers are warned against comparing values of the indicators across different editions of the report and encouraged to always refer to the series as presented in the most current report.

2 Angola, Burundi, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Eritrea, Ethiopia, Guinea-Bissau, Liberia, Mali, Nigeria, Rwanda, Senegal, South Sudan and Uganda (see Food and Agriculture Organization of the United Nations (FAO), International Fund for Agricultural Development (IFAD), United Nations Children's Fund (UNICEF), World Food Programme (WFP) and World Health Organization (WHO). 2017. *The State of Food Security and Nutrition in the World 2017. Building resilience for peace and food security*, Table A2.1, p.103. Rome, FAO).

3 Benin, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Eritrea, Gabon, Guinea-Bissau, Madagascar, Mauritania, Mozambique, Namibia, Nigeria, South Africa, Togo, United Republic of Tanzania, Zambia and Zimbabwe (see FAO, IFAD, UNICEF, WFP and WHO. 2018. *The State of Food Security and Nutrition in the World 2018. Building climate resilience for food security and nutrition*, Table A2.1, p. 151. Rome, FAO).

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7 IMF. 2019. IMF DataMapper – World Economic Outlook (April 2019). In: *IMF* [online]. Washington, DC. [Cited 6 May 2019]. <https://www.imf.org/external/datamapper/datasets/WEO>

8 FIES or compatible data collected by national institutions are used in this report to inform the estimates of SDG Indicator 2.1.2 and of the prevalence of severe food

insecurity for the following countries: Burkina Faso, Cabo Verde, Canada, Chile, Dominican Republic, Ecuador, Ghana, Indonesia, Kenya, Malawi, Nigeria, Palestine, Republic of Korea, Saint Lucia, Seychelles and United States of America. FAO data collected through the Gallup World Poll are used to report on SDG 2.1.2 at national level for countries that have explicitly provided their authorization and to integrate official national data in producing regional and global estimates. Estimates for groups of countries are produced only when the population of the countries within the group for which data are available exceeds 50 percent of the total. For the specific methodology see Annex 1B; FIES measures the severity of food insecurity condition as experienced at any time during the reference period. For SDG monitoring purposes, the reference period is 12 months to ensure comparability of the estimates across countries. For other purposes (e.g. for short-term, continued monitoring of the situation in repeated surveys), the FIES survey module can be modified to use a one-month reference period.

9 One notable difference between PoU and FI_{sev} exists for Eastern Asia, where the PoU is estimated to be 8.3 percent in 2018 and 8.6 percent for the period 2016–18, driven by the value estimated for mainland China (see Annex 1A Table A1.1). FI_{sev} in this region is only 1.1 percent, and mainland China is aligned with other countries. Excluding Eastern Asia, there is a close correspondence between the overall number of undernourished and of severely food-insecure people measured with the FIES and their distribution across regions. It is also important to highlight that the worrisome global trend for the PoU, which is no longer declining in the most recent years, does not change even if excluding Eastern Asia.

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51 To derive the total number of obese people in the world, the number of obese adolescents aged 18 and 19 years old was subtracted from the number of obese adults to avoid double-counting, and the number of overweight children under five was used because obesity data is not available for this age group. FAO calculations are based on FAO data for the number of undernourished people; WHO. 2017. Global Health Observatory (GHO). In: *World Health Organization* [online]. Geneva, Switzerland. [Cited 2 May 2019]. <http://apps.who.int/gho/data/node.imr.PREVANEMIA?lang=en> for number of obese adults (18 years and above) and of school-age children and adolescents (5–19 years of age); UNICEF, WHO and World Bank. 2019. UNICEF-WHO-The World Bank: *Joint child malnutrition estimates – Levels and trends* (March 2019 edition) [online]. <https://data.unicef.org/topic/nutrition/www.who.int/nutgrowthdb/estimates;https://data.worldbank.org> for overweight in children under five; UN. 2017. *World Population Prospects 2017*. In: *United Nations – DESA/Population Division* [online]. New York, USA. [Cited 13 May 2019]. <https://population.un.org/wpp> for annual population by age.

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53 Food insecurity is the prevalence of moderate or severe food insecurity ($FI_{mod+sev}$) in 2018, while nutritional outcomes are based on last available year. Correlations are computed using a different number of countries for each nutrition indicator, depending on data availability. For adult obesity and overweight in school-age children and adolescents, and for anaemia, the 86/87 countries for which data are available cover all income levels (low-income: 11 countries; lower-middle-income: 27/28 countries; upper-middle-income:

24 countries; and high-income: 24 countries). For child stunting and wasting, high-income countries are not equally represented (low-income: 10 countries; lower-middle-income > 20 countries; upper-middle-income: 11 countries; high-income: 2 countries).

54 Prevalence of moderate or severe food insecurity (2014–2016), PoU (2014–2016), and poverty headcount ratio at USD 1.90 a day (2013–2017) are used here as independent variables. Use of the prevalence of undernourishment is intended to control for the more severe forms of food insecurity. Multicollinearity prevents from including FI_{sev} directly as a control. As there are other structural indicators not controlled for, including those related to health and sanitation conditions or education levels, there may still be residual confounding. For details, see the technical note in Annex 2.

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2 Food crises refer to the most severe forms/manifestations of acute food insecurity based on country-level analysis using the Integrated Food Security Phase Classification (IPC)/Cadre Harmonisé (CH), as reported in the *Global Report on Food Crises* (see Food Security Information Network (FSIN)). 2019. *Global Report on Food Crises 2019* [online]. [Cited 24 April 2019]. http://www.fsinplatform.org/sites/default/files/resources/files/GRFC_2019-Full_Report.pdf. Countries considered to be affected by food crises are those with any segment of the population in IPC/CH Phase 4 Emergency or Phase 5 Catastrophe; those with at least 1 million people in IPC/CH Phase 3 Crisis; and those for which an Inter-Agency Standing Committee (IASC) Humanitarian System-Wide Emergency Response was declared. The numbers of acute food insecure differ from the undernourishment estimates, and FIES-based severe food insecurity presented in Part 1, which are more globally comprehensive and measure chronic food deprivation.

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5 World Bank. 2019. *Global Economic Prospects, January 2019: Darkening Skies*. Washington, DC; IMF. 2019. *World Economic Outlook, April 2019: Growth Slowdown, Precarious Recovery*. Washington, DC.

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7 IMF. 2019. *World Economic Outlook, April 2019: Growth Slowdown, Precarious Recovery*. Washington, DC.

8 World Bank. 2018. Special Focus 1. The Role of Major Emerging Markets in the Global Commodity Demand. In World Bank. *Global Economic Prospects, June 2018*, pp. 61–90. Washington, DC.

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12 The PoU estimates the proportion of the population habitually not meeting the (average) minimum daily dietary-intake requirements. It uses the dietary energy consumption (DEC), which is computed as a three-year average. This means that the PoU is a highly smoothed data time series, which can be expected to reflect to some extent major variations in production in cases where a country is not able to compensate large production drops with stocks and imports. This way of computing and smoothing the PoU data means there will be insufficient variability between years, which makes direct year-on-year regression on economic slowdowns and downturns problematic.

13 Economic slowdowns and downturns have been identified using the growth rate of GDP per capita at constant 2010 prices, expressed in US dollars (USD). The change in the rate is computed for each country to obtain a simple difference in growth. See Annex 3 for full definitions.

14 See next section and Annex 6 for definition of commodity dependence.

15 The analysis is focused between 2011 and 2017 so that data points are sufficiently distant to detect changes and are not affected by sampling errors. On the other hand, it was not possible to undertake a statistical correlation analysis on year-on-year changes of PoU given the indicator is smoothed as noted.

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18 FSIN. 2019. *Global Report on Food Crises 2019* [online]. [Cited 24 April 2019]. http://www.fsinplatform.org/sites/default/files/resources/files/GRFC_2019-Full_Report.pdf

19 Countries included faced a high severity and magnitude of acute food insecurity in the period from January to December 2018. The key information source is the country-level analysis based on the Integrated Food Security Phase Classification (IPC)/*Cadre Harmonisé* (CH).

20 The analysis is carried out by a multi-sector and multi-agency technical team of experts (National IPC Technical Working Groups). For the global annual synthesis of country analyses, see FSIN. 2019. *Global Report on Food Crises 2019* [online]. [Cited 24 April 2019]. http://www.fsinplatform.org/sites/default/files/resources/files/GRFC_2019-Full_Report.pdf. For full individual country analyses, see www.ipcinfo.org.

21 Identification of drivers, including economic shocks, is an analytical component of the Integrated Food Security Phase Classification (IPC)/*Cadre Harmonisé* (CH) analysis carried out by countries.

22 FAO, IFAD, UNICEF, WFP and WHO. 2017. *The State of Food Security and Nutrition in the World 2017. Building resilience for peace and security*. Rome, FAO. As highlighted in the 2017 report, conflict-induced economic contractions reduce employment and income opportunities, which in turn can increase poverty and reduce the ability of households to meet their food and healthcare needs.

23 Calculated as the average difference in GDP per capita growth between 2014 and 2017 for 18 countries where conflict and civil insecurity was the primary driver of the food crisis in 2018. Data source for GDP per capita growth is: UN. 2019. National Accounts – Analysis of Main Aggregates. In: *UNSTATS* [online]. New York, USA. [Cited 6 May 2019]. <https://unstats.un.org/unsd/snaama>; while conflict-driven food crisis countries are identified in FSIN. 2019. *Global Report on Food Crises 2019* [online]. [Cited 24 April 2019]. http://www.fsinplatform.org/sites/default/files/resources/files/GRFC_2019-Full_Report.pdf. Also see FAO, IFAD, UNICEF, WFP and WHO. 2017. *The State of Food Security and Nutrition in the World 2017. Building resilience for peace and security*. Rome, FAO, which presented evidence showing that armed conflict reduces the level of GDP per capita by 17.5 percent on average. Impacts vary widely though: the GDP of the Syrian Arab Republic fell by more than 50 percent between 2010 and 2015; Libya's GDP fell by 24 percent in 2014 after violence picked up; and in Yemen there was a GDP decline of an estimated 25–35 percent in 2015 alone.

24 FSIN. 2018. *Global Report on Food Crises 2018* [online]. [Cited 24 April 2019]. https://docs.wfp.org/api/documents/WFP-0000069227/download/?_ga=2.160606203.756747346.1556271415-1211808128.1528362052

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27 The diversification of their productive and export activities is a pending task for many transition and developing economies. The UNCTAD Merchandise Trade Specialization Index confirms that, despite the rapid rate of growth of trade in many developing economies over the period 1995–2012, the degree of specialization in their export structures has not varied significantly. In a sample of relatively open developing economies, the index of export concentration has actually increased from the early 2000s (before the commodity

boom) to 2012. Dependence on a smaller set of export products has increased in commodity exporters, including Chile, Colombia, Ecuador, the Bolivarian Republic of Venezuela and the group of transition economies as a whole. See Table 1.2 in UNCTAD. 2015. *Commodities and Development Report 2015. Smallholder farmers and sustainable commodity development*. New York, USA and Geneva, Switzerland; also see World Bank. 2017. Economic diversification: A priority for action, now more than ever. In: *The World Bank* [online]. Washington, DC. [Cited 25 April 2019]. <https://blogs.worldbank.org/psd/economic-diversification-priority-action-now-more-ever>

28 Building more competitive firms, moving resources into higher-value-added sectors and strengthening national technological capabilities cannot rely on market forces alone; effective industrial policies and dedicated efforts to support and coordinate private- and public-sector activities will also be crucial. UNCTAD and FAO. 2017. *Commodities and Development Report 2017. Commodity markets, economic growth and development*. New York, USA, UNCTAD.

29 UNCTAD and FAO. 2017. *Commodities and Development Report 2017. Commodity markets, economic growth and development*. New York, USA, UNCTAD.

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NOTES TO ANNEXES

1 For a detailed description of the method, see N. Wanner, C. Cafiero, N. Troubat and P. Conforti. 2014. *Refinements to the FAO methodology for estimating the prevalence of undernourishment indicator*. FAO Statistics Division, Working Paper Series. ESS/14-05 [online]. Rome, FAO. [Cited 13 May 2019]. <http://www.fao.org/3/a-i4046e.pdf>

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5 FAO Trade and Markets Division has developed and maintains a Commodity Balance Sheet database (XCBS) that provides up-to-date and elementary information for analysis of the state of agricultural commodity markets at global and regional levels, as well as the food situation of all countries in the world. XCBS contains balance sheet-structured data for the major commodities in the following groups: cereals, dairy, meat, oil-bearing crops, sugar, tropical beverages, bananas and citrus since the 1980s. The data from

XCBS are used in a number of systems and publications, such as FAO Global Information and Early Warning System (GIEWS), Agricultural Market Information System (AMIS), Food Outlook and Crop Prospects and Food Situation.

6 H. Blencowe, J. Krasevec, M. de Onis, R.E. Black, X. An, G.A. Stevens, E. Borghi, C. Hayashi, D. Estevez, L. Cegolon, S. Shiekh, V.P. Hardy, J.E. Lawn and S. Cousens. 2019. National, regional, and worldwide estimates of low birthweight in 2015, with trends from 2000: a systematic analysis. *The Lancet Global Health*, 15 May 2019 [online]. [http://dx.doi.org/10.1016/S2214-109X\(18\)30565-5](http://dx.doi.org/10.1016/S2214-109X(18)30565-5).

7 The estimates were derived for various regional groupings of which the UNICEF regional grouping has the largest number of countries ($n = 202$). Seven of the 202 countries did not have LBW input data or covariate data. It was therefore not possible to generate any estimates for these seven countries or include them in the regional and global estimates which are based on a total of 195 countries.

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Paper 6329 [online]. Washington, DC, World Bank. [Cited 29 May 2019]. <http://documents.worldbank.org/curated/en/762131468267628816/pdf/wps6329.pdf>

14 The period 2006–2010 was not considered for the following reasons: 1) there are only a handful of countries that experience increases in PoU during this period (see Box 10 and Figure 24); 2) this period is marked by high volatility related to the global food price crisis and global financial crisis (see Box 10), and there are no high frequency data of PoU during this high volatility, nor is PoU designed to capture such sharp and volatile swings in such a short period of time.

15 D.F. Hendry. 1995. *Dynamic econometrics – advanced texts in econometrics*. New York, USA, Oxford University Press.

16 A sensitivity analysis using a logistic model was undertaken, with a dependent variable defined as a zero-one dummy variable denoting countries with an increase in PoU between years 2011 and 2017 vs. countries with no increase. The results were consistent with the Ordinary Least Squares (OLS) analysis.

17 The PoU estimates the proportion of the population habitually meeting the (average) minimum daily dietary-intake requirements. It uses the DEC (dietary energy consumption), which is computed as a three-year average. This means that the PoU is a highly smoothed data time series, which can be expected to reflect to some extent major variations in production in cases where a country is not able to compensate for large production drops with stocks and imports. This way of computing and smoothing the PoU data means there will be insufficient variability between years, which makes direct year-on-year regression on economic slowdowns and downturns problematic.

18 This alternative model specification involved the computation of change in PoU and in economic growth between years 2011–2013, 2013–2015 and 2015–2017. The results show that an average 10 percent increase in economic growth is associated with a decrease in PoU of 0.4 percentage points occurring on average over a period of two years. Thus, if one considers the relevant seven-year period (2011–2017), a 10 percent increase in economic growth is approximately associated with a 1.3 percentage point decrease in PoU, where 1.3 is obtained multiplying the estimated coefficient of 0.4 by 3.5 (i.e. two-year average estimated coefficient, with 3.5 corresponding to a time span of seven years). Thus, this supports the robustness

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of the estimated coefficient associated with economic growth shown in Table A4.2. Further analysis can be done using GMM-IV procedures (see M. Arellano and S. Bond. 1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies*, 58(2): 277, but this is beyond the scope of the study, and in addition the PoU data available are not appropriate given the PoU is a three-year rolling average.

19 By means of robustness, regressions were also run including the five outlier countries. The estimated coefficient of economic growth remained statistically significant and negative, although lower in magnitude (i.e. estimated coefficient is -0.9 with outliers, compared to -1.5 without). Standard errors of the models were clustered at the regional level.

20 FAO, IFAD, UNICEF, WFP and WHO. 2018. *The State of Food Security and Nutrition in the World 2018. Building climate resilience for food security and nutrition*, Annexes 2 and 3. Rome, FAO.

21 FAO, IFAD, UNICEF, WFP and WHO. 2017. *The State of Food Security and Nutrition in the World 2017. Building resilience for peace and food security*, Annex 2. Rome, FAO.

22 In the 2017 edition of this report, the time frame spans from 1996 to 2015, focusing the analysis on four periods of five years: 1996–2000, 2001–2005, 2006–2010 and 2011–2015. For the purpose of the current report, only countries affected by conflict during the 2011–2015 period are considered, as well as additional countries with conflict in the most recent years (2016 and 2017).

23 UNCTAD and FAO. 2017. *Commodities and Development Report 2017. commodity markets, economic growth and development*. New York, USA, UNCTAD.

24 J.D. Nkurunziza, K. Tsowou and S. Cazzaniga. 2017. Commodity dependence and human development. *African Development Review*, 29(S1): 27–41.

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26 UNCTAD and FAO. 2017. *Commodities and Development Report 2017. Commodity markets, economic growth and development*. New York, USA, UNCTAD.

27 The most recent World Bank classification (2017) defines countries with a gross national income (GNI) below or equal to USD 995 as low income; countries with a GNI in the range USD 996–USD 3 895 as lower-middle income; countries with a GNI greater than USD 12 055 as upper-middle income. For further information see World Bank. 2019. World Bank country and lending groups. In: *The World Bank* [online]. Washington, DC. [Cited 13 May 2019]. <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>

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31 UNCTAD and FAO. 2017. *Commodities and Development Report 2017. Commodity markets, economic growth and development*. New York, USA, UNCTAD.

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34 United Nations General Assembly (UNGA). 2016. *Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction*. (1 December 2016).

NOTES ON GEOGRAPHIC REGIONS IN STATISTICAL TABLES IN PART 1 AND ANNEX 1

Countries revise their official statistics regularly for past periods as well as for the latest reporting period. The same holds for population data of the United Nations. Whenever this happens, estimates are revised accordingly. Therefore, users are advised to refer to changes in estimates over time only within the same edition of *The State of Food Security and Nutrition in the World* and refrain from comparing data published in editions for different years.

Geographic regions

This publication follows the composition of geographic regions as presented by the Statistics Division of the United Nations Secretariat primarily for use in its publications and databases (<https://unstats.un.org/unsd/methodology/m49>). The assignment of countries or areas to specific groupings is for statistical convenience and does not imply any assumption regarding political or other affiliation of countries or territories by the United Nations. Please refer to the list on the right for the country composition of each region in Annex 1 tables as well as in Tables 1–4 in Section 1.1.

Countries, areas and territories for which there were insufficient or unreliable data for conducting the assessment are not reported and not included in the aggregates.

Specifically:

- **Northern Africa:** In addition to the countries listed in the table, PoU and FIES include an estimate for Western Sahara. Child wasting, stunting and overweight, low birthweight, adult obesity, exclusive breastfeeding and anaemia estimates exclude Western Sahara.
- **Eastern Africa:** With respect to the M49 classification, it excludes British Indian Ocean Territory, French Southern and Antarctic Territories, Mayotte, and Réunion.
- **Western Africa:** With respect to the M49 classification, it excludes Saint Helena.
- **Asia and Eastern Asia:** With respect to the M49 classification, low birthweight, child wasting, stunting and overweight aggregates exclude Japan.
- **Caribbean:** With respect to the M49 classification, it excludes Anguilla; Aruba; Bonaire, Sint Eustatius and

Saba; British Virgin Islands; Cayman Islands; Curaçao; Guadeloupe; Martinique; Montserrat; Saint Barthélemy; Saint Martin (French Part); Sint Maarten (Dutch part); Turks and Caicos Islands; and United States Virgin Islands. In addition to these, anaemia estimates exclude Saint Kitts and Nevis. Adult obesity, child wasting, stunting and overweight, low birthweight and exclusive breastfeeding exclude Puerto Rico.

- **South America:** With respect to the M49 classification, it excludes Bouvet Island, Falkland Islands (Malvinas), French Guyana, and South Georgia and the South Sandwich Islands.
- **Australia and New Zealand:** With respect to the M49 classification, it excludes Christmas Island, Cocos (Keeling) Islands, Heard and McDonald Islands, and Norfolk Island.
- **Melanesia:** With respect to the M49 classification, anaemia, child wasting, stunting and overweight, low birthweight and exclusive breastfeeding estimates exclude New Caledonia.
- **Micronesia:** With respect to the M49 classification, it excludes Guam, Northern Mariana Islands, and US Minor Outlying Islands. In addition to these, anaemia estimates exclude Nauru and Palau.
- **Poynesia:** With respect to the M49 classification, it excludes Pitcairn Islands, and Wallis and Futuna Islands. Adult obesity, child wasting, stunting and overweight, low birthweight and exclusive breastfeeding estimates exclude American Samoa, French Polynesia and Tokelau. In addition, anaemia aggregates also exclude Cook Islands, Niue, and Tuvalu.
- **Northern America:** With respect to the M49 classification, it excludes Saint Pierre and Miquelon. Adult obesity, anaemia, low birthweight and exclusive breastfeeding aggregates also exclude Bermuda and Greenland. Aggregates for wasting and stunting are based only on data for the United States of America.
- **Northern Europe:** With respect to the M49 classification, it excludes Åland Islands, Channel Islands, Faroe Islands, Isle of Man, and Svalbard and Jan Mayen Islands.
- **Southern Europe:** With respect to the M49 classification, it excludes

Gibraltar, Holy See, and San Marino. However, low birthweight estimates include San Marino.

- **Western Europe:** With respect to the M49 classification, it excludes Liechtenstein and Monaco. However, low birthweight estimates include Monaco.

Other groupings

Least Developed Countries, Land Locked Developing Countries, and Small Island Developing States groupings include the countries as presented by the Statistics Division of the United Nations (<https://unstats.un.org/unsd/methodology/m49>).

- **Small Island Developing States:** Estimates for child wasting, stunting and overweight, adult obesity, exclusive breastfeeding and low birthweight exclude American Samoa, Anguilla, Aruba, Bonaire, British Virgin Islands, Curaçao, French Polynesia, Guam, Montserrat, New Caledonia, Northern Mariana Islands, Puerto Rico, Sint Eustatius and Saba, Sint Maarten (Dutch part) and United States Virgin Islands. In addition, anaemia estimates exclude Cook Islands, Nauru, Niue, Palau, Saint Kitts and Nevis and Tuvalu.

High-income, upper-middle-income, lower-middle-income and low-income countries include the countries as presented by the World Bank classification for the 2018–2019 fiscal year (<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>). For adult obesity, anaemia and low birthweight, the World Bank classification for the previous fiscal year was used.

- **Low-income food-deficit countries (2016):** Afghanistan, Bangladesh, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Comoros, Côte d'Ivoire, Democratic People's Republic of Korea, Democratic Republic of the Congo, Djibouti, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Haiti, India, Kenya, Kyrgyzstan, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Nepal, Nicaragua, Niger, Nigeria, Pakistan, Papua New Guinea, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sudan, Syrian Arab Republic, Tajikistan, Togo, Uganda, United Republic of Tanzania, Uzbekistan, Yemen, and Zimbabwe.

Composition of geographic regions

AFRICA

Northern Africa: Algeria, Egypt, Libya, Morocco, Sudan, Tunisia and Western Sahara.

Sub-Saharan Africa

Eastern Africa: Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mozambique, Rwanda, Seychelles, Somalia, South Sudan, Uganda, United Republic of Tanzania, Zambia and Zimbabwe.

Middle Africa: Angola, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon, and Sao Tome and Principe.

Southern Africa: Botswana, Eswatini, Lesotho, Namibia and South Africa.

Western Africa: Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone and Togo.

ASIA

Central Asia: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

Eastern Asia: China, Democratic People's Republic of Korea, Japan, Mongolia and Republic of Korea.

South-eastern Asia: Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Viet Nam.

Southern Asia: Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Maldives, Nepal, Pakistan and Sri Lanka.

Western Asia: Armenia, Azerbaijan, Bahrain, Cyprus, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates and Yemen.

LATIN AMERICA AND THE CARIBBEAN

Caribbean: Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, and Trinidad and Tobago.

Latin America

Central America: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama.

South America: Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay and Venezuela (Bolivarian Republic of).

OCEANIA

Australia and New Zealand: Australia and New Zealand.

Oceania excluding Australia and New Zealand

Melanesia: Fiji, New Caledonia, Papua New Guinea, Solomon Islands and Vanuatu.

Micronesia: Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru and Palau.

Polynesia: American Samoa, Cook Islands, French Polynesia, Niue, Samoa, Tokelau, Tonga and Tuvalu.

NORTHERN AMERICA AND EUROPE

Northern America: Bermuda, Canada, Greenland and United States of America.

Europe

Eastern Europe: Belarus, Bulgaria, Czechia, Hungary, Poland, Republic of Moldova, Romania, Russian Federation, Slovakia and Ukraine.

Northern Europe: Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, Norway, Sweden, and United Kingdom of Great Britain and Northern Ireland.

Southern Europe: Albania, Andorra, Bosnia and Herzegovina, Croatia, Greece, Italy, Malta, Montenegro, North Macedonia, Portugal, Serbia, Slovenia and Spain.

Western Europe: Austria, Belgium, France, Germany, Luxembourg, Netherlands and Switzerland.

2019

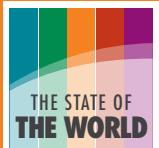
THE STATE OF FOOD SECURITY AND NUTRITION IN THE WORLD

SAFEGUARDING AGAINST ECONOMIC SLOWDOWNS AND DOWNTURNS

This year's report presents evidence that the absolute number of people who suffer from hunger continues to slowly increase. The report also highlights that food insecurity is more than just hunger. For the first time, the report provides evidence that many people in the world, even if not hungry, experience moderate food insecurity as they face uncertainties about their ability to obtain food and are forced to compromise on the quality and/or quantity of the food they consume. This phenomenon is observed globally, not only in low- and middle-income countries but also in high-income countries.

The report also shows that the world is not on track to meet global nutrition targets, including those on low birthweight and on reducing stunting among children under five years. Moreover, overweight and obesity continue to increase in all regions, particularly among school-age children and adults. The report stresses that no region is exempt from the epidemic of overweight and obesity, underscoring the necessity of multifaceted, multisectoral approaches to halt and reverse these worrying trends.

In light of the fragile state of the world economy, the report presents new evidence confirming that hunger has been on the rise for many countries where the economy has slowed down or contracted. Unpacking the links between economic slowdowns and downturns and food insecurity and malnutrition, the report contends that the effects of the former on the latter can only be offset by addressing the root causes of hunger and malnutrition: poverty, inequality and marginalization. The report concludes by recommending short- to long-term policies that address these underlying causes and safeguard food security and nutrition against economic slowdowns and downturns.



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WFP Strategic Plan (2017-2021)

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Executive Summary

Every day, WFP and its partners work to achieve the vision of a zero hunger world. In full alignment with the Sustainable Development Goals (SDGs), achieving this vision by 2030 will require not just WFP but the world to make nutritious food accessible and available all year round, to eliminate stunting; increase rural economic opportunity; prevent food waste; and promote sustainable agricultural development.

As set out in Article II of WFP's General Regulations the purposes of WFP are: (a) to use food aid to support economic and social development; (b) to meet refugee and other emergency and protracted relief food needs; and (c) to promote world food security in accordance with the recommendations of the United Nations and the Food and Agriculture Organization (FAO) of the United Nations.

This Strategic Plan (2017–2021) builds on the activities approved by the Executive Board in past strategic plans and policies and presents them in the context of the 2030 Agenda and the Sustainable Development Goals (SDGs). The plan seeks to leverage WFP's strengths to maximize the organization's contribution to achievement of the SDGs, in the spirit of openness and collaboration called for by the Economic and Social Council (ECOSOC) of the United Nations, the General Assembly and the Secretary-General. The ultimate goal of this Strategic Plan is to support countries to end hunger.

The 2030 Agenda for Sustainable Development conveys the global commitment to end poverty, hunger and inequality. The 2030 Agenda encompasses humanitarian and development activity situated



within the broader context of human progress and sustainable development to achieve peace and prosperity for all. This Strategic Plan aligns WFP's work with the 2030 Agenda for Sustainable Development and covers the period 2017–2021.

WFP is the largest humanitarian organization addressing the challenges of global hunger and nutrition. While WFP's mandate clearly articulates humanitarian and development responsibilities, the organization's comparative advantage and long experience call for prioritization of emergency, life saving and development-enabling work that benefits the poorest and most marginal people. The SDGs require moving beyond saving lives to changing lives, focusing first on the people in greatest need,

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not just in least-developed countries but universally throughout the world.

This Strategic Plan provides a new planning and operational framework to reinforce, through effective partnerships, WFP's emergency, life-saving and logistics contributions as well as those it can make to ending hunger and chronic malnutrition. The plan does not expand WFP's mandate.¹ It leverages WFP's primary strengths and capacities in humanitarian response and recovery and identifies opportunities to apply these strengths and capacities in the continuum from emergency relief to development to achieve the SDGs. WFP works to strengthen the resilience of affected people in protracted crises by applying a development lens in its humanitarian response.

WFP supports a common, people centred, needs-driven approach that is guided by the humanitarian principles. WFP is committed to participating in humanitarian-development joint needs assessments, combined data analysis, and planning and programming processes to deliver better outcomes to people, moving beyond meeting needs to ending needs. In doing so, WFP will pay special attention to strengthening capacities of local crisis responders.

This Strategic Plan, supported by revised financial and corporate results frameworks, guides the preparation and implementation of Country Strategic Plans. These country plans will facilitate implementation of results-focused portfolios of context-specific activities that address humanitarian needs and enable longer-term development.

Responding to emergencies and saving lives and livelihoods – directly and by strengthening country response capacities – are paramount and will remain the major part of WFP's operations. This is crucial to supporting countries' efforts to achieve the SDGs. However, ending hunger remains a significant global challenge. Ending hunger must be achieved in the context of increasingly complex and protracted humanitarian needs. Conflict, climate change and growing inequality amplify these challenges, disrupting food systems, economies and societies as well as increasing people's vulnerability. Current trends point to continued disruption over the medium term.

The 2030 Agenda makes clear that sustainable development hinges on effective partnerships. WFP embraces this imperative, seeking to align and integrate its food assistance capacities and programmes with the interventions and investments of governments, other United Nations agencies, the private sector and civil society, which together can generate the systemic changes for sustainable development. WFP will work in synergy with partners to combine and leverage complementary strengths and resources. The objective will be transparent, equitable and mutually beneficial arrangements with mechanisms for sharing risks, responsibilities and accountability. WFP will rely on partners with

¹ The references to humanitarian and development work in the Strategic Plan (2017–2021) will be implemented in accordance with the purpose and functions of WFP, as set out in WFP's General Regulations.

stronger comparative advantages, which might be better placed to respond. Commitment to partnership and collective action has long been central to WFP's operations and is at the heart of the 2030 Agenda's global call to action. The Strategic Plan (2017–2021) affirms and deepens that commitment.

Programme and operational innovation, effective communication, stakeholder advocacy, continuous staff skill development are critical requirements for a successful delivery of the Plan.

WFP is committed to the highest standards of integrity and its actions will at all times be guided by the humanitarian principles of humanity, impartiality, neutrality and independence.

Given the ambitious timeframe of the 2030 Agenda, WFP is submitting this Strategic Plan one year early. The Plan can be extended or adjusted in 2021, with subsequent reviews every four years to harmonize with Quadrennial Comprehensive Policy Review resolutions.

The Strategic Plan (2017–2021) has been informed by agreements made at major international conferences and summits. It takes into consideration United Nations General Assembly resolutions and complementary global and regional frameworks aimed at ending hunger and malnutrition. The Plan draws on lessons from the mid-term review of the Strategic Plan (2014–2017), evaluations and external reviews. It has benefited from extensive consultations within WFP and with partners.

The Strategic Plan (2017–2021) allows WFP to evolve with other entities of the United Nations Development System (UNDS)². These entities serve specific and differing needs, reflected in their specializations and spheres of influence. The 2030 Agenda requires the UNDS to pursue integrated approaches and create cross-sectoral synergies to deliver interlinked results at all levels, supported by an enabling funding and governance architecture. The system has recognized this moment as a window of opportunity and is taking practical measures, both individually and collectively, to do business differently. The UNDS recognizes that its primary focus should be on achieving interlinked and transformative results at country level and

promoting national ownership. The UNDS has renewed its commitment to deliver across mandates, sectors and institutional boundaries, working within the framework of the Charter of the United Nations, using more integrated and interconnected approaches.

The 17 Sustainable Development Goals are interconnected. WFP will prioritize SDG 2, on achieving zero hunger; and SDG 17, on partnering to support implementation of the SDGs. Each Strategic Goal is elaborated by Strategic Objectives. Reflecting WFP's mandate and capacities, as demonstrated in its Programme of Work and the strong demand for its technical, operational, and common services, WFP anchors assessment of its performance towards these Strategic Objectives through Strategic Results that correspond to the targets of SDGs 2 and 17. Focusing on these Strategic Results ensures that WFP's reporting is in line with countries' measurement and reporting on progress towards achieving the 2030 Agenda.

THE STRATEGIC GOALS, STRATEGIC OBJECTIVES AND STRATEGIC RESULTS ARE:

Strategic Goal 1: Support countries to achieve zero hunger (SDG 2)

Strategic Objective 1

End hunger by protecting access to food

→ Strategic Result 1

Everyone has access to food (SDG Target 2.1)

Strategic Objective 2

Improve nutrition

→ Strategic Result 2

No one suffers from malnutrition (SDG Target 2.2)

Strategic Objective 3

Achieve food security

→ Strategic Result 3

Smallholders have improved food security and nutrition through improved productivity and incomes (SDG Target 2.3)

→ Strategic Result 4

Food systems are sustainable (SDG Target 2.4)

² A/71/292/Rev.1, Report of the United Nations Secretary-General on the Quadrennial Comprehensive Policy Review's (QCPR) operational activities for development of the United Nations system.

Strategic Goal 2: Partner to support implementation of the SDGs (SDG 17)

Strategic Objective 4

Support SDG implementation

→ Strategic Result 5

Developing countries have strengthened capacities to implement the SDGs (SDG Target 17.9)

→ Strategic Result 6

→ Policies to support sustainable development are coherent (SDG Target 17.14)

Strategic Objective 5

Partner for SDG results

→ Strategic Result 7

Developing countries access a range of financial resources for development investment (SDG Target 17.3)

→ Strategic Result 8

Sharing of knowledge, expertise and technology, strengthen global partnership support to country efforts to achieve the SDGs (SDG Target 17.16)

Implementation of the Strategic Plan (2017–2021) will be adapted to local contexts, capacities and partnerships in each country in which WFP operates. Country Strategic Plans will determine the Strategic Results, presented as “strategic outcomes”, to which WFP will contribute. These strategic outcomes will reflect the situation and dynamics of a country, in line with national priorities, goals and regulations and consistent with the core values of WFP and the United Nations. The strategic outcomes for each country link directly to the achievement of national SDG targets and hence to WFP Strategic Results. WFP’s primary focus on ending hunger may also contribute directly or indirectly to the outcomes related to SDGs other than 2 and 17 of countries and partners.

Not all Strategic Objectives and Strategic Results will apply in all countries. WFP’s activities will reflect the context and needs in a specific country or region, the added value that WFP can bring at a particular time and place, and the presence and capabilities of other actors. For example, WFP will work with the African Union (AU) and its Regional Economic Communities (RECs) to address Africa’s specific challenges in

realizing zero hunger. WFP will work in synergy with partners to implement programmes that strengthen the capacities of people, communities and countries to manage underlying risks, save lives and livelihoods, and ultimately end hunger. WFP will select the appropriate tool or mix of tools based on a rigorous analysis of needs and context, people’s preferences, operational goals, efficiency, environmental impact and evidence of potential impact.

The Strategic Plan (2017–2021) does not articulate WFP’s resourcing projections, funding and shortfalls. Country Strategic Plans will serve as the vehicle for resource mobilization and fund management, including WFP’s commitment to the guidelines and procedures regarding the allocation of multilateral contributions for development assistance.³ Over the term of the Strategic Plan, WFP expects resource flows to mirror past trends, including along the humanitarian–development–peace building nexus, and will prioritize its work and comply with resource allocation decisions of the Board that recognize these patterns, including for multilateral resources.

DRAFT DECISION*

The Board, reaffirming its commitment to WFP’s mandate, approves the “WFP Strategic Plan (2017–2021)” (WFP/EB.2/2016/4-A/1/Rev.2*), which will align the organization’s operations with the Sustainable Development Goals.

The Board notes its expectation that responding to food security related emergencies and providing direct humanitarian assistance that helps save lives and livelihoods and upholding the humanitarian principles shall remain WFP’s primary focus, and continue to be the major part of WFP’s operations. The Board recognizes the importance of WFP implementing its Strategic Plan 2017–2021 in collaboration with FAO, IFAD and other UNDS entities to maximize results for achieving the SDGs.

³ Strategic Resource Allocation Committee (SRAC) Guidelines and Procedures (III) – Allocation of Multilateral Contributions (for Development).

* This is a draft decision. For the final decision adopted by the Board, please refer to the Decisions and Recommendations document issued at the end of the session.

I. Overview

1. In September 2015, world leaders came together to establish a comprehensive framework for global action to achieve sustainable development in its three dimensions – economic, social and environmental – in a balanced and integrated manner. Transforming Our World: the 2030 Agenda for Sustainable Development sets forth a people-centred global framework for achieving sustainable development and ending poverty, hunger and inequality. The 2030 Agenda embraces the Secretary-General's Zero Hunger Challenge and reflects it in Sustainable Development Goal 2 (SDG 2) – End hunger, achieve food security and improved nutrition and promote sustainable agriculture. The 2030 Agenda situates humanitarian efforts within a broader context of human progress and development, with a strong commitment to leaving no one behind.
2. The 2030 Agenda is ambitious in its reach, in the complexity of the challenges to be overcome and

in its 15-year timeframe for achieving sustained results that will transform the world. Action is needed now: the goals require accelerated action to end poverty and hunger by 2030. Multi stakeholder engagement is crucial.

3. Responding to the 2030 Agenda's global call to action,⁴ the WFP Secretariat is exceptionally submitting the 2017–2021 Strategic Plan one year early, with a five-year duration that would enable return to the four-year strategic plan duration foreseen by General Rule VI.1 in 2018.⁵ This will adjust and align WFP's strategic direction and set the course for its contributions to country efforts towards achieving zero hunger and sustainable development.

The results framework of the Strategic Plan (2017–2021) is fully aligned with the 2030 Agenda and is intended to remain stable throughout its implementation. In this context, while recognizing



⁴ See Economic and Social Council of the United Nations (ECOSOC) document E/2015/L.16 (15 June 2015), paragraph 73.

⁵ The Executive Board is, under powers granted to it by Article VI.2.(b)(vi) of the General Regulations, able to authorize such temporary departure from General Rule VI.1.

that WFP must plan and perform the humanitarian work required to help save lives, the vision of this Strategic Plan (2017–2021) is to ensure that countries are on track for achieving the 2030 Agenda, in particular SDG 2 on zero hunger. As per standard practice, the Strategic Plan (2017–2021) will be subject to a mid-term review. Lessons learned will generate further guidance on how collective, coherent action can increase progress. To ensure that the Strategic Plan (2017–2021) reflects all relevant outcomes of the Quadrennial Comprehensive Policy Review (QCPR) and is fully aligned with the efforts of the United Nations Development Group (UNDG), WFP will continue to engage fully in the current QCPR process in 2017, and, if necessary, amend the Strategic Plan 2017–2021 at either EB.2/2017 or EB.1/2018 in order to ensure its full alignment with UNDG strategic planning and actions.

4. This Strategic Plan (2017–2021) should guide WFP through the first five years of the 2030 Agenda implementation period. The Plan channels WFP’s support to countries’ work to end hunger among the poorest and most food-insecure people, and guides WFP’s participation in a revitalized global partnership for sustainable development, which will be supported by enhanced advocacy. WFP is committed to reaching those in greatest need first, while ensuring that no one is left behind. Responding to emergencies and saving lives and livelihoods will continue to constitute the major part of WFP’s operations while it will focus on aspects of development where food-based interventions are most appropriate. WFP will maintain the highest standards of integrity and WFP’s actions will at all times be guided by the humanitarian principles of humanity, impartiality, neutrality and independence. WFP will operate in accordance with the United Nations General Assembly’s Resolution⁶ and the ECOSOC’s Resolution⁷ on strengthening of the coordination

of humanitarian emergency assistance of the United Nations. The humanitarian principles and the five principles of the Paris Declaration on Aid Effectiveness⁸ will be respected. Strategic partnerships, communication and advocacy, and the development of staff awareness and capacity will be necessary to realize the Strategic Plan (2017–2021). In addition, to achieve the vision and goals of the Strategic Plan in a constantly changing world, it will be crucial for WFP to leverage and strengthen innovation efforts, including through the WFP Innovation Accelerator.⁹

5. WFP’s mandate allows it to apply development tools and perspectives to its humanitarian responses, providing communities with early recovery and development-enabling interventions that help build resilience and contribute to productive opportunities over the long term. As a result of this mandate, WFP’s experience in both humanitarian and development contexts has allowed it to establish unique strengths and capacities to support food security and nutrition, including in contexts of protracted crises. In keeping with the 2030 Agenda, as WFP focuses on its core business of saving lives, it must do so in ways that contribute to outcomes that provide productive opportunities over the longer term, working collaboratively across institutional boundaries at the humanitarian–development and peace-building nexus, in line with the policy¹⁰ on WFP’s role in peace-building in transition settings, while ensuring that it does not deviate from the primacy of humanitarian principles. During discussions held at the World Humanitarian Summit some countries raised the importance to shrink humanitarian needs over the long-term in a manner which contributes to the outcomes of the SDGs. Prevention, mitigation and preparedness for early action are critical. The Strategic Plan (2017–2021) provides a framework for WFP to make significant contributions in these areas in different contexts.

⁶ A/RES/47/168.

⁷ E/RES/2016/9.

⁸ The Paris Declaration on Aid Effectiveness (2005) and the Accra Agenda for Action (2008).

⁹ The WFP Innovation Accelerator was opened in Munich, Germany, in August 2015, to strengthen the culture of innovation in WFP, and to facilitate collaboration with experts from diverse sectors and institutions. It works to link WFP operations with the latest technologies, thus helping countries to achieve the SDGs more efficiently and effectively.

¹⁰ WFP/EB.2/2013/4-A/Rev.1.

II. The Global Context

THE 2030 AGENDA

6. The global push to achieve the 2030 Agenda is led by Member States. They defined the 17 goals with targets as integrated and indivisible, global in nature and universally applicable. They recognize the interconnectedness of the social, economic and environmental dimensions of sustainable development, within a country and across all countries. Each government will set its own national targets, guided by the ambitions for the global level while taking into account national circumstances. The 2030 Agenda calls for collective action to support country-led efforts.¹¹ SDG 17 – Strengthen the means of implementation and revitalize the global partnership for sustainable development – is supported and complemented by the Addis Ababa Action Agenda and recognizes that new ways of working together and improved partnership based approaches are essential in supporting countries in achieving sustainable development in all its dimensions.
7. Of particular importance to WFP, the 2030 Agenda recognizes that some countries and people are more vulnerable than others, face greater challenges in achieving sustainable development, and require special attention to ensure that no one is left behind.¹² Rather than define an SDG related specifically to humanitarian action, Heads of State and Government chose to place risk and vulnerability at the core of the 2030 Agenda. Managing crisis-related risks and reducing vulnerability must be viewed as both a humanitarian imperative for saving lives more effectively and a development necessity in ensuring progress towards achieving the SDGs. “Leaving no one behind” in the fight against hunger means reaching everybody – women, men, girls and boys – with special attention to people living in extreme poverty,

those facing discrimination, refugees, internally displaced persons (IDPs), people living with disabilities, the infirm, the elderly and people affected by complex and protracted humanitarian crises, extreme violence and climate related and other disasters. To ensure that the people in greatest need are reached, concerted efforts are necessary, which means that WFP will partner a wide range of actors in the development, humanitarian and – as appropriate – peace and security communities.

GLOBAL TRENDS AND INTERNATIONAL CONFERENCES AND AGREEMENTS

8. Almost 800 million people around the world are undernourished, 159 million children under the age of 5 are stunted and 50 million children suffer from wasting.¹³ Children account for more than half of the world’s refugee population; wasting and stunting rates among children increase both during and in the years following a disaster.¹⁴ Women and girls are disproportionately affected by humanitarian crises: they have higher morbidity and mortality rates, and face multiple forms of violence. People in conflict-affected states are up to three times more likely to be undernourished than those living in more stable developing countries. Vulnerable groups such as children, refugees and IDPs, and people living with HIV or disabilities often have limited access to social protection, and many live in situations of conflict and instability. Lack of gender equality and women’s empowerment means that women and girls are often more vulnerable in humanitarian situations, and hinders progress in all areas of sustainable development. In many countries, inequalities are persistent or rising, and hunger is increasingly becoming an urban challenge as well as a rural one.

11 The 2030 Agenda, paragraph 61: “The means of implementation targets under each Sustainable Development Goal and Goal 17, which are referred to above, are key to realizing our Agenda and are of equal importance with the other Goals and targets. We shall accord them equal priority in our implementation efforts and in the global indicator framework for monitoring our progress.”

12 The 2030 Agenda, paragraphs 21 and 22: “The most vulnerable countries ... deserve special attention, as do countries in situations of conflict and post-conflict countries. There are also serious challenges within many middle-income countries.” Paragraph 23: “We resolve to take further effective measures and actions, in conformity with international law, to remove obstacles and constraints, strengthen support and meet the special needs of people living in areas affected by complex humanitarian emergencies and in areas affected by terrorism.”

13 UNICEF-WHO-World Bank Group. 2015. Joint child malnutrition estimates – Levels and trends. Available at <http://www.who.int/nutgrowthdb/estimates2014/en/>

14 Hsiang, S. and Antilla-Hughes, J. 2013. Destruction, Disinvestment, and Death: Economic and Human Losses Following Environmental Disaster. Available at <http://ssrn.com/abstract=2220501>; Silventoinen, K. 2003. Determinants of variation in adult body height. Journal of Biosocial Sciences, 35(2): 263–285.

9. More than 125 million people are currently affected by humanitarian crises. In 2014 and 2015, WFP provided direct food assistance to an average of more than 78 million people per year in 82 countries. Some 42 percent of its expenditure was on emergency operations, 38.5 percent on early recovery activities, 6.9 percent on development activities and 7.6 percent on special operations.¹⁵ In 2014 and 2015, on average 77 percent of food transfers and 89 percent of cash based transfers (CBTs) went to saving lives and protecting livelihoods in emergencies, in direct support of 59.5 percent of WFP's beneficiaries. This support ensured that the food security of emergency-affected populations was stabilized or improved through general distributions of food, or CBTs, which increased food consumption and dietary diversity. Activities were also conducted to prevent nutritional deterioration and related mortality, and to support acutely malnourished people in emergencies.
10. In more stable situations, WFP supported smallholder farmers by transforming its local procurement into a tool for addressing hunger, working with the Food and Agriculture Organization of the United Nations (FAO) and other partners. These catalytic market creation activities enabled the economic development of smallholder farmers by improving crop quality and increasing sales to WFP, and – even more importantly – to other more sustainable commercial and government buyers. In situations of early recovery, WFP worked to improve the food security of vulnerable communities and households by providing food or cash-based transfers, while helping local communities to rehabilitate land and build or rebuild dams and wells, feeder roads and other assets. In diverse contexts, WFP worked to reduce vulnerable households' exposure to climate change and disasters by helping food-insecure communities prepare for, respond to and recover from climate-related disasters. In the last decade, almost half of WFP's emergency

and recovery operations included response to climate-related disasters; in the last five years, at least 40 percent of WFP's operations included activities to reduce disaster risk. WFP has supported governments in building their capacity to manage disaster risk and improve food security, while investing in early warning and preparedness systems. WFP has also helped ensure adequate access to nutritious food for children through school meal programmes, which supported an average of about 18 million children in 64 countries in 2014 and 2015.

11. WFP responded to 13 major emergencies in 2014 and 12 major emergencies in 2015. Current trends in climate-, conflict- and health-related crises risk are increasing the number of people living in hunger, and indicate that it will remain necessary for WFP to continue to maintain a strong focus on saving lives and livelihoods in emergencies if it is to help countries achieve the 2030 Agenda. Climate change threatens to break down food systems by increasing frequency and severity of natural hazards, with a disproportionate impact on vulnerable food-insecure households. The global community cannot and should not keep saving the same lives every year. Climate justice¹⁶ and the 2030 Agenda call for collective responsibility to perform the adaptation and mitigation work that will help build the resilience of marginalized people living in vulnerable places. The continued proliferation and fragmentation of conflicts is leading to increased displacement and growing humanitarian needs. These conflicts, with no peaceful solution in sight, create the quintessential oxymoron of ever longer lasting protracted emergencies requiring broad based humanitarian assistance, and offering little if any space for productive sustainable development activity.

15 Plus 5 percent on bilaterals, trust funds, and General Fund and trust funds that cannot be apportioned by project or operation. These are averages for 2014 and 2015.

16 The Paris Agreement adopted on 12 December 2015 at the 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change held in Paris from 30 November to 13 December 2015.

12. *The State of Food Insecurity in the World* report from 2015¹⁷ states: "Over the past 30 years, the typology of crises has gradually evolved from catastrophic, short-term, acute and highly visible events to more structural, longer-term and protracted situations [...]. In other words, protracted crises have become the new norm, while acute short-term crises are now the exception." The Committee on World Food Security (CFS) adopted the Framework for Action for Food Security and Nutrition in Protracted Crises (CFS-FFA) in 2015,¹⁸ in recognition of the impact on affected populations of food insecurity and undernutrition. WFP has unique strengths and capacities for responding to affected populations in protracted crises, and for acting on the principles set out by the CFS-FFA. WFP's mandate has allowed it to accumulate significant experience in both the humanitarian and development contexts, which makes it well suited to help strengthen the resilience of affected people in protracted crises by also applying a development lens in its humanitarian response, and by aligning its recovery and development interventions accordingly.
13. The 2030 Agenda recognizes that concurrent action in different contexts and across sectors is required. By addressing their interconnected root causes, poverty and hunger can be ended forever. This is critical wherever hunger is found, and resonates with the 2030 Agenda's call to prioritize people in situations of conflict, disaster, risk and vulnerability. Supporting the 2030 Agenda, actions to end hunger include the outcome documents of important United Nations conferences and summits.
14. The World Humanitarian Summit deliberations focused the attention on the scale of changes required to address the magnitude of challenges before us. Trends in climate-related disasters, intra-state conflict and displacement suggest that the world will see an increasing number of complex and protracted crises in the coming decades. The Summit affirmed that humanitarian assistance alone cannot adequately address the needs of the world's most vulnerable people. A coherent approach is required to sustainably address the root causes of crisis, including political diplomacy for prevention and conflict resolution, and integrating humanitarian, development and peace building efforts.¹⁹ Achieving the affirmations of humanity for millions of people will need to go beyond a declaratory vision. It will need to shape politics, steer behaviour and be a consistent driver of political, social and financial decisions. Humanity will need to become inseparable from the responsibility to act.
15. Participants emphasized that humanitarian needs must be met by adequate and predictable financing, and commitments were made to widen donor base. Unrestricted humanitarian access, the humanitarian principles and the international protection standards were underscored as imperative; there is an urgent need to uphold and promote them. Participants also resolved to address the needs of internally displaced persons (IDPs) and refugees that meets both immediate humanitarian needs and longer-term development objectives to enhance the self-reliance of refugees, IDPs and host communities.
16. The first World Humanitarian Summit was held at a time when the world faces profound global challenges. Today's complex challenges cross borders and surpass the capacity of any single country or institution to cope and there is a need to develop capacities of national and regional institutions to confront these challenges effectively.
17. WFP fully supports a common, people-centred, needs-driven approach that is guided by a strong commitment to the humanitarian principles, in accordance with the relevant resolutions of the United Nations, in particular, General Assembly Resolution 46/182. WFP is committed to greater transparency, participation of and accountability to affected populations and

17 FAO, IFAD and WFP. 2015. *The State of Food Insecurity in the World*, page 38. Rome.

18 <http://www.fao.org/cfs/cfs-home/activities/cfs-fipc/en/>

19 WFP remains aligned with the United Nations General Assembly Resolution 46/182, adopted in 1991, and its guiding principles referring to the interconnectedness of emergency and development.

- acting in concert with other actors, on the basis of its core strengths, to achieve collective results. That includes, amongst others: further supporting local and national responders; expanding the use of well coordinated cash-based programming, where appropriate; reducing management costs; improving joint and impartial needs assessments; facilitating funding allocations; simplifying and harmonizing reporting requirements; and, most importantly, enhancing coordination between humanitarian and development actors. WFP will report on the achievement of this work through its Corporate Results Framework.
18. Where food is available but inaccessible to the targeted hungry poor, WFP is already driving a scale up of cash-based transfers through its presence in over 50 countries – reaching close to 10 million people with nearly USD 1 billion in transfer value. WFP cash-based transfers offer an opportunity not only to address food security and nutrition issues but also to increase inclusion of the target population in the local financial and market system. The organization has been recognized as an important partner by governments and other actors in leading the scale up of cash-based transfers. WFP is fully committed to assuming this leadership role, and providing cash-based transfers for a range of basic needs in contexts where it is appropriate in conjunction with national social protection schemes. WFP will expand its support in the management of cash transfers, common tools and approaches to digital beneficiary management, and measurement with an increasing number of partners. Utilization of cash transfers will follow the basic principles of needs assessment and response analysis to identify beneficiary needs. The diversification of benefit transfer modalities requires a systematic analysis of markets and the capacities of service providers. The selection of transfer modalities

is based on ex-ante cost efficiency and cost effectiveness analysis. In its partnerships, WFP will pay special attention to strengthening the performance capacity of local crisis responders.

19. Other major conferences and agreements, and their relevance to ending hunger include:
- *World Conference on Disaster Risk Reduction (March 2015)*: More than 80 percent of the world's food-insecure people live in countries that are prone to natural hazards and characterized by land and ecosystem degradation.²⁰ Disasters affect all dimensions of food security: without protection from disaster risks, the most vulnerable people cannot begin to build their resilience. The Sendai Framework for Disaster Risk Reduction 2015–2030 contributes to the 2030 Agenda and hunger reduction, especially by calling for investment in disaster risk reduction for resilience – including through social protection systems – and enhanced disaster preparedness for effective response and “building back better”.
 - *International Conference on Financing for Development (July 2015)*: The Addis Ababa Action Agenda is integrated into the 2030 Agenda through SDG 17. Despite important progress reflected in the Addis Ababa Action Agenda, important issues remain unresolved. For example, the tools and resources currently available to humanitarian and development actors are not adequate for meeting the long-term needs of populations which are vulnerable to crises. There is need for the international community to invest more in recovery from disasters and conflicts, and in the financing of risk reduction. Funding for social protection and humanitarian response, especially in fragile and conflict or post-conflict settings, is often inadequate, reducing the opportunities for addressing the drivers of vulnerability and risk.²¹

20 Index for Risk Management. 2014. Natural Hazard Composite Indicator; EM-DAT. 2014. International Disaster Database (online); International Food Policy Research Institute, Weltunterhilfe and Concern Worldwide. 2014 Global Hunger Index data; World Bank. 2014. Population figures (online); Global assessment of soil degradation (GLASOD) assessment of human induced soil degradation, 1990; Bai, Z.G., Dent, D.L., Olsson, L., and Schaepman, M.E. 2008. Proxy global assessment of land degradation. *Soil Use and Management*, 24(3): 223–234 (September).

21 WFP, OCHA, IFRC, UNHCR, UN-HABITAT, UNICEF, UNDP, WHO and IOM. 2015. Financing for Development: Addressing the Humanitarian-Development Divide.

- *United Nations Framework Convention on Climate Change Paris Agreement (December 2015):* Climate change has a disproportionately negative impact on food insecure people,²² and could increase the risk of hunger and malnutrition by up to 20 percent by 2050.²³ Climate change will deepen vulnerability to disasters,²⁴ especially in resource-scarce environments dominated by high prevalence of food insecurity and malnutrition. Floods and droughts are more frequent and intense. The vulnerability of people and food production systems to climate change will require greater efforts and capacity strengthening in early warning systems, emergency preparedness, comprehensive risk assessment and management, climate risk insurance, and resilience building of communities, livelihoods and ecosystems. Safety nets and social protection systems are among the best options for empowering the most vulnerable people so that they can start adapting to climate change and building resilience. In this regard, it will be crucial for WFP to integrate support to the national COP21 action plans with WFP's Country Strategic Planning approach.
- *The United Nations Summit for Refugees and Migrants (September 2016):* Large movements of people will continue or possibly increase as a result of violent conflict, poverty, inequality, climate change, disasters and environmental degradation. Life-saving assistance has been provided, but the ability to plan for potential longer-term displacement or to support host communities sufficiently has been lacking. Individual countries cannot solve these issues on their own. International cooperation and action to address large movements of refugees and migrants must be strengthened. In September 2016, the United Nations General Assembly hosted a high-level summit to address this issue by strengthening governance of international migration and creating a more responsible, predictable system for responding to large movements of refugees and migrants.
- *Third United Nations Conference on Housing and Sustainable Urban Development (HABITAT III) (October 2016):* Hunger and malnutrition among the urban poor are recognized as a challenge to achievement of the 2030 Agenda: rapid urbanization is steadily increasing the number of slum dwellers; extremely poor urban households spend a large part of their income on food, making them especially vulnerable to sudden price shocks or bottlenecks in supply; and conflicts are displacing growing numbers of people into urban areas. Improving access to basic services including safety nets and nutrition services will be critical to reducing urban hunger. The New Urban Agenda²⁵ unanimously adopted by Member States is a global agreement dedicated to addressing the challenge of unprecedented and rapid urbanization within the framework of the 2030 Agenda.
- 20. The 2030 Agenda and the Strategic Plan (2017–2021) are also aligned with and supportive of other resolutions by the United Nations General Assembly, including the annual resolution on agriculture development, food security and nutrition to which WFP contributes with FAO and the International Fund for Agricultural Development (IFAD). In 2015, the resolution²⁶ provided recommendations on how to carry forward the unfinished work on eradicating hunger and malnutrition, which is central to the transformative sustainable development agenda. In particular, the resolution recognizes the importance of supporting complementary frameworks for the fight against hunger and malnutrition, including the African Union Agenda 2063, the recommendations of the CFS, the Zero Hunger Challenge, the Global Nutrition for Growth Compact, the Second International Conference on Nutrition (ICN2) and the United Nations Decade of Action on Nutrition.

²² World Bank. 2015. Shock Waves: Managing the Impacts of Climate Change on Poverty. Washington, DC.

²³ Intergovernmental Panel on Climate Change (IPCC). 2014. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Geneva.

²⁴ IPCC (2013) 5th Assessment Report. <http://www.ipcc.ch/>

²⁵ <https://www2.habitat3.org/the-new-urban-agenda>

²⁶ A/RES/70/223.



LESSONS FROM THE MID-TERM REVIEW OF THE WFP STRATEGIC PLAN (2014–2017)

21. To inform WFP's new Strategic Plan, a mid-term review of the Strategic Plan (2014–2017) was undertaken in 2015. Its main findings and recommendations were as follows:
- WFP's mission and mandate overlap in global policy agendas and corporate objectives. The new Strategic Plan should provide a tight conceptual framework and focus WFP's work, using the transition to the SDGs as an opportunity to do so.
 - The move to food assistance has shown positive results and should be consolidated, using the Country Strategic Plans (CSPs) to articulate WFP's comparative advantage at the country level more clearly.
 - The Financial Framework Review should provide a funding model that is better adapted to the agreed short- and long-term missions of WFP, thus strengthening the CSPs by establishing stronger linkages among financial, short-term and long term operational goals.
 - WFP's Strategic Plan should better reflect the critical services that WFP provides to the broader humanitarian community as the lead agency of the logistics and emergency telecommunications clusters, and the manager of the United Nations Humanitarian Air Service (UNHAS) and the United Nations Humanitarian Response Depot (UNHRD).
 - In light of the unprecedented number of emergencies, WFP's core excellence in emergency response and preparedness should be maintained, and strengthened where required.
 - WFP should continue to reflect on the implications for its structure and function of business model changes such as CBTs and local procurement.
 - WFP should continue to build an evidence base – including by improving results measurement – to facilitate more robust and conclusive reporting on organizational performance.

EVALUATION FINDINGS

22. The Strategic Plan (2017–2021) builds on evaluations undertaken by WFP’s Office of Evaluation in 2014 and 2015. The most important findings are reflected in the Annual Evaluation Reports of 2014 and 2015, and the Synthesis Report of 2014–2015 Operation Evaluations.²⁷
23. Major evaluation findings include the following:
- WFP’s continued shift from food aid to food assistance is highly relevant for sustainable hunger solutions, and positions WFP well for the transformations called for by the 2030 Agenda.
 - Evaluations confirm WFP’s strengths in emergency response, especially in large-scale sudden-onset disasters. However, managing multiple Level 3 emergencies has diverted attention from other protracted, chronic and lower-level emergencies.
 - WFP can make relevant contributions in the dynamic contexts of middle-income countries, where differences in development often result in vulnerability. To do this, however, WFP needs to enhance its focus on helping countries to strengthen their own national policies and systems, working effectively as an independent and impartial partner, and enhancing capacity-building efforts in its areas of expertise to assist countries in eliminating extreme poverty and hunger.
 - WFP’s commitment to and resourcing of its leadership role in the coordination of key humanitarian clusters was found to be variable.
 - Evaluations reveal a mixed picture regarding collaboration among United Nations agencies and with civil society partners. Leadership and prioritization will enable WFP to realize the full benefits of this wide array of partnerships. Evaluations also highlight a need for greater consistency across WFP on alignment with national systems.
 - WFP’s current monitoring systems and capacity are still inadequate to measure and analyse outcome-

level results. Challenges in determining WFP’s efficiency, effectiveness and comparative advantage, coupled with unclear result chains in project designs, limit WFP’s ability to manage for results based on analysis of what works and what does not.

EXTERNAL REVIEWS AND ASSESSMENTS

24. In addition to internal reviews and evaluations, WFP’s performance was assessed externally, including by the Multilateral Organization Performance Assessment Network in 2013. These evaluations and assessments were largely positive, noting, “WFP is well positioned to deliver assistance in emergencies and has a strong comparative advantage in humanitarian settings due to many noted strengths: WFP’s strong investment and focus on emergency preparedness and response across the organization, the reliability of needs assessments and their use to inform programming, robust security measures to protect staff, effective procurement practices, strong risk management strategies, timely response to events and disasters, harmonised procedures with programming partners, and active contribution to inter-agency plans and appeals.”²⁸ Reports also cite WFP’s ability to operate in challenging and often volatile environments, such as in conflict or war-torn regions and countries experiencing recurrent climatic shocks, where the delivery of food and non-food items is not simple and where needs may fluctuate significantly and rapidly.²⁹ WFP also received consistently high ratings in the area of financial accountability. For example, the International Aid Transparency Initiative (IATI), which produces an influential ranking of 381 international organizations involved in aid and development work, ranked WFP number one for financial transparency.³⁰
25. WFP’s new conceptual results framework presented in Section III builds on the internal findings of the mid-term review, the evaluability assessment of the Strategic Plan (2014–2017) and evaluations from 2014 and 2015. It also takes into account external assessments and reviews, and the recommendations of the QCPR.

27 WFP/EB.2/2015/6-E*.

28 Multilateral Organization Performance Assessment Network. 2013. WFP 2013 Report, Vol. 1, p. 12.

29 DFID. 2016. Multilateral Aid Review 2015. London.

30 <http://dashboard.iatistandard.org/transparencyindicator.html> (to see the IATI ranking, click twice on the word “Score”).



III. Positioning WFP In Support of the 2030 Agenda



WFP STRATEGIC VISION AND GOALS

26. The Strategic Plan (2017–2021) builds on WFP’s well-recognized identity as the world’s largest humanitarian organization. With this identity comes a responsibility for fulfilling commitments and expectations in emergency response and recovery in contexts of crisis and disruption, aiming to save lives through first-rate food assistance interventions designed and implemented in partnership with national governments, international agencies and other actors. The Strategic Plan (2017–2021) affirms this critical dimension of WFP’s work, ensuring that it is maintained and strengthened. By aligning WFP’s work with the 2030 Agenda, the Strategic Plan (2017–2021) also provides a coherent and transparent framework for WFP to make broader contributions towards the SDGs in several contexts, using the skills, capacities and competencies that WFP has built up through humanitarian action and development initiatives. These capacities, and competencies – which spring from WFP’s mandate – are unique, significant, and global in reach, opening scope for a new generation of systemic interventions and partnerships motivated by the transformative

spirit of the 2030 Agenda. WFP’s existing portfolio of innovative policies and effective operations implemented in a range of contexts represent a potent contribution to a world seeking not only to end hunger and develop sustainably, but also to do so in ways that leave no one behind, strengthening capacities and building resilience along the way. The Strategic Plan (2017–2021) articulates a framework for realizing this opportunity.

27. As articulated in the WFP Corporate Partnership Strategy (2014–2017),³¹ WFP aligns and integrates its food assistance capacities and programmes with interventions and investments of governments, other United Nations agencies and actors from the private sector and civil society, which can together generate the deep systemic changes required for sustainable development. WFP will work with these partners to combine and leverage complementary strengths and resources. The objective will be transparent, equitable and mutually beneficial arrangements with mechanisms for sharing risks, responsibilities and accountability. By aligning with existing approaches, these partnerships

will support the needs of food-insecure people cost-effectively. Commitment to partnership and collective action has long been central to WFP's operations and is at the heart of the 2030 Agenda's global call to action. The Strategic Plan (2017–2021) affirms and deepens this commitment. In addition to these strategic and operational partnerships, innovation, communication and advocacy, and development of staff awareness and capacity will be crucial for delivering on the Strategic Plan.

28. WFP fully embraces the vision set in the 2030 Agenda for a world free from hunger in a context of equitable and environmentally responsible sustainable development. Reflecting its own history and mandate, and recognizing that all 17 SDGs are interconnected, WFP prioritizes two SDGs – SDG 2 on achieving zero hunger and

SDG 17 on partnering to support implementation of the SDGs – while contributing to other SDGs depending on country contexts and national priorities. This focus reflects WFP's mandate as set out in United Nations General Assembly Resolution 1714 of 1961³² and subsequent mission statements, and its strengths, capacities and potential as demonstrated in its programme of work and the demand for its technical and operational services, common services and capacities. In its operations, WFP will keep a strong focus on saving lives and livelihoods in emergencies, leveraging its many recognized strengths in humanitarian and crisis settings. The ultimate goal of the Strategic Plan (2017–2021) is to support countries to end hunger. Figure 1 illustrates the results framework for the Strategic Plan (2017–2021).



Figure 1: WFP Strategic Plan (2017–2021) results framework

32 A/RES/1714(XVI). In particular, paragraph 10 of the resolution:

"In the administration of the programme attention should be paid to:

(a) establishing orderly and adequate procedures on a world basis for meeting emergency food needs and emergencies inherent in chronic malnutrition (this could include the establishment of food reserves);
 (b) assisting in pre-school and school feeding; and
 (c) implementing a pilot project, with the multilateral use of food as an aid to economic and social development, particularly when related to labour-intensive projects and rural welfare."

29. WFP's Strategic Plan (2017–2021) will be implemented in accordance with its policies, as compiled in "Compendium of WFP Policies Relating to the Strategic Plan".³³ Among the relevant policies are the 2004 "Humanitarian Principles",³⁴ and the 2013 policy "WFP's Role in Peacebuilding in Transition Settings".³⁵ Both policies reiterate that in responding to humanitarian crises, WFP's actions will at all times be guided by the humanitarian principles of humanity, impartiality, neutrality and independence, and that WFP will rely on its partners and all other actors to respect the humanitarian nature of its work.
30. Other relevant policies for the Strategic Plan (2017–2021) include the "Policy on Capacity Development"³⁶ the 2012 "Humanitarian Protection Policy",³⁷ and "Gender Policy (2015–2020)",³⁸ which present WFP's strategic vision to enable it to integrate humanitarian protection concerns and gender equality and women's empowerment into all of its work and activities. Country office implementation of the Strategic Plan (2017–2021) will be aided by WFP's policy "Building Resilience for Food Security and Nutrition",³⁹ which guides a resilience building approach to programming to help mitigate the damaging effects of shocks and stressors before, during and after crises, thereby minimizing human suffering and economic loss. Other relevant policies include the 2015 "South-South and Triangular cooperation Policy"⁴⁰ and the 2013 "Revised School Feeding Policy".⁴¹
31. The compendium is updated every year and submitted to the Board for information. It highlights policies that have been replaced by new ones; potential gaps for policies; and policies that need to be updated in the context of a new Strategic Plan – for example, the Nutrition

Policy,⁴² the Corporate Partnership Strategy (2014–2017)⁴³ and WFP's People Strategy,⁴⁴ which is a "People Management Framework for Achieving WFP's Strategic Plan". Corporate policies on environmental impact, and climate change-related food assistance measures will also be presented to the Board for approval during the course of this Strategic Plan. WFP's food assistance interventions will be based on comprehensive food security and vulnerability analysis tools and guidelines that identify food-insecure and vulnerable households, identify the root causes of hunger, analyse the risks and emerging vulnerabilities among populations in crisis prone countries, make recommendations on the best response and transfer modality options to target the neediest populations, and to inform preparedness for reduced hunger.

PARTNERSHIP WITH THE ROME-BASED AGENCIES AND WITHIN THE UNITED NATIONS DEVELOPMENT SYSTEM

32. Enhanced synergies among the Rome-based agencies (RBA) are paramount to achieving SDG 2. RBA collaboration is particularly relevant when adapted to country context to maximize each agency's complementary capacities and strengths. Over recent years, significant efforts have been made to enhance RBA collaboration. This progress must be strengthened for effective SDG 2 results. As noted in the RBA paper on *Collaboration among the United Nations Rome-based Agencies: Delivering on the 2030 Agenda*,⁴⁵ WFP is committed to working with FAO and IFAD by capturing all available synergies and complementarities and avoiding overlaps to contribute to collective results across humanitarian and development contexts, and to enhance RBA advocacy on food security and nutrition at the global level and within the broader United Nations system.

33 The updated version will be submitted to the Board for information at the First Regular Session of the Board in 2017.

34 WFP/EB.1/2004/4-C.

35 WFP/EB.2/2013/4-A/Rev.1.

36 WFP/EB.2/2009/4-B.

37 WFP/EB.1/2012/5-B/Rev.1.

38 WFP/EB.A/2015/5-A.

39 WFP/EB.A/2015/5-C.

40 WFP/EB.A/2015/5-D.

41 WFP/EB.2/2013/4-C.

42 WFP/EB.1/2012/5-A.

43 WFP/EB.A/2014/5-B.

44 WFP/EB.2/2014/4-B.

45 WFP/EB.2/2016/4-D.

33. Partnerships reflect the spirit and action required for the 2030 Sustainable Development Agenda and the United Nations development system (UNDS). The Strategic Plan (2017–2021) allows WFP to evolve alongside other entities of the UNDS, including other humanitarian agencies such as the Office of the United Nations High Commissioner for Refugees (UNHCR), the United Nations Children’s Fund (UNICEF) and the Office for the Coordination of Humanitarian Affairs (OCHA), as requested by the Secretary-General in his report⁴⁶ on the QCPR’s operational activities for development of the UNDS. The 2030 Agenda requires the UNDS to pursue more integrated approaches and create cross-sectoral synergies to deliver interlinked results at all levels, supported by an enabling funding and governance architecture. The UNDS recognizes that its primary focus should be on facilitating the achievement of interlinked and transformative results at the country level and promoting national ownership. To that end, UNDS has renewed its commitment to delivering together across mandates, sectors and institutional boundaries, working within the framework of the Charter of the United Nations and using more integrated and interconnected approaches. Planning and implementation of WFP’s country-level activities with UNDS partners, especially FAO and IFAD, will continue to be a priority for achieving zero hunger and avoiding programme overlap and duplication.

STRATEGIC GOAL 1

Support Countries to Achieve Zero Hunger

34. Strategic Goal 1 is in line with SDG 2 – End hunger, achieve food security and improved nutrition and promote sustainable agriculture. SDG 2 reflects the fact that hunger has multiple interrelated components. Achieving zero hunger is a multi-sectoral challenge that will require multi stakeholder partnerships to make progress on the different components of SDG 2 in a coordinated and concerted manner. Expressed in everyday language rather than technical definitions, SDG 2 encompasses the four

dimensions of food security as defined by the World Food Summit in 1996:⁴⁷

- *End hunger* – **access** to safe, nutritious and sufficient food at all times (Target 2.1).
 - *Achieve improved nutrition* – consumption of nutritionally adequate diets with complementary actions to support utilization (Target 2.2).
 - *Achieve food security* – **availability** of safe, nutritious, and sufficient food (Target 2.3) and **stability** of food systems (Target 2.4).
 - *Promote sustainable agriculture* – **stability** of food systems (Target 2.4) and inputs (Target 2.5).
35. The four components of SDG 2 provide a definition of zero hunger and benchmarks against which to measure progress towards its achievement. WFP’s primary focus will be on the first three elements of SDG 2 and the first four targets, while other actors have mandates and capacities for promoting sustainable agriculture and enhancing seed, plant and animal genetic diversity.
36. Although SDG 2 lies at the core of WFP’s mandate, no single agency or entity owns any of the SDGs, and partnerships will be required to achieve progress. Partnerships beyond and across sectors and areas of expertise are essential – within countries and among their SDG partners such as UNICEF, FAO and IFAD. WFP will also build strategic alliances with partners who will support advocacy, policy and a deeper understanding of SDG 2.
37. Progress towards SDG 2 contributes to many other SDGs. It is also dependent on progress in other SDGs. WFP will collaborate with partners, including FAO and IFAD, to leverage each one’s capacities and strengths to achieve the SDGs. Relevant in this regard are SDGs that affect access to food, nutrition and food availability. Goals relevant to access to food include SDG 1 on ending poverty, SDG 8 on

46 A/71/292/Rev.1

47 World Food Summit. 1996. Rome Declaration on World Food Security. Rome.

2 ZERO
HUNGER

WORLD BANK



promoting sustained and inclusive economic growth and SDG 10 on reducing inequality. SDGs relevant to nutrition include SDG 6 on ensuring clean water and sanitation, SDG 3 on ensuring healthy lives and well-being and SDG 4 on ensuring quality education. SDGs relevant to food availability include SDG 12 on ensuring responsible consumption and production, SDG 13 on taking action to combat climate change, SDG 14 on conserving and using marine resources sustainably and SDG 15 on conserving and using land responsibly and halting biodiversity loss. Two additional SDGs have broader, cross-cutting relevance for WFP. Specifically, SDG 5 on achieving gender equality and empowering all women and girls and SDG 16 on promoting peace, justice and strong institutions. Contributions to these SDGs will not emerge directly from WFP's programme portfolio, nor will WFP hold itself accountable for outcomes implied by these SDGs. But recognizing that SDG2 motivated initiatives that significantly and sustainably reduce hunger in a range of contexts, and given the strong imperative for enhanced partnership under the 2030 Agenda, WFP will seize opportunities for strategic and operational partnerships that enhance prospects for progress under these other SDGs.

Access

- *SDG 1 on ending poverty:* Extreme poverty has been cut by more than half since 1990. This is a remarkable achievement, but one in five people in developing regions still lives on less than USD 1.25 a day and many risk slipping back into poverty. Poverty is more than a lack of income and resources to ensure a sustainable livelihood. It is manifested in hunger and malnutrition, limited access to education and other basic services, social discrimination and exclusion, and a lack of participation in decision-making. Indeed, a lack of income is the most significant challenge for many food-insecure people. Markets and income are essential in ensuring that all people everywhere have access to nutritious food for healthy lives. When people lack income

because of unemployment, poor health, gender inequalities or disability, appropriate means of social protection are necessary to ensure that they and their families have access to food. Economic growth must be inclusive and equitable, providing sustainable jobs and advancing equality. Conditional safety nets such as school meals programmes constitute income transfers while promoting other benefits, such as nutrition and education for children.

- Other goals relevant to access to food include SDG 8 on promoting sustained and inclusive economic growth and SDG 10 on reducing inequality.

Nutrition

- *SDG 6 on ensuring clean water and sanitation* and SDG 3 on ensuring healthy lives and well-being are essential to improved nutrition. Access to clean water and sanitation prevents the spread of diarrhoea and other diseases that prevent people's bodies from utilizing food effectively, leading to malnutrition. For good nutrition to be effective, HIV treatment with anti-retroviral therapy, and malaria and tuberculosis prevention and treatment may be required.
- *SDG 4 on ensuring quality education* enhances people's ability to adapt their nutrition, hygiene, sanitation and health practices, and to demand appropriate services. As part of the essential package for schoolchildren's health and nutrition, school meals programmes help ensure that children have access to education and support achievement of education improvement targets, despite crises or chronic poverty, and support improved nutrition through the provision of healthy, fresh and fortified foods. Improving access to quality education and together with nutritious foods through schools contributes to breaking the intergenerational cycle of hunger.

Food availability and markets

- *SDG 12 on ensuring responsible consumption and production* recognizes that food waste and loss must be reduced along the food production

- chain. Consumer consumption patterns also influence achievement on nutrition outcomes.
- ***SDG 13 on taking action to combat climate change:*** Climate risks have disproportionate effects on the poorest and most vulnerable people who are more exposed to climate related disasters that increase hunger by destroying land, livestock, crops and food supplies and restricting people's access to markets. Climate change also increases health threats, posing further risks to nutrition status. Without rapid, inclusive and climate-smart development including resilience programmes, where appropriate delivered in partnership with WFP, many more people will be affected by poverty and hunger by 2030.⁴⁸
 - ***SDG 14 on conserving and using marine resources sustainably*** for food security and nutrition.
 - ***SDG 15 on conserving and using land responsibly and halting biodiversity loss:*** hunger will not be ended without a halt to land degradation, deforestation and desertification. There is need for sustainable, resilient farming practices that increase smallholder farmers' productivity, create employment and provide opportunity. WFP's efforts will be largely negated without action in these areas but WFP can also contribute by assisting those people most directly affected.
- Broader linkages***
- ***SDG 5 on achieving gender equality and empowering all women and girls:*** Gender equality and women's empowerment affect all aspects of development and human well-being. Women bear the primary responsibility for feeding their families. Ending all forms of discrimination, violence and harmful practices against women and girls; ensuring women's full and effective participation at all levels of decision-making; and recognizing, valuing and redistributing unpaid care and domestic work are fundamental to achieving the 2030 Agenda. Gender equality is essential for all women, men, girls and boys to achieve zero hunger. WFP will ensure that gender is integrated into all of its work.
 - ***SDG 16 on promoting peace, justice and strong institutions:*** conflict forces millions of people to flee their homes leaving them without the means to feed themselves and living in poverty. People who are exposed to violence, exploitation and abuse are the most vulnerable and food-insecure. Hunger causes and exacerbates risks to people's safety and dignity, while these risks in turn affect people's access to food. Hunger can be a contributing factor to conflict.
- STRATEGIC GOAL 2**
Partner to Support Implementation of the SDGs
38. Strategic Goal 2 aligns with SDG 17 – *Strengthen the means of implementation and revitalize the global partnership for sustainable development.* SDG 17 is focused on how the SDGs can be achieved by using multi-stakeholder partnerships to enable collective and coherent action that provides the necessary financial, knowledge and institutional support for implementation. SDG 17 urges all stakeholders to continue to learn, innovate and transform, particularly as they work together to achieve the 2030 Agenda. Its 19 targets reflect the 7 action areas of the Addis Ababa Action Agenda, especially those of particular relevance to ending hunger, namely: sustained resource investments, particularly in social protection and disaster risk reduction; private-sector partnerships; international development cooperation, especially South–South cooperation among developing countries; addressing systemic issues; and science, technology, innovation and capacity development.
39. Given the fundamental importance of working across sectors and involving all stakeholders in the 2030 Agenda, Strategic Goal 2 covers both how WFP implements actions towards SDG 2 and how it supports other stakeholders in contributing to efforts to achieve all the SDGs:

- *Means of implementation* – support partnership-based efforts to strengthen capacities and improve the integration and coherence of actions towards the SDGs, including by facilitating consultative platforms, providing common services, enabling South–South and triangular cooperation, engaging in local community based partnerships, supporting centres of excellence, and acting collectively with the United Nations Development Programme (UNDP), UNICEF, the World Bank, FAO, IFAD and others (Targets 17.9, 17.14 and 17.18; and SDG 2 means of implementation 2a and 2c).
 - *Revitalize global partnerships* – support stakeholders, including United Nations agencies, regional bodies, the private sector and local communities, in joining collective action towards the SDGs, including through South–South and triangular cooperation among developing countries and the provision of common services (Targets 17.3, 17.6, 17.16 and 17.17).
40. Achieving zero hunger requires WFP to act as part of a system by helping to shape the way in which partners interact and relate to each other. WFP's agility in responding to humanitarian



needs, its ability to innovate and learn and its willingness to act when called on by its partners are recognized as core strengths that support partners' responses to increasing and more complex humanitarian needs. The Addis Ababa Action Agenda points to the wide range of stakeholders, including the private sector, that are critical for the innovation and transformation that, together with humanitarian response, are necessary to achieve the 2030 Agenda.⁴⁹

41. Building on progress made through the Zero Hunger Challenge, WFP will develop platforms for outreach, engagement and advocacy. This will include providing a clear voice on how WFP is positioned globally and at the country level, and providing communications channels to support and mobilize partners, stakeholders and advocates to work together to achieve zero hunger.
42. The private sector is already taking action to advance the 2030 Agenda while creating opportunities for growth, cost reduction and improved management of risk. Innovative technologies and approaches to resilience are being developed, along with financial products, and platforms and services for the billion poorest people. WFP needs partnerships with the private sector to improve its work in such areas as the value and supply chain, fortification, specially formulated nutritious foods, financial services for the poor and food security. For example, WFP uses mobile technology for real-time food security assessments and monitoring (mVAM). Through private partnerships, WFP and stakeholders can have a positive influence on organizational practices, policies and behaviours for achievement of SDG 2.
43. Guided by its corporate partnership strategy,⁵⁰ WFP engages in five main types of relationship, with resource partners, knowledge partners, policy and governance partners, advocacy partners, and capability partners. WFP will

continue to build on its strong partnerships with member governments, the World Bank, FAO, IFAD, UNDP, UNICEF, UNHCR and other United Nations agencies, civil society and local communities. To contribute better to SDG 17, WFP will also support transformative partnerships, enabling the private sector to play more active roles in ensuring food security and nutrition, while maintaining due diligence and accountability in its selection of and engagement with partners.

WFP STRATEGIC OBJECTIVES AND WFP STRATEGIC RESULTS

44. In line with the two Strategic Goals, WFP has five Strategic Objectives, which relate to the elements of SDG 2 and SDG 17 addressed by WFP. The Strategic Objectives frame WFP's programmatic and operational focus, and provide links between the Strategic Goals and the eight Strategic Results that connect WFP to country and global efforts through relevant SDG 2 and SDG 17 targets.
45. Underpinning WFP's capacities and mandate as reflected by the Strategic Objectives, the Strategic Results focus WFP's responses on what countries need. Strategic Results are mapped to the SDG 2 and SDG 17 targets that are relevant to WFP's capacities and mandate in helping to end hunger and in supporting partnerships for sustainable development. Through this mapping, the Strategic Results align WFP's support to national and global efforts on the SDGs. WFP Strategic Results will be measured by the SDG indicators of the related SDG targets (see Annex I) as defined by the UN General Assembly; they will therefore be measured in each country by the national government.
46. Importantly, the Strategic Results highlight the areas where WFP can add value based on its capacities, mandate, and operational experience as reflected under the Strategic Objectives.

49 Outcome document of the Third International Conference on Financing for Development: Addis Ababa Action Agenda. Addis Ababa, 13–16 July 2015. A/CONF.227/L.1.

50 "WFP Corporate Partnership Strategy (2014–2017)" (WFP/EB.A/2014/5-B) defines partnership as: "Collaborative relationships between actors that achieve better outcomes for the people we serve by: combining and leveraging complementary resources of all kinds; working together in a transparent, equitable and mutually beneficial way; and sharing risks, responsibilities and accountability. To achieve objectives (both the collective partnership's objectives and individual partner goals) that could not be achieved as efficiently, effectively or innovatively alone, and where the value created is greater than the transaction costs involved."

These Strategic Results do not indicate that WFP must lead or has the main global lead role in the areas outlined. Strategic Results do not relate to mutually exclusive strengths, or to advantages over other partners. On the contrary, they reflect WFP's capacities and strengths in contributing with partners to national efforts, and WFP's different roles in helping to eliminate hunger and build capacity in different contexts.

47. WFP's integration of gender equality and women's empowerment into all of its work and activities is particularly important, with many targets specifically recognizing gender equality and women's empowerment both as objectives and as part of the solution. WFP will ensure that women and men equitably participate in the design, implementation, monitoring and evaluation of gender-transformative programmes and policies, and that its work promotes decision-making by women and girls. WFP will pay special attention to mitigate and prevent violence, including gender-based discrimination and harmful practices against women and girls. In addition to its commitment to gender equality

and women's empowerment, WFP will work to integrate humanitarian protection concerns and accountability to affected populations in all its activities. It will pay attention to the specific vulnerabilities of different groups, including women, men, girls, boys, elderly persons, persons with disabilities, or others.

48. The parameters and contexts, including partnerships, in which each WFP Strategic Objective and its related Strategic Results will guide WFP's assistance to countries are discussed in the following paragraphs. As not all Strategic Objectives and Strategic Results will apply to all countries, the situations in which WFP will not expect to make significant contributions are also articulated. WFP's activities will reflect the needs in a specific country or region, the added value that WFP can bring at a particular time and place, and the presence and capabilities of other actors. WFP will work in synergy with partners to implement programmes that strengthen the capacities of communities and countries to manage underlying risks, save lives and livelihoods, and end hunger. WFP will



select the appropriate tool or mix of tools based on a rigorous analysis of needs and context, beneficiary preferences, operational goals, efficiency, and evidence of potential impact.

STRATEGIC OBJECTIVE 1

End hunger by protecting access to food

Strategic Result 1: Everyone has access to food. By 2030, all people, especially the poor and vulnerable, have access to sufficient, nutritious and safe food all year (SDG Target 2.1).

49. WFP will support collective efforts to protect access for all people, especially the most vulnerable, to the sufficient, nutritious and safe food they need to survive and to live healthy and productive lives while strengthening national systems wherever possible. WFP will work on this Strategic Objective and Strategic Result in partnership with UNHCR, UNICEF, UNDP, OCHA, the World Bank, FAO, IFAD and other partners. In humanitarian operations, other major partners include the International Committee of the Red Cross (ICRC), the International Federation of Red Cross and Red Crescent Societies (IFRC) and international and national civil society partners.

- In situations of conflict, natural disasters, and other emergencies, WFP humanitarian relief operations save lives and livelihoods by ensuring access to safe, nutritious and sufficient food, often in difficult and dangerous circumstances. Responding as needed is a WFP core competence.
- In addition to implementing direct operations where needed, it will also be critical for WFP to support countries in strengthening their disaster risk reduction, prevention, preparedness and response capacities to ensure access to sufficient, nutritious and safe food for all people at all times.
- Recognizing that lack of access to safe, nutritious and sufficient food is a major problem for most of the world's hungry people, WFP will continue to support hunger-related safety nets, such as school meals programmes, and productive

safety nets that protect access while promoting nutrition, livelihoods and asset creation.

- Leveraging its vast global expertise in supporting different social protection schemes all over the world, WFP will work to strengthen countries' capacities to provide social protection measures that protect access to adequate, nutritious and safe food for all.
- Activities designed and implemented with partners towards Strategic Result 1 will include unconditional resource transfers to support access to food; asset creation and livelihood support; school meals; individual capacity strengthening; institutional capacity strengthening; and emergency preparedness.
- In contexts where viable, inclusive, safe and reliable commercial alternatives for enhancing access to food are available, WFP will assess the needs for these activities and will support actors who are better placed to contribute to ensuring access to nutritious foods for all, all year round, or where livelihoods of identified populations are stable and rewarding.

STRATEGIC OBJECTIVE 2

Improve nutrition

Strategic Result 2: No one suffers from malnutrition. By 2030 no one is malnourished, and by 2025 the internationally agreed targets on stunting and wasting in children are met (SDG Target 2.2).

50. WFP will support joint and coordinated collective efforts that are essential to end all forms of malnutrition, and will support governments to strengthen national capacities in multi-sectoral nutrition activities. It will also enhance partnerships with other public and private actors, and will continue to engage in nutrition governance and to invest in country level action through multi stakeholder platforms such as the United Nations Standing Committee on Nutrition, the CFS, the Scaling Up Nutrition movement, and the Renewed Efforts Against Child Hunger



and undernutrition (REACH) approach. WFP will work on this Strategic Objective and Strategic Result in partnership with UNICEF, the World Health Organization (WHO), the Joint United Nations Programme on HIV/AIDS (UNAIDS), UNHCR, the World Bank, FAO and IFAD, among other partners. In humanitarian operations, WFP will work through relevant coordinating mechanisms such as the Inter-Agency Standing Committee (IASC) nutrition cluster, including international and national civil society partners.

- Helping to eliminate malnutrition, particularly in contexts of high burden or high risk, is central to WFP's work. Malnutrition has a huge impact on human development, contributing to the persistence of poverty and inequality through the intergenerational cycle of hunger.
- WFP will support countries' capacities in nutrition-specific approaches that deliver quality nutrition services to treat and prevent malnutrition. WFP will emphasize a preventive approach to malnutrition, focusing on facilitating access to nutritious diets required by vulnerable groups, helping to provide the foundation for sustainable development.
- WFP will leverage all its assistance and activities to deliver improved nutrition outcomes by strengthening nutrition-sensitive approaches, and by working with partners using complementary approaches across sectors – such as strengthening social protection systems, strengthening capacity and supportive legislation for enhanced public and private demand for fortified food where necessary, building resilience, improving health and education, increasing smallholder productivity, reducing post-harvest losses, and ensuring sanitation and hygiene.
- Recognizing that nutritional status both determines and is determined by multi-sectoral and cross-cutting factors, WFP will design programmes with a clear understanding of how nutrition is affected by gender equality, lack of



women's empowerment and other drivers of malnutrition that cut across sectors.

- Activities designed and implemented with partners towards Strategic Result 2 will include nutrition treatment; malnutrition prevention; unconditional resource transfers to support access to food; school meals; individual capacity strengthening; and institutional capacity strengthening.
- WFP's contributions will focus on ensuring that diets which meet the nutrient needs of targeted vulnerable groups are available, accessible and consumed. Activities will focus on improving access to nutritious foods to complement the work of other actors focusing on food



production and of organizations with specialized mandates and capacities to address the non-food determinants of malnutrition. WFP will seek context-based opportunities to work with partners to adjust the targeting of programmes, provide complementary support to healthy diets, align with national nutrition strategies, and will “co-locate” its programmes with those of partners to address multisectoral drivers of malnutrition. WFP will implement these activities where vulnerable groups do not have diets that meet their nutrient needs.

STRATEGIC OBJECTIVE 3

Achieve food security

Strategic Result 3: Smallholders have improved food

security and nutrition through improved productivity and incomes. By 2030, smallholders’ have higher incomes and greater productivity than in 2015, supporting improved food security and nutrition (SDG Target 2.3)

and

Strategic Result 4: Food systems are sustainable. By 2030, food systems are sustainable and utilize resilient practices that help maintain ecosystems; strengthen capacities for adaptation to climate change, extreme weather and disasters; and progressively improve land and soil quality (SDG Target 2.4).

51. WFP has two reasons to engage. Smallholder farmers and their families account for a significant proportion of the most food-insecure and a large segment of WFP’s beneficiaries, whose direct needs are addressed under Strategic Objectives 1 and 2. Additionally, WFP can⁵¹ use its significant purchasing power and experience to increase smallholder farmers’ access to markets, both directly and by mainstreaming learning and best practices across the organization. Working with FAO, IFAD and others, WFP will continue these efforts seeking to raise awareness and catalyse policy reform and institutional innovation and capacity development to address hunger from the demand-side of food systems. Operating at the intersection of commercial food markets and the public interest represented by food assistance, WFP’s demand for food and food system services can be a direct and indirect force for enhanced performance of food systems, contributing to inclusive agricultural growth, sustainable social and economic transformation and broad-based food security. Given that in many countries the bulk of food available in local markets originates from smallholder farms, WFP’s procurement footprint in these markets can provide a basis for partnerships with governments and the private sector to catalyze demand-driven platforms that enable smallholders to have sustainable and profitable engagement with local markets beyond WFP. Under Strategic Objective 3, WFP’s

⁵¹ Based on the 2006 policy on food procurement in developing countries (WFP/EB.1/2006/5□C) and the 2008–2011 and 2014–2017 Strategic Plans.

- activities will be directly related to achieving food security and nutrition outcomes.
- Focusing on the most vulnerable people and communities, WFP will support partners to promote livelihoods and resilience-building linked to food security and nutrition, climate change adaptation, risk management, and strengthened sustainability and resilience of food systems. WFP will continue to collaborate with FAO and IFAD on joint strategies, implementation and advocacy, including in areas related to supporting countries' efforts in sustainable food production, where WFP relies on the core strengths of FAO, IFAD and others. WFP will also work on this Strategic Objective and these Strategic Results in partnership with UNDP, UNHCR, the World Bank, the United Nations Office for Disaster Risk Reduction, and the AU, amongst others to support national programmes and services. WFP will also contribute to related coordinating mechanisms such as the CFS and the Food Security Information Network. Other major partners include international and national civil society entities.
 - Food systems are changing rapidly and profoundly as a result of such forces as urbanization, changing consumer diets, and supply chain integration due to capital-intensive technology change and expanded use of digital devices and Internet access. Food system transformation is embedded in broader transformations of rural areas and wider economies, including urban areas.⁵² In both humanitarian and development contexts, WFP will work in synergy with partners to design and implement food assistance activities that address systemic problems rooted in these transforming food systems, aiming to expand the scope for hunger reduction in broader structural and rural transformation processes.
 - Situations of recurrent crisis in which food-insecure communities live in damaged or fragile environments and are exposed to high levels of shock are recognized as a major challenge to the achievement of zero hunger. WFP will use analytical tools to facilitate a cross-sectoral understanding of disaster risks and of opportunities for enhancing livelihoods, climate resilience and nutrition, in line with government's provisions. This analytical process will help partners engage in sustained efforts to build resilience for food security and nutrition. Similar tools will also help partners support communities in protracted conflict and displacement situations by guiding efforts to enhance their resilience for food security and nutrition.

⁵² IFAD Rural Development Report 2016: Fostering Inclusive Rural Development (forthcoming).

- Significant investments in capacity strengthening of national governments and other actors supporting smallholder agriculture and food systems are being made by a range of actors including FAO and IFAD. WFP will continue to play a role by making strategic demand side investments in the capacity-strengthening of relevant national and local civil society entities, farmers' organizations and other community-based organizations to help communities lead and sustain their own fight against hunger and achieve SDG 2.
- Activities designed and implemented with partners towards Strategic Result 3 will include unconditional resource transfers to support access to food; asset creation and livelihood support; individual capacity-strengthening; institutional capacity-strengthening; and smallholder agricultural market support. Activities towards Strategic Result 4 will include unconditional/conditional resource transfers to support access to food; climate adaptation and risk management; individual capacity-strengthening; institutional and market capacity strengthening; and asset creation and livelihood support.
- As WFP's contributions to this Strategic Objective and the two Strategic Results will arise from its demand-side orientation, WFP's activities will focus on enhancing and improving demand-side aspects of food systems and addressing demand-side constraints on smallholder productivity and income growth. Strategic and operational partnerships will be developed with agencies and actors with complementary capacities to boost productivity from the supply side, as captured, for instance, in SDG 2.5.

STRATEGIC OBJECTIVE 4

Support SDG implementation

Strategic Result 5: Developing countries have strengthened capacities to implement the SDGs. International support for capacity-strengthening, including through South-South and triangular cooperation, provides common services, improves implementation of national plans to achieve all the

SDGs, especially through greater technology transfer, innovation, improved data collection and quality, and knowledge sharing. (SDG Target 17.9).

and

Strategic Result 6: Policies to support sustainable development are coherent. Policies on ending hunger and promoting sustainable development are coherent and support collective efforts for sustainable development in all its dimensions (SDG Target 17.14).

52. WFP's experience and analyses indicate that physical, technical, organizational and institutional capacities for improved food security and nutrition in humanitarian and development contexts are often lacking at the national and sub-national levels. There are often significant gaps in skills and capabilities for policy and institutional reform, including convening and coordinating multiple stakeholders. In many contexts in which WFP operates, there is an urgent need for capacity development to enhance technical quality and organizational performance, as part of prioritized reform efforts that reflect the needs and aspirations of multiple stakeholders. In addition to providing specific capacity-strengthening support under the Strategic Objectives and Strategic Results identified above, WFP will facilitate responsible and accountable partnerships for strengthening country capacities, ensuring coherent policies and actions, encouraging multi stakeholder participation in implementation, and promoting innovation for achievement of all SDGs.
- WFP will provide and facilitate support to capacity-strengthening of governments for the implementation of zero hunger and related national SDG plans, including through support to South-South and triangular cooperation among developing countries, and the provision of common services. WFP will focus on sectors where it has a core competency recognized by national stakeholders and partners in the country context as identified in WFP's CSPs.

- WFP will work with FAO and others, as appropriate, to promote evidence-based food and nutrition security decisions by strengthening national and regional capacity to undertake credible, relevant and timely assessments and analysis, and to serve as global references for food and nutrition security standards, statistics and information. The vision will be achieved through the implementation of activities that fall under four complementary pillars: i) capacity development to support information systems on food and nutrition security of member countries; ii) standards, methods, and tools for information systems on food and nutrition security; iii) monitoring and in-country food security and nutrition assessments; and iv) statistics, information and analysis on food and nutrition security (global public goods). The implementation of the joint strategy⁵³ will emphasize national ownership and leadership.

Mechanisms for collaboration, improved communication and partnership building have also been identified. The guiding principles of the strategy highlight, among other things, the need to systematically place governments at the centre of planning and decision-making processes. High priority is placed on ensuring complementarity with the policies and practices of partners, including national governments, regional institutions, civil society and academia.

- WFP will actively participate in and contribute to country level and regional dialogues related to SDG2-relevant goals and/or targets, including key areas of policy and programmatic linkage between SDG2 and other goals, such as education, poverty alleviation, climate change, peace and justice, health or gender.



- Activities designed and implemented with partners towards Strategic Result 5 will include institutional capacity strengthening; common services and platforms; and analysis, monitoring and joint needs assessments. Activities towards Strategic Result 6 will include institutional capacity strengthening; and analysis, monitoring and joint needs assessments.
- WFP envisions playing a limited role in working towards this Strategic Objective and its two Strategic Results where technical, organizational and institutional capacities are well developed, partnerships are in place, and policy frameworks are conducive to effective design, implementation and coordination of food security and nutrition interventions in humanitarian and development contexts.

STRATEGIC OBJECTIVE 5

Partner for SDG results

Strategic Result 7: Developing countries have access to a range of financial resources for development investment. Additional financial resources from multiple sources are enabling developing countries to engage in sustained coherent action to achieve the SDGs (SDG Target 17.3).

and

Strategic Result 8: Sharing of knowledge, expertise and technology strengthen global partnership support to country efforts to achieve the SDGs. In humanitarian and other situations, and when called on by partners, WFP provides common services, mobilizes and shares knowledge, expertise, technology and financial resources, including through South-South and triangular cooperation (SDG Target 17.16).

53. Commitments by global leaders in the 2030 Agenda, the Addis Ababa Action Agenda and the Sendai Framework for Disaster Risk Reduction, as well as the World Humanitarian Summit's deliberations, stress the critical importance of enhanced roles for governments and other national and local actors in financing development initiatives and humanitarian

preparedness, response, and recovery. Countries face complex challenges in generating the required quantity and quality of investment. WFP's long experience in developing effective partnerships with public and private actors for financing humanitarian and development activities – including technological and institutional innovation – can add value to country efforts to build the required coalitions for investment and action. WFP delivers food assistance to save lives in emergencies and eradicate hunger in all its forms, leveraging its supply chain capabilities and purchasing power to strengthen national markets and capacities. The organization often also acts as the provider of choice for supply chain services for governments and humanitarian and development partners, using its supply chain expertise in modality planning, demand aggregation, network optimization and innovative contracting to deliver more with less while retaining reliability, cost efficiency, agility and quality. WFP will continue to provide supply chain and other common services and platforms, and improve access to resources, expertise, knowledge and networks to support stakeholders' efforts to achieve all SDGs.

- WFP's ability to quickly scale up and respond to fast-evolving complex crises through large logistics, supply chain and telecommunications operations are a key strength of the organization. The common services WFP provides through such operations are of crucial importance in supporting country, regional and global efforts to respond to humanitarian crises. WFP will continue to provide high-quality and timely services to governments and humanitarian partners in emergency preparedness as leader of the IASC logistics and emergency telecommunications clusters; as manager of UNHRD and UNHAS; and through provision of sustainable engineering solutions for humanitarian needs.
- WFP will develop and refine common delivery platforms for CBTs, domestic procurement capacities and similar initiatives that support

implementation of the SDGs by governments, United Nations partners and other stakeholders. Common delivery platforms leverage WFP's existing delivery platforms for providing CBTs, and improve the cost efficiency of multiple CBT initiatives targeting the same beneficiaries. It simplifies the processes, reduces the potential for duplication, fraud and abuses, and improves the overall verification and monitoring mechanisms.

- WFP will support partnership-based actions for continuous innovation and learning to address the multiple challenges to sustainable development, including through South-South and Triangular cooperation leveraging its presence in over 80 countries. Collaboration provides access to resources, expertise, knowledge and networks that are essential to achieve the SDGs. In order to facilitate implementation of the 2030 Agenda, WFP will support countries in mobilizing increased, sustained and flexible resources, including through innovative public-private partnerships.
- WFP's long experience as a large-scale buyer in markets for food products and food system services provides it with extensive knowledge about conditions, opportunities and challenges in markets for a range of financial products and services, including credit, insurance and foreign exchange. The increasing role of cash-based transfers in WFP's portfolio is deepening this set of skills and capabilities. A growing number of countries and regional bodies are seeking WFP's support to the development of innovative financial instruments for enhancing resilience, deepening financial inclusion, and promoting food security and improved nutrition at the household, community, national, and regional levels. WFP will continue to respond to these demands, focusing on enhancing capacity for effective risk management and preparedness at multiple levels of aggregation. Examples of such efforts include WFP's support to the African Union's Africa Risk Capacity (ARC) mutual insurance initiative that aims to improve current responses to climate-related food security emergencies by providing

member countries with rapid funds in the event of natural disasters, and the R4 Rural Resilience Initiative (R4) comprehensive risk management approach that helps communities be more resilient to climate variability and shocks through a combination of four risk management strategies: improved resource management through asset creation, insurance, livelihoods diversification and microcredit, and savings.

- Activities designed and implemented with partners towards Strategic Result 7 will include climate adaptation and risk management; institutional capacity strengthening; and analysis, monitoring and joint needs assessments. Activities towards Strategic Result 8 will include institutional capacity strengthening; common services and platforms; and analysis and monitoring and assessment.
- WFP will not implement these activities in contexts where viable, inclusive, safe and reliable commercial alternatives are available or where other actors are better placed to contribute to ensuring access to a range of financial resources for development investment, particularly in developing countries, sharing of knowledge, expertise and technology, and strengthening of global partnership support to these countries in achieving the SDGs.

WFP STRATEGIC OUTCOMES

54. It is expected that nationally defined SDG targets will be the global SDG targets reworded for the local context. Guided by the WFP Strategic Results, and taking into account local context and priorities, WFP will contribute to national SDG targets through a set of WFP Strategic Outcomes related to each Strategic Result. WFP Strategic Outcomes reflect the results to which WFP's assistance contributes and identify the target populations, institutions and systems to be supported. The Strategic Outcomes are reworded Strategic Results that provide greater focus and relate to local contexts. The phrasing of WFP Strategic Outcomes will reflect the national SDG targets that WFP will work towards with



national partners and United Nations agencies. Achievement of these targets will be measured by the national indicators related to SDG 2 and SDG 17 targets. The Strategic Outcomes will be formulated at the country level and are contextualized by local needs and priorities, using language linked to the Strategic Outcomes of the United Nations country team.

55. WFP Strategic Outcomes describe the short to medium-term effects that contribute to the achievement of national SDG targets and WFP Strategic Results. WFP Strategic Outcomes describe the people or entities that will benefit, the geographic scope, the result that is sought, and the foreseen timeframe of the programme intervention. Formulated at the country level, WFP Strategic Outcomes are aligned with standardized strategic outcome categories included in the Corporate Results Framework.
56. Because strategic outcomes reflect the specific situation and dynamics of a country, they need to be appropriate to the national context, resonate with national and subnational actors and show clear alignment with national priorities and goals. Individual strategic outcomes vary from country to country in pitch and formulation, but they all show a clear link to the achievement of a national SDG target, and hence also a WFP Strategic Result. Importantly, Strategic Outcomes cannot be achieved by WFP on its

own. Achievement of Strategic Outcomes requires strengthened coordinated and concerted efforts, led by government stakeholders and encompassing all partners, including the RBAs and other entities of the UNDS.

57. WFP Strategic Outcomes are linked to national SDG targets in a robust results framework in line with QCPR recommendations⁵⁴ and ECOSOC decisions. This results framework is based on the results chain in Figure 1, showing how the impact level of Strategic Goals and related Strategic Objectives will be achieved through the Strategic Results, which are elaborated at the country level through a set of WFP Strategic Outcomes generated from the organization's outputs. Outputs relate to what WFP's activities are, what and how much they deliver, and who benefits. They are the direct result of WFP's activities and describe the short-term effects – typically achieved in one to three years – that lead to the higher-level Strategic Outcomes. Monitoring outputs helps WFP monitor and manage its performance. Organizational outputs are standardized and included in the CRF to facilitate the aggregation of CSP-specific outputs at the country level. WFP's results chain is based on theories of change that explain the causal pathways by which WFP's activities and outputs contribute directly and significantly to WFP outcomes that are needed to achieve impacts related to SDG 2 and SDG 17.

54 According to the United Nations Development Group (UNDG), outputs are changes in skills or abilities and capacities of individuals or institutions, or the availability of new products and services that result from the completion of activities within a development intervention within the control of the organization. They are achieved with the resources provided and within the time period specified. Similarly, OCHA defines outputs as the products and services which result from the completion of activities within a humanitarian intervention.

LINKING WFP'S WORK TO OTHER SDG TARGETS

58. While WFP's point of departure is its work to achieve zero hunger – SDG 2 – the interrelated challenges and solutions involved in ending hunger and poverty mean that WFP will directly and indirectly contribute to most of the other SDGs. WFP's primary focus on ending hunger will serve as the entry point and rationale for contributing to SDGs other than SDG 2.
59. For example, in supporting or implementing school meals programmes, WFP might contribute to SDG 2 targets related to access to food, improved nutrition or smallholder livelihoods, while also often making substantial contributions to the achievement of other SDG targets, including those related to education (SDG 4), gender equality and women's empowerment (SDG 5), family income (SDG 1) and health (SDG 3). In Côte d'Ivoire in 2016, for example, with support from the McGovern Dole programme, WFP provided daily hot meals to 125,000 children in 613 public primary schools in the country's most vulnerable regions, while also fostering the capacity of women farmers to supply food for the programme. Such a programme contributes to the country's national education and gender equality results while also supporting health results related to dietary practices.
60. In support of SDG 17, and in close consultation and collaboration with relevant stakeholders, WFP may respond to a request from a national government and partners to provide services that are not directly related to zero hunger efforts but that support achievement of the 2030 Agenda goals and match WFP's strengths and capacity to assist. Throughout the regional Ebola crisis of 2014–2015, for example, WFP worked in all affected countries, providing vital logistics and engineering support to the World Health Organization (WHO) and the humanitarian community, including storage, procurement, transport, logistics hubs in or near the capital cities, and 11 forward logistics bases in the three countries.

61. WFP's contributions to other SDGs will be captured at the country level by linking WFP Outputs to the outcomes of national and other partners that are related to SDG targets other than those reflected in WFP's Strategic Results.

BOUNDARIES AND CONTEXT

62. Given the broad scope of SDG 2 and SDG 17, it is important to articulate the boundaries of WFP's engagement from a strategic perspective, and not just in response to the challenges or opportunities for involvement that may arise. WFP capitalizes on its own resources, knowledge and skills within a given context while respecting and leveraging the added value of partners. WFP may not have a significant role in working towards SDG 2 and SDG 17 in countries that are able to effectively and efficiently undertake the necessary functions and actions themselves, or in contexts where viable, inclusive, safe and reliable commercial alternatives are available or other actors are better placed to contribute. Working with a range of international, regional and national partners, WFP aims to support countries to assume operational, financial and technical responsibility for achieving zero hunger. In countries that can achieve zero hunger by 2030 without assistance, WFP's presence in the country should be phased out. For SDG 17, WFP's support to countries may relate to developmental or humanitarian objectives other than zero hunger.

63. WFP may be needed in a country in four broad types of situational context:

- disruption;
- structural poverty;
- transitions/recovery; and/or
- disaster prevention and risk mitigation.

These contexts often overlap. It is particularly important to recognize that the poorest and most vulnerable people tend to face frequent disruptions that prevent sustained investments in addressing structural poverty and undermine efforts towards recovery.

Disruption

64. A disruption is any kind of shock significant enough to interrupt sustainable development at the community level. Examples include natural disasters, food shortages and price spikes, economic recession, pandemics and conflict. These disruptions lead to two types of situation where support is necessary to save lives and livelihoods: an emergency, when the initial stage after a major shock leads to a life-threatening crisis; and – equally important – a longer-term disruption resulting from a complex crisis such as protracted conflict and forced displacement and impeding the ability to invest, grow and develop, leaving communities unable to cope. When host communities and governments are forced to care for displaced populations – sometimes for decades – capacities are often overwhelmed, particularly when there are large influxes of people fleeing conflict and extreme violence.

Structural poverty

65. Poverty and hunger continue to exist even when there is peace, stability and the ability to invest and even in countries with good overall macro economic indicators. The “structural” nature of this poverty is often related to inadequate social protection policies and systems to reach all the people in need and ensure access to food. In many cases, this inability perpetuates mother-and-child malnutrition, causing an intergenerational cycle of hunger that is not alleviated by widespread economic growth and development. Persistent and structural gender inequalities – particularly discriminatory institutions, norms and practices that limit opportunities for women to participate in education, health, economic and political fora – pose a significant barrier to sustainable development and overcoming entrenched poverty and hunger; it is therefore important to understand and shift unequal gender relations. Geographical factors, lack of infrastructure and low population density can make it difficult for governments to provide services in rural areas, particularly to the smallholders who

constitute the majority of people living in poverty. However, as urbanization expands in developing countries, where the scale of poverty and the rate of migration into urban areas often overwhelm existing services, leaving the poorest people without access to safety nets. The effects of climate change, ecosystem degradation and population growth amplify the challenges faced for populations in this context. Strengthening resilience of vulnerable households and communities will be crucial to counter the effects of these stressors.

Transitions/recovery

66. The process of recovering from a disruption typically covers the period after a major shock – such as an earthquake, drought or flood – or during the post-conflict transition towards peace and the return and resettlement of displaced populations. Recovery is often not a linear process, especially where people and communities are very vulnerable, making it likely that setbacks will result from even minor shocks and stressors. This risk underlines the importance of mainstreaming resilience-building, especially preparedness, disaster risk reduction and safety nets, in country efforts and all of WFP’s work. In communities and countries that do not face high levels of risk, rebuilding should be possible if there is sustained investment.

Disaster prevention and risk mitigation

67. Even communities that have not suffered from major disruptions or that are not affected by structural poverty can be highly vulnerable and at great risk of severe disruptions such as extreme weather events due to climate change, or other shocks, including conflict. Significant investment and long-term partnership are needed to strengthen the capacity of governments and local stakeholders to prevent and mitigate risk, especially through preparedness, using integrated risk management approaches.

IV. Country-Level Action

SUPPORTING COUNTRY EFFORTS IN ACHIEVING ZERO HUNGER

68. Achieving zero hunger requires a common understanding of the contexts of hunger in a country and joint agreement on priority actions to address these contexts. Local contexts provide the parameters for national needs and priorities and for WFP's strategic engagement and partnerships in the country. Context not only determines the priorities for action, it also affects how actions can be carried out and reflects the challenges that partners and people will face in achieving zero hunger. All major conferences call for collaborative work to respond to local contexts, while the 2030 Agenda also emphasizes the importance of recognizing that some contexts face greater challenges than others and thus have special needs for assistance.⁵⁵
69. The context in each country and each situation within a country will involve a complex mix of factors, including the political and economic situation, social and cultural practices and customs, capacity and geography. Different contexts may exist in a single country and vulnerable populations may move from one context to another over time. Context-sensitive responses will require different actions within a single country and at different times, in line with the differing needs of women, men, girls and boys and their communities. It is therefore important that partners agree on the context and reflect it appropriately at the country outcome level. WFP will utilize a wide range of tools, such as VAM and the three pronged approach, to analyse the context and define appropriate programmes in close collaboration with partners.

THE COUNTRY STRATEGIC PLANS APPROACH

70. The 2030 Agenda will be achieved at the country level. WFP will work with national stakeholders and United Nations country teams to determine how best to support national strategies for achieving zero hunger, making the necessary links across sectors and contexts

and ensuring coherence with and support to countries' broader strategies for sustainable development. The heart of the Strategic Plan (2017–2021) is therefore WFP's new country strategic planning approach, which consists of strategic reviews and Country Strategic Plans. The objectives of the country strategic planning approach are to: i) support countries in making progress towards zero hunger; ii) operationalize the Strategic Plan (2017–2021) at the country level, including effective emergency response; and iii) improve strategic coherence, focus and operational effectiveness to support country and regional efforts in addressing food insecurity and malnutrition, while maintaining WFP's commitment to its principles and accountability, and expecting the same from its partners.

Country-led strategic reviews that focus on SDG 2

71. WFP will participate in and, where appropriate, facilitate nationally led strategic reviews of zero hunger challenges and efforts. To be useful and meaningful, these country-led strategic reviews should be consultative and comprehensive, with clear and credible analysis of the humanitarian and development context identifying the challenges a country faces in achieving zero hunger, such as gaps in the national policy framework and programmes, in the public and private funding of the food security and nutrition sector, and in the implementation capacities of government and other institutions. The strategic review should facilitate discussion of how the country's partners, including WFP, can support the country's progress towards zero hunger. The strategic review and subsequent Country Strategic Planning process should be undertaken as part of the United Nations country team's efforts to work together, including through the Delivering as One approach and/or other modalities as appropriate.
72. Based on country-led strategic reviews and in line with the planning processes of the Government and the United Nations country

55 The 2030 Agenda, paragraph 56: "In deciding upon these Goals and targets, we recognize that each country faces specific challenges to achieve sustainable development, and we underscore the special challenges facing the most vulnerable countries and, in particular, African countries, least developed countries, landlocked developing countries and small-island developing States, as well as the specific challenges facing the middle-income countries. Countries in situations of conflict also need special attention."



team, WFP will identify the national SDG targets and results that it is well placed to support. WFP will determine with the Government and other partners the outcomes to which it can contribute towards SDG 2 and SDG 17; these WFP Strategic Outcomes will reflect the target population, institutions and systems that will be supported to end hunger in the country and region, based on the context when appropriate.

WFP Country Strategic Plans

73. To operationalize the Strategic Plan (2017–2021), and to link country-level strategic and programme planning and actions to national and global efforts to achieve zero hunger, WFP's project categories will be replaced by a Country Strategic Plan.⁵⁶ The Country Strategic Plan will be WFP's strategic, programmatic and governance instrument, and will comprise WFP's entire portfolio of activities in a country.

As highlighted in previous sections, Country Strategic Plans will retain a strong focus on saving lives and livelihoods in emergencies to help countries achieve zero hunger and related goals. WFP's responses to emergencies will be incorporated into Country Strategic Plans, which will preserve WFP's flexibility and ability to respond quickly, while ensuring that any response to crisis invests in recovery and enables long term development. Country Strategic Plans will ensure that the emergency phase and WFP's own role and/or presence are not prolonged beyond when they are needed. The country strategic plans include policy and programmatic activities alongside supply chain and other non programmatic support or assistance. Country Strategic Plans will:

- i) define WFP's position and role based on country needs and WFP's strengths and areas of experience and expertise;

56 This is fully elaborated in the Policy on Country Strategic Plans.

- ii) specify the national results and SDG targets to which WFP will contribute during the CSP period – normally five years – and articulate the WFP Strategic Outcomes that will be supported by WFP’s contribution;
- iii) embed emergency response and preparedness in the context of recovery, building resilience and supporting longer-term development and provide a platform for additional emergency response to short-term shocks, if required;
- iv) identify the capacity-strengthening investments required for national partners;
- v) identify the strategic, resourcing and technical support actions that will be taken to maximize WFP’s contributions to national results; and
- vi) identify appropriate partnerships with stakeholders, including United Nations agencies, in line with the processes of the United Nations Development Assistance Framework, and the private sector, national civil society and affected communities.

74. Country Strategic Plans will help to improve the efficiency and effectiveness of WFP’s assistance to governments and people in need, including those affected by instability and conflict. The advantages of the new approach to country-level action include:

- *Coherence for achieving zero hunger.* Country Strategic Plans will allow the effective translation of WFP’s Strategic Plan into action at country level, aligning WFP operations with national, United Nations and humanitarian response plans, and framing food security and nutrition issues into plans and programmes. Greater coherence between the Strategic Plan and national zero hunger targets will improve WFP programming and strategic positioning and help WFP forge deeper partnerships with governments, donors, the private sector, civil society and others.
- Flexibility that ensures appropriate planning for and responses to dynamic operational contexts, *including emergency response to rapid onset shocks.* Country Strategic Plans

are context-specific and adaptable, to facilitate appropriate responses to changes in the operating environment; promote links between humanitarian and development assistance; and enable effective resilience-building by ensuring that crisis response supports recovery and long term development and that development activities reflect an understanding of risk, vulnerability and ways to protect vulnerable people in crisis.

- *A robust platform for delivering on commitments in agreed areas of engagement and for planning effective exit strategies.* Country Strategic Plans ensure targeted institutional capacity strengthening to support governments in designing and managing their nationally owned hunger solutions.
 - *Consultative processes for increased impact.* The analytical, consultative process through which Country Strategic Plans are developed will focus WFP’s efforts on its strengths, and thus enhance WFP’s added value, foster engagement with governments and enable partnerships to cohere around a common approach to eliminating hunger.
75. The Strategic Plan (2017–2021) provides the strategic direction for WFP but does not articulate WFP’s resourcing projections, funding and shortfalls. WFP is a voluntarily funded organization that relies entirely on contributions from governments, corporations and individuals to finance its operations. The Country Strategic Plans will be the vehicle for resource mobilization, fund management and spending authority, and for delivering on WFP’s commitment to guidelines and procedures regarding the allocation of multilateral contributions for development assistance. WFP recognizes that the implementation of policies for humanitarian and development coherence is supported by funding streams for both humanitarian and development activities, and available and forecasted resources will inform the country operational planning of activity



implementation. Over the term of the Strategic Plan, WFP expects resource flows to mirror past trends, including along the humanitarian–development–peacebuilding nexus, and will comply with resource allocation decisions of the Board that recognize these patterns, including for multilateral resources.

76. A separate policy paper on Country Strategic Plans that expands on the principles and processes highlighted in the Strategic Plan (2017–2021) will be submitted to the Board for approval in November 2016.

V. Measuring and Monitoring Performance

77. WFP's current performance management system is built on two performance frameworks: the Management Results Framework, which captures the efficiency with which WFP provides services; and the Strategic Results Framework, which reflects progress towards WFP's aim of improving the lives of beneficiaries. Together, the two frameworks and related results chains provide a complete picture of WFP's performance. Use of the two frameworks has provided the basis for organization-wide planning, monitoring and reporting under the Strategic Plan (2008–2013) and the current Strategic Plan (2014–2017).
78. With the new Strategic Plan (2017–2021), WFP is seizing the opportunity to integrate strategic and management results into a single CRF. The CRF is built around two Strategic Goals drawn from SDG 2 and SDG 17, and supported by five Strategic Objectives and eight Strategic Results as set out in this Strategic Plan (2017–2021). The five Strategic Objectives frame WFP's programmatic and operational focus, and link to national and global efforts to meet SDG 2 and SDG 17 targets. In addition to the eight Strategic Results are WFP's Strategic Outcomes, outputs and activities. Strategic Outcome, output and activity statements will be drafted at the country level in line with the CRF. Country-specific Strategic Outcome, output and activity statements linked to standardized categories allow for flexibility and contextualization of Strategic Outcomes, outputs and activities at the country level while ensuring a harmonized approach to performance measurement and reporting across countries. The CRF will ensure harmonized design, monitoring and reporting for CSPs across all WFP offices. Adoption of the CRF will be a further step in aligning WFP's monitoring and reporting on results with those of other United Nations agencies, particularly UNICEF, UNDP and the United Nations Population Fund.
79. In line with international norms, the monitoring of SDG indicators and of selected national, subnational and thematic indicators will be the responsibility of national authorities with the assistance of international organizations.⁵⁷ WFP's performance management will involve tracking operational outcome indicators, process indicators, output indicators and activity indicators. Outcome and output achievement values will be reported on in annual performance reports at the country and global level. In addition, WFP's evaluation function will provide independent assessment of WFP's contributions to country-specific and global strategic results and objectives, in line with the Evaluation Policy's coverage norms, standards and principles.
80. To support consistent monitoring of CRF indicators, WFP will update its normative framework for monitoring, including by revising the standard operating procedures for monitoring and the minimum monitoring requirements. All corporate guidance on monitoring will also be updated, and all logical frameworks will be realigned with the new Strategic Results and Strategic Objectives and will incorporate the new planning elements and indicators. WFP will also work towards establishing sustainable funding models for assessment and monitoring systems that enable it to better capture and report on results at the outcome level.

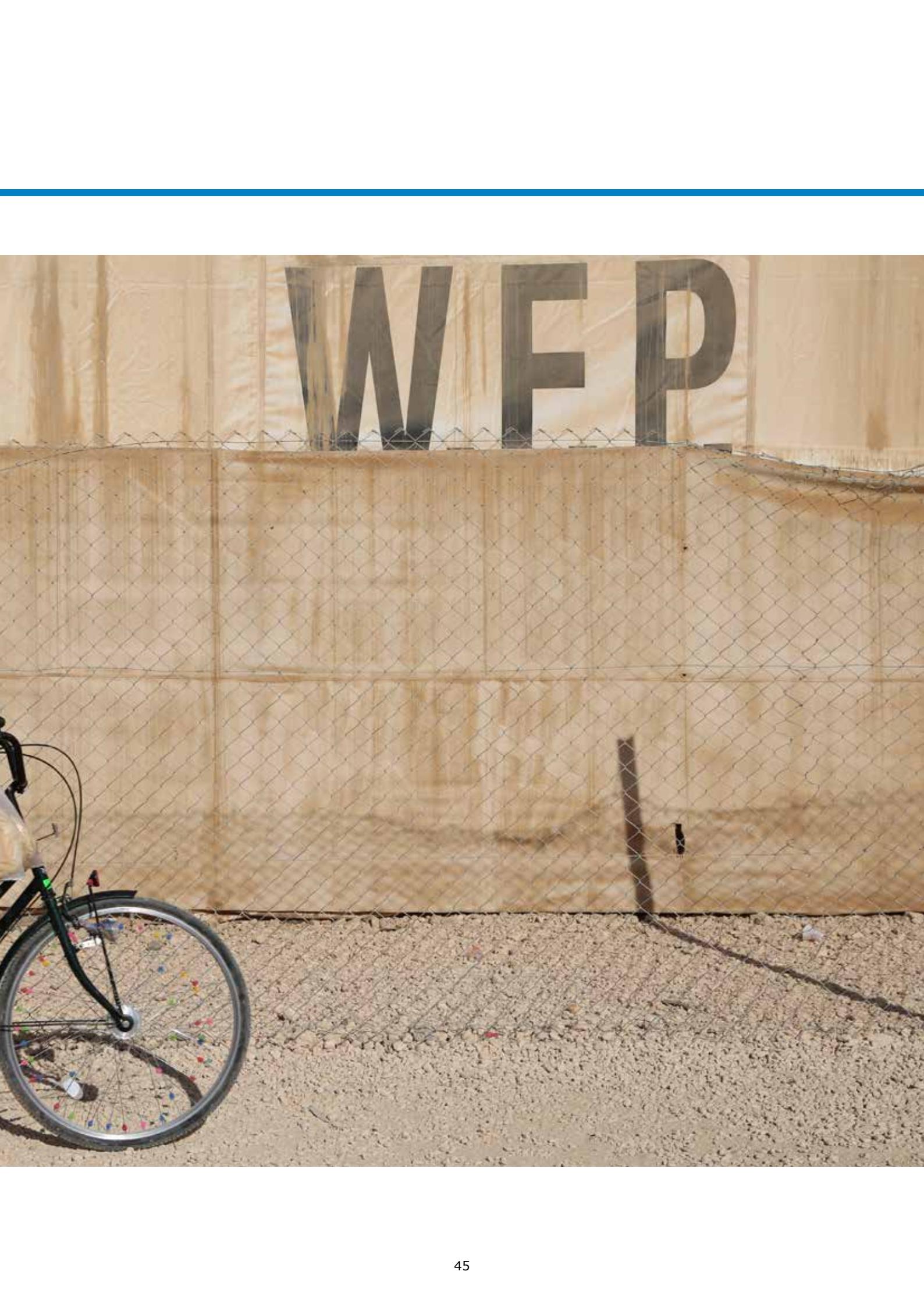
⁵⁷ United Nations Economic and Social Council (ECOSOC) documents E/CN.32016/2 and E/CN.32016/3. 2016. Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators and the Report of the High-Level Group for Partnership, Coordination and Capacity Building for Post-2015 Monitoring.



VI. WFP's Financial Framework

81. The financial framework for the Strategic Plan – to be developed in the context of a review of the current financial framework – will be fundamental for implementing CSPs. With a view to enhancing transparency and accountability in resource management, demonstrating value for money and improving decision-making, the new financial framework aims to increase the alignment between resources and results. It will build on the QCPR, while also drawing lessons from other United Nations organizations where appropriate.
82. As part of the new financial framework, a country portfolio budget (CPB) approach will facilitate the implementation of CSPs. This simplified, more transparent, and flexible portfolio budget will ensure that the links between strategic planning and financial and operational performance are clear. The CPB will also facilitate the better alignment of WFP activities with other United Nations agencies supporting the achievement of joint planning, joint performance and joint resource mobilization.
83. The CPB is a very different concept from the current use of multiple projects with their own start and end dates. The budget is based on a calendar year, and linked to SDG targets and results. As the CSPs will encompass all the planned outcomes that WFP will support in that country, the corresponding budget structure will provide clear links from corporate strategy to resourcing for WFP Strategic Outcomes, and it will enable WFP to plan its full portfolio of activities annually. The CPB will shift away from the current reliance on the inputs and cost components of individual projects. This is expected to maximize WFP's ability to respond efficiently; prioritize operational needs; contribute to better financial management, reporting and analysis to provide better data on cost-efficiency; and facilitate resource mobilization.
84. The revised financial framework and CPB concept will be set out in a separate policy paper, to be submitted to the Board for approval.





WFP

ANNEX I

RELEVANT TARGETS AND INDICATORS¹ OF SDG 2 AND SDG 17

1. The targets of SDG 2 and SDG 17 relevant to the Strategic Results are:
 2. Target 2.1: By 2030 end hunger and ensure access by all people, in particular the poor and people in vulnerable situations including infants, to safe, nutritious and sufficient food all year round.
 3. SDG indicators 2.1:
 - prevalence of undernourishment; and
 - Food Insecurity Experience Scale.
 4. Target 2.2: By 2030 end all forms of malnutrition, including achieving by 2025 the internationally agreed targets on stunting and wasting in children under five years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons.
 5. SDG indicators 2.2:
 - prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age; and
 - prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5, disaggregated by type (wasting and overweight).
6. Target 2.3: By 2030 double the agricultural productivity and the incomes of small-scale food producers, particularly women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets, and opportunities for value addition and non farm employment.
7. SDG indicators 2.3:
 - volume of production per labour unit by classes of farming/pastoral/forestry enterprise size; and
 - average income of small-scale food producers, by sex and indigenous status.
8. Target 2.4: By 2030 ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters, and that progressively improve land and soil quality.
9. SDG indicator 2.4:
 - proportion of agricultural area under productive and sustainable agriculture.
10. Target 17.3: Mobilize additional financial resources for developing countries from multiple resources.

1 These indicators were agreed upon by Member States during the 47th session of the United Nations Statistical Commission. Please refer to Annex IV of the resolution (E/CN.3/2016/2/Rev.1) for the final list of proposed Sustainable Development Goal indicators: <http://unstats.un.org/unsd/statcom/47th-session/documents/2016-2-IAEG-SDGs-Rev1-E.pdf>.

2 For SDG 2.1, WFP also considers the food consumption score (FCS) an important indicator. WFP calculates the FCS from the frequency of consumption of different food groups by a household during the seven days before the survey. This is an indicator of food access, based on both dietary diversity and the frequency of food groups consumed. The FCS is relevant to operations at the subnational level, which is why it is not included in the SDG indicator framework as a global indicator. However, the FCS is a proven WFP corporate indicator collected in more than 50 countries, with an operational history of more than 10 years and has enabled the organization to assess and monitor food access and consumption in developing countries. Many institutions including the World Bank have used FCS as an operational indicator over the last several years. While by definition the FCS is a composite indicator, the food frequency data collected for its computation provides a rich data repository that may be employed in a variety of ways. For example, nutrient adequacy may be analysed from the raw frequency data, and unweighted or differentially weighted scores may be adapted to reflect cultural and geographic dietary variation, to account for seasonality, or to prioritize dietary habits that are consistent with sustainable development goals. WFP will continue to support countries in using the FCS for monitoring food security and nutrition, particularly with respect to SDG 2.1, as appropriate, and it will continue to be a core operational indicator in the CRF.

11. SDG indicators 17.3:

- foreign direct investments (FDI), official development assistance and South–South cooperation as a proportion of total domestic budget; and
- volume of remittances (in United States dollars) as a proportion of total GDP.

12. Target 17.9: Enhance international support for implementing effective and targeted capacity development in developing countries to support national plans to implement all the Sustainable Development Goals, including through North–South, South–South and triangular cooperation.

13. SDG indicator 17.9:

- Dollar value of financial and technical assistance (including through North–South, South–South and triangular cooperation) committed to developing countries.

14. Target 17.14 Enhance policy coherence for sustainable development.

15. SDG indicator 17.14:

- number of countries with mechanisms in place to enhance policy coherence of sustainable development.

16. Target 17.16: Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the Sustainable Development Goals in all countries, in particular developing countries.

17. SDG indicator 17.16:

- number of countries reporting progress in multi-stakeholder development effectiveness monitoring frameworks that support the achievement of the sustainable development goals.

ANNEX II

WFP CORE VALUES, PRINCIPLES AND STANDARDS

Zero hunger is an ambitious objective, leading to a world where every man, woman and child has enough to eat. It is one of the global goals that world leaders have set for 2030. Achieving zero hunger means ending chronic hunger, malnutrition and food insecurity, leaving no one behind, and humanity requires it so that people can reach their full potential. WFP's ability to achieve its objectives and contribute to the achievement of the SDGs depends on WFP's unwavering commitment to act with the highest ethics and standards of conduct. This means adhering to WFP's core values, principles and standards in all its actions by providing humanitarian and development assistance with the highest standards of corporate behaviour towards the people, communities and governments it serves, towards its partners, and towards the societies and the world.

IDEALS OF THE UNITED NATIONS CHARTER AND THE HUMANITARIAN PRINCIPLES

1. WFP is committed to working towards a world without hunger while abiding by the ideals and principles of the United Nations Charter. WFP serves the ideals of peace, respect for fundamental rights, economic and social progress and international cooperation. WFP is always guided by and respects the principles of human rights, social justice, the dignity and worth of the human person and respect for equal rights of men and women, boys and girls. WFP adheres to the core humanitarian principles¹ set out in the following table.

STANDARDS OF CONDUCT

2. WFP expects all its operations to be conducted in accordance with the Standards of Conduct for the International Civil Service (2013)² and the WFP Code of Conduct,³ set out in the following table.

CORE HUMANITARIAN PRINCIPLES

Humanity	WFP will seek to prevent and alleviate human suffering wherever it is found and respond with food assistance when appropriate. It will provide assistance in ways that respect life, health and dignity.
Neutrality	WFP will not take sides in a conflict and will not engage in controversies of a political, racial, religious or ideological nature. Food assistance will not be provided to active combatants.
Impartiality	WFP's assistance will be guided solely by need and will not discriminate in terms of ethnic origin, nationality, political opinion, gender, race or religion. In a country, assistance will be targeted to those most at risk, following a sound assessment that considers the different needs and vulnerabilities of women, men and children.
Independence	WFP will provide assistance in a manner that is operationally independent of the political, economic, military or other objectives that any actor may hold with regard to areas where such assistance is being provided.

¹ The humanitarian principles of humanity, impartiality and neutrality were endorsed in United Nations General Assembly Resolution 46/182, adopted in 1991. The fourth principle of independence was added in 2004 under Resolution 58/114. WFP/EB.A/2004/5-C.

² International Civil Service Commission. 2013. Standards of Conduct for the International Civil Service.

³ Executive Director Circular OED2014/016, WFP Code of Conduct.

PRINCIPLES OF WFP'S CODE OF CONDUCT

Serve the ideals of peace, respect for fundamental rights, economic and social progress, and international cooperation.

Carry out duties, both in public and private life, with competence, integrity, impartiality, independence and discretion.

Abide by the regulations and rules of WFP and/or contract terms, and report any breach of those regulations and rules or terms of contract while having a right to be protected from retaliation.

Recognize privileges and immunities, if any, are conferred solely in the interests of WFP and are not an exemption from observing local laws or respecting private legal or financial obligations.

Contribute to building a harmonious workplace based on mutual respect and understanding, respect for diversity, and free from harassment, sexual harassment, sexual violence and/or abuse of authority.

Respect the rights, dignity and safety of the people WFP serves, taking into account their expressed needs and concerns, and acting impartially and fairly without any acts of sexual exploitation and abuse.

Base actions on honesty, truthfulness, impartiality and incorruptibility, reporting any fraudulent, corrupt, collusive, coercive and obstructive practice or attempted practice.

Perform official duties and conduct private affairs in a manner that avoids actual, apparent and potential conflicts of interest or reflects unfavourably on WFP.

Refuse any personal honour, decoration, favour, gift or remuneration from a government or other private or public sources external to WFP, except when exceptionally permissible by policy.

Disclose any conflict of interest and cooperate in resolving it with the interests of WFP only in view.

Refrain from using any confidential information for unauthorized purposes and/or disclosing any confidential information to unauthorized persons.

Use the assets, property, information and other WFP resources with care, efficiency, effectiveness and integrity and for authorized purposes only, and safeguard the resources of WFP.

Abide by the principles and values enshrined in the United Nations Charter: fundamental human rights, social justice, the dignity and worth of the human person and respect for the equal rights of men and women and of nations great and small.

Contribute to the WFP mission for promoting food security and toward eradicating hunger.

RESPECT FOR HUMAN RIGHTS

3. WFP is committed to adhering to the values, purposes and principles of the United Nations Charter and the Universal Declaration of Human Rights. Promoting and encouraging respect for human rights and international humanitarian law is a core objective of the United Nations. Through its mandate to address hunger, WFP is committed to ensuring that it does not exacerbate or create risks to people through its presence or assistance, but rather seeks ways of fostering people's safety, dignity and integrity. In doing so, WFP acknowledges the interlinkages between risks to people's fundamental human rights and hunger and the potential of food assistance to support people's safety and maintain their dignity.

ACCOUNTABILITY TO AFFECTED POPULATIONS

4. WFP is accountable to affected populations, both for achieving results in addressing hunger and for the manner in which programmes are implemented. This requirement calls for the systematic and meaningful engagement of people, including the most marginalized, in all stages of the project cycle, to ensure that people have a voice in the decisions that affect their lives. Basing programmes on feedback from affected communities helps to ensure that needs are correctly identified and understood and that programmes are modified as appropriate, ultimately resulting in more effective programmes.

UNITY OF PURPOSE, INTEGRITY, AND DEDICATION

5. WFP's greatest strength is its dedicated women and men working around the world who provide access to nutritious food and promote lasting solutions, often under difficult conditions where security threats and risks to personal safety are considerable. WFP's dedicated individuals draw on an unparalleled range of expertise in providing nutritious foods, logistics, engineering, telecommunications, food security needs assessment, post-emergency rehabilitation and longer term capacity development, conducting operations with integrity and with respect for the many people, organizations and environments WFP touches.

WORKING FOR WFP AND THE UNITED NATIONS

6. WFP and its people are expected to abide by the core values of WFP and the United Nations – at all times be loyal to WFP and the United Nations with a shared vision of WFP and the United Nations, placing the interests of WFP and its mission above one's own interests while respecting each other and others, regardless of differences in views and cultural practices. WFP is committed to respecting all persons equally, including people living with disabilities, the infirm, and the elderly, while promoting women's empowerment and gender equality.

WORKING WITH OTHERS/COMMITMENT TO PARTNERSHIP PRINCIPLES

7. Achieving zero hunger requires WFP to act as a system player that is actively helping to shape the way in which partners interact and relate to WFP and each other by engaging in operational and knowledge partnerships with organizations offering complementary skills and resources that maximizes value for the people it serves. This requires long-term engagement with key partners – including governments, United Nations agencies, civil society, private business, international foundations and research institutions – to develop strong partnerships and concrete ways forward based on context specific demands and WFP's strengths and expertise. WFP is committed to work with partners who have values similar to its own and work to the same standards. This means, while engaging with WFP, partners must respect the fundamental values, principles and standards of WFP and its personnel must act accordingly, respecting the dignity of the people and the communities it serves.
8. WFP is a signatory to the 2007 United Nations Global Humanitarian Platform⁴ Principles of Partnership, whose five requirements are:
 - equality;
 - transparency;
 - result-oriented approach;
 - responsibility; and
 - complementarity.

⁴ See www.globalhumanitarianplatform.org

9. WFP continues to adhere to the Global Humanitarian Platform Principles, preferring “equity” rather than “equality,” acknowledging that all partners contribute something to a collaborative relationship and must be respected regardless of size or status. In addition, WFP adheres in strategic and precautionary principles,⁵ to ensure its relationships are tied to the achievement of strategic objectives, are cost-effective, and do not present undue risk or detriment to WFP’s reputation, status or operating efficiency.
13. WFP’s strong delivery culture, deep field presence in 80 countries, and scope of operations are all assets that need to be preserved and strengthened by a continued focus for impact at the country level through well-targeted and high-quality programmes that are applicable in a variety of contexts, and in line with national priorities.

WORKING WITH VENDORS/SUPPLIERS

10. WFP is committed to ensuring that the highest standards of ethics and conduct are reflected throughout its operations and, accordingly, vendors/suppliers are expected to abide by the United Nations Supplier Code of Conduct, which covers standards related to Labour, Human Rights, Environment and Ethical Conduct.

SOCIAL SUSTAINABILITY

11. WFP is committed to consideration of the principles of social sustainability as part of its programming, implementation and operations within a context of socially equitable and environmentally responsible sustainable development. This includes taking into consideration the impacts of WFP’s operations to the environment and climate for the purpose of instituting safeguards aimed to enhance the environmental benefits of activities, avoid irreversible environmental damage, foresee adverse impacts on those WFP serves and in the communities it serves, and ensure sustainable use and management of natural resources.

AN ACTION-ORIENTED APPROACH WITH IMPACT ON THE GROUND

12. Responding to humanitarian emergencies is and will continue to be a primary focus for WFP’s dedicated people and partners worldwide. Agility to scale up and scale down operations quickly to meet changing needs is crucial. Likewise, when emergencies strike, WFP needs to be ready to efficiently deliver as soon as possible to affected areas worldwide.

⁵ See also WFP Corporate Partnership Strategy (2014–2017), paragraphs 21–26.
⁶ WFP/EB.2/2015/4-A/Rev.1.
⁷ WFP/EB.A/2015/5-E/1.

ACCOUNTABILITY AND TRANSPARENCY

14. WFP is committed to transparency and accountability in the management of its resources in order to ensure the effective fulfilment of its Strategic Objectives. WFP believes in a culture of learning that enables evidence-based interventions to deliver results in a cost efficient manner. To support global operations in the most effective way, WFP runs a lean and efficient administrative infrastructure characterized by a high degree of transparency and accountability. WFP is committed to the principles and practice of independent, credible and useful evaluations; its Office of Evaluation is independent of other management functions. WFP’s 2016–2021 Evaluation Policy⁶ sets the strategic direction, standards and coverage norms for embedding evaluation throughout WFP to strengthen evidence-based policy and programming. WFP has strong commitment to sound financial management, internal control and accounting, and was the first United Nations organization to implement International Public Sector Accounting Standards, provides an annual statement of assurance on the effectiveness of internal control and has a wide range of oversight bodies which ensure that all aspects of its Headquarters and field operations are subject to regular independent audits, as well as evaluations. WFP does not, and shall not, tolerate any fraudulent, corrupt and/or collusive practices in the course of its operations.⁷ WFP recognizes the adverse effect that such practices have on its activities and operations, and is committed to preventing them and taking robust action where they are found to occur.

ANNEX III

RISK CATEGORY	RISKS	CAUSE	EFFECTS	RISK SERIOUSNESS	MITIGATION ACTIONS
Institutional	Inability to meet humanitarian commitments	WFP's mandate requires it to take a lead role in emergencies	WFP's capacity to respond in emergencies may be affected by competing demands and lack of resources. WFP's reputation as an emergency response organization may suffer.	Medium	Completion of corporate emergency response mechanisms such as staff capacity development, the emergency response rosters, and advance financing mechanisms
Institutional	Challenges in adapting to support countries to achieve the Sustainable Development Goals of the 2030 Agenda	Responsibilities emerging from the 2030 Agenda require WFP to support governments both in emergencies by providing humanitarian assistance as well as in recovery or structural poverty situations, including through dedicated capacity strengthening support	WFP may lack the resources and focus to act as an effective partner in providing capacity strengthening support	Medium	Integration and completion of the WFP Impact Framework. Updating and revising WFP's programme and monitoring guidance on technical assistance and country capacity strengthening. Programme staff training. Enhanced partnerships
Institutional	Insufficient evidence to demonstrate impact, and inadequate systems and capacity to measure and analyse outcome level results	WFP lacks mechanisms and investments for capturing evidence at the outcome level, and also faces increased accountability requirements.	WFP corporate monitoring systems do not facilitate its assessment at the outcome level and limit WFP's ability to manage for results based on analysis of what works and what does not. As a result, WFP may be unable to demonstrate the extent to which it is meeting its 2030 Agenda objectives – it may not be evident that WFP is achieving results cost efficiently and cost-effectively	Medium	Establishment of sustainable funding models for assessment, monitoring and evaluations. Integration of roles and accountabilities in assessments, monitoring and evaluations into staff performance management. Establishment of systems for capturing and reporting on results at the outcome level.

STRATEGIC PLAN (2017–2021) RISK ASSESSMENT

RISK CATEGORY	RISKS	CAUSE	EFFECTS	RISK SERIOUSNESS	MITIGATION ACTIONS
Programmatic	Cooperating partners' lack of capacity	There is increased emphasis on partnership and complementarities while the availability and capacity of cooperating partners, including government counterparts, is limited. The 2030 Agenda requires partners with different skill sets for the evolving environment.	WFP may be unable to fully achieve the Strategic Results outlined in the Strategic Plan (2017–2021).	Medium	Completion of corporate emergency response mechanisms such as staff capacity development, the emergency response rosters, and advance financing mechanisms
Programmatic	Lack of staff skill sets for the 2030 Agenda initiatives	The 2030 Agenda obligations require staff skills in areas such as humanitarian relief operations, climate and disaster risk reduction, social protection and safety nets, nutrition, partnerships and capacity-strengthening with national partners.	Lack of staff skills may lead to a mismatch between the staff profile needed and that available. WFP management and control structures may be unable to keep pace with new obligations leading to poor results and inefficient use of resources.	High	Clear identification of the required skill sets at the corporate level, linked to capacity-development tools. Programme Learning Journey, drawing from current expertise and training staff to respond to evolving needs. Developing opportunities for national staff. Link the career implementation framework to the 2030 Agenda obligations.
Contextual	Challenging funding environment	Needs are increasing and competition for resources is intensifying, with investments needed to align staff skill sets with 2030 Agenda obligations.	WFP may be unable to become the partner of choice in supporting countries to achieve the 2030 Agenda.	High	Implementation of the WFP Impact Framework relating to the financial framework. Demonstration of the impacts of WFP activities for stakeholders. Reorientation of WFP's donor relations and fundraising approach towards the 2030 Agenda requirements.

ACRONYMS USED IN THE DOCUMENT

ARC	African Risk Capacity
AU	African Union
CBT	cash-based transfer
CFS	Committee on World Food Security
CPB	Country portfolio budget
CRF	Corporate Results Framework
CSP	Country Strategic Plan
ECOSOC	Economic and Social Council of the United Nations
FAO	Food and Agriculture Organization of the United Nations
FFR	Financial Framework Review
FITTEST	Fast Information Technology and Telecommunications Emergency Support Team
IASC	Inter-Agency Standing Committee
IATI	International Aid Transparency Initiative
ICRC	International Committee of the Red Cross
IFAD	International Fund for Agricultural Development
IFRC	International Federation of Red Cross and Red Crescent Societies
MRF	Management Results Framework
OCHA	Office for the Coordination of Humanitarian Affairs
QCPR	Quadrennial Comprehensive Policy Review
RBA	Rome-based agencies
SDG	Sustainable Development Goal
SRF	Strategic Results Framework
UNDP	United Nations Development Programme
UNDS	United Nations development system
UNHAS	United Nations Humanitarian Air Service
UNHCR	Office of the United Nations High Commissioner for Refugees
UNHRD	United Nations Humanitarian Response Depot
UNICEF	United Nations Children's Fund
VAM	Vulnerability analysis and mapping
WHO	World Health Organization
WHS	World Humanitarian Summit

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World Food
Programme

World Food Assistance 2018

Preventing Food Crises

May 2018

Beneficiaries of the Resilience and Climate Change Programme in El Salvador purchase food at the local supermarket with e-vouchers.

WFP/Rein Skallerud



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Foreword

In just the past few years, we have seen a dramatic increase in the number of people around the world who are trapped in food crises. Conflict, climate-related disasters and overall instability and insecurity are the main factors for why 124 million people in 51 countries were in food crisis in 2017, up from 108 million in 48 countries in 2016.

This report builds on datasets and analytical approaches that were first introduced in World Food Assistance 2017: Taking Stock and Looking Ahead. This year's report quantifies how short-term events and long-term factors influence the outbreak and intensity of food crises. Examining these phenomena through the lens of WFP's food assistance expenditures sheds unique insight into both drivers and deterrents of food crises.

We can and should do better in how we plan for the short-term natural disasters and other shocks that always happen. But that's just in the short term. In the long-term, we need to have a broader, deeper strategic plan that would help enhance the economies of communities, regions and countries that are susceptible to food crises. If we do this right, we might spend more money up front, but we'll be far more effective in the long run by making these areas more resilient. And if they are more resilient, they will be more stable and peaceful.

The message of World Food Assistance 2018 is clear: we can stem the tide of food crises – stopping them in many cases, and preventing them from expanding and persisting in others. The impact of effective prevention would be dramatic, not just in terms of the money we save, but the lives we change. We must remain committed to working with partners around the globe, from national authorities to the international community, to improve and enhance our work. If we do, then the dream of Zero Hunger can become a reality.

David Beasley
Executive Director
World Food Programme

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Children enjoy high-energy biscuits distributed as part of the WFP school feeding programme in Cox's Bazar, Bangladesh.

WFP/Shehzad Noorani

Summary

Chronic hunger is increasing, and food crises are spreading and intensifying across the world. *World Food Assistance 2018: Preventing Food Crises* (WoFA 2018) focuses on these crises, and asks what causes them to break out, what determines their scale and how they might be prevented.

Existing knowledge suggests that food crises are driven by combinations of short-term events such as conflicts and natural disasters and long-term influencers of poverty and food insecurity. Hence the prevention of food crises entails short-term action and long-term investment. But precisely which actions and investments should be prioritized in different contexts, and why, are still not clear.

WoFA 2018 seeks to reduce this knowledge gap through ground-breaking analysis of linkages between food assistance expenditures by the United Nations World Food Programme (WFP) and a range of other factors. Food assistance is uniquely positioned at the intersection of short-term humanitarian action and long-term hunger reduction. Food assistance expenditures thus constitute a powerful lens through which the drivers and deterrents of outbreak and intensity of food crises can be examined. The vision of the report is that increased understanding of the drivers of food assistance will lead to greater comprehension of the causes of food crises. This should in turn expand scope to prevent them.

A dataset covering 152 countries between 2009 and 2015 is analysed in two stages. In the first stage the probability of a food crisis in all 152 countries is examined; the presence of WFP food assistance is taken as an indicator of a food crisis. The aim is to identify factors influencing the probability that a country will need WFP food assistance, which in turn sheds light on causes of food crisis outbreaks. The second stage focuses on the scale of food crises. Only the 77 countries receiving food assistance from WFP are included, and the aim is to identify the factors that influence the level of food assistance expenditures and hence show what determines the scale of the underlying food crisis.

The results indicate that the likelihood of a food crisis outbreak increases in accordance with the share of a population affected by natural disasters, displacement and/or chronic hunger. The likelihood of outbreaks decreases with greater availability of food, better food absorption capacity and better access to markets and services.

The scale of a food crisis increases in line with the share of population affected by natural disasters and displacement and by lower food absorption capacity. The higher the income, the greater the level of education and the greater the political stability the smaller the scale of food crises. The size of a country does not affect the outbreak or scale of a food crisis.

Political instability, displacement, poor education and sparse infrastructure emerge as especially potent drivers of food assistance expenditures, and hence also of the food crises reflected in these expenditures. Exposure to natural disasters and food system congestion lead to greater than proportionate increases on food assistance expenditures. Lower income increases food assistance expenditures but less than proportionately.

The findings suggest that improved management of natural and man-made shocks in the short-term, and greater investments in political, social and economic underpinnings of societies in the longer term can reduce risks of food crises and lower food assistance expenditures significantly. For instance, such investments could have reduced WFP's global food assistance expenditures in 2016 by US\$ 5.1 billion. This would have been equivalent to almost 96 percent of the US\$ 5.3 billion WFP actually spent that year.

There are similarities and differences in priorities for preventing outbreaks of food crises and for containing them. Each component of the prevention agenda requires short-term and long-term action and investment to address the effects of identified risk factors. Priorities for preventing outbreaks of food crises and for containing them are inherently country-specific, but regional patterns are apparent. Priorities also vary across income groups.

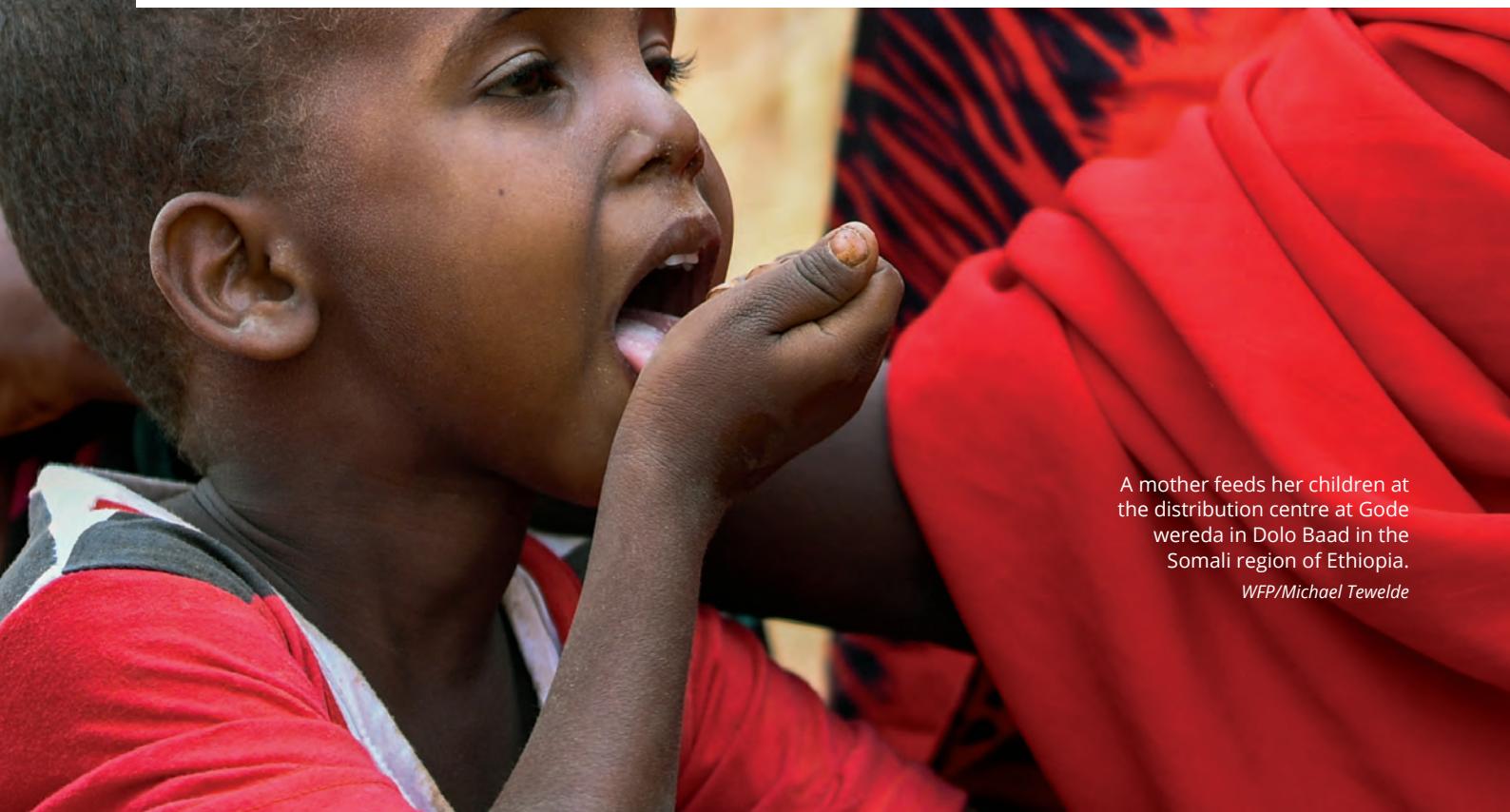
A core argument in WoFA 2018 is that international food assistance signals the existence of food crises. The analysis shows that these crises are linked to myriad performance gaps in national food sectors, economies and political and social systems. The analysis also shows that international food assistance reveals challenges and opportunities at the humanitarian-development-peace nexus. The greater the level of international food assistance, the greater the challenges and opportunities at the nexus. The identified priorities for action and investment to prevent food crises can therefore justifiably be interpreted as priorities to generate and seize major dividends at the nexus.



Hunger, Food Crises and Food Assistance

Globally, 124 million people are caught up in food crises that condemn them to acute hunger and food insecurity (FSIN, 2018). Food crises are far more common among populations suffering from prolonged hunger and malnutrition (Timmer, 2010). About 11 percent of the world's population – 815 million people – are chronically hungry. In 2016 this number increased for the first time in a decade from 775 million in 2015 (FAO, IFAD and WFP, 2017). Risks of further food crises are therefore high and increasing.

World Food Assistance 2018: Preventing Food Crises (WoFA 2018) seeks to build an understanding of the factors that cause food crises to break out, persist and expand. Most important, WoFA 2018 seeks to identify how food crises can be prevented.



A mother feeds her children at the distribution centre at Gode wereda in Dolo Baad in the Somali region of Ethiopia.

WFP/Michael Tewelde

Many experts have addressed these quandaries: Barrett, 1996; Barrett and Bellamare, 2011; Brinkman et al., 2010; HLPE, 2011; Timmer, 2010; Timmer et al., 1983; World Bank, 2006. Considerable evidence indicates that rising labour productivity through economic growth, stable food prices and access to food by the poor are important (Dorward, 2013; FAO, 2011; Timmer, 2010). This suggests that food crises are caused not only by large-scale shocks such as the conflicts and natural disasters that dominate the news, but also by less visible underlying drivers of poverty and food insecurity. Hence the prevention of food crises entails two objectives: i) reducing short-term spikes of hunger; and ii) putting in place deep mechanisms of long-term pro-poor economic growth (Timmer, 2010).

To what degree does this short-term vs. long-term perspective hold in actuality? Which factors raise risks of sharp spikes of hunger that signal food crises? Which ones reduce those risks? Which are the most potent crisis intensifiers? Which are the most effective crisis mitigators? With the number of hungry people increasing again, the need for answers to these questions could not be more urgent. Precisely which actions and investments should be prioritized in different contexts, and why, are still unclear.

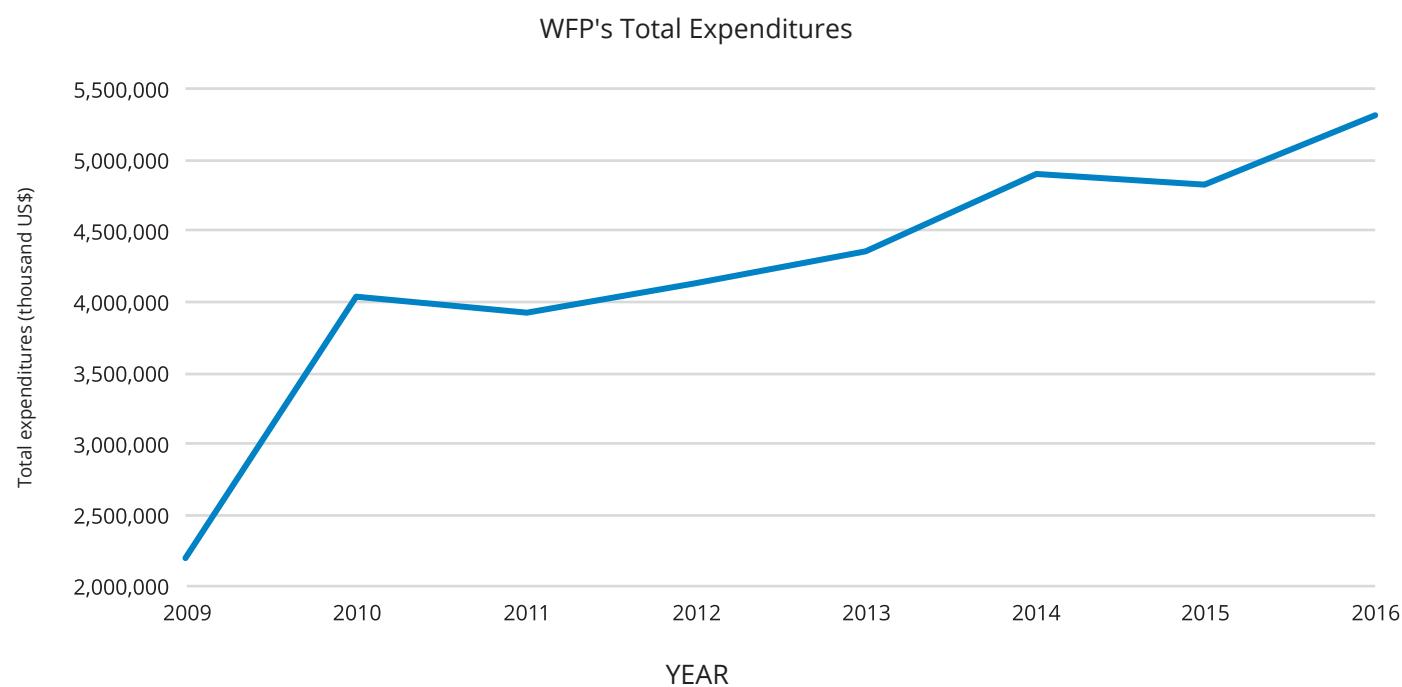
WoFA 2018 seeks to help to fill this knowledge gap through ground-breaking analysis of food assistance expenditures. The focus on food assistance expenditures is both novel and valuable. Almost by definition wherever there is an actual or potential food crisis, food assistance is required (OCHA, 2016). Food assistance accounts for 40 percent of humanitarian assistance (GHAR, 2016). In general, the more acute the humanitarian crisis the greater the demand for food assistance (WFP, 2017). In recent years, as humanitarian crises have grown in number and complexity, food assistance expenditures have expanded significantly, more than doubling between 2009 and 2016 (Figure 1).

But there is much more to food assistance than its role in averting starvation in humanitarian crises. As set out in World Food Assistance 2017: Taking Stock and Looking Ahead (WFP, 2017a), food assistance refers to multi-faceted efforts to empower vulnerable and food-insecure people and communities to access nutritious food. It seeks to save lives and livelihoods in the short term and to combat the root causes of hunger in the medium term and long term. Hence although expenditures on international food assistance are concentrated in countries in deep crises, the demand is much wider (Figure 2). When food assistance investments by national authorities are considered, the coverage is truly global (WFP, 2017a).



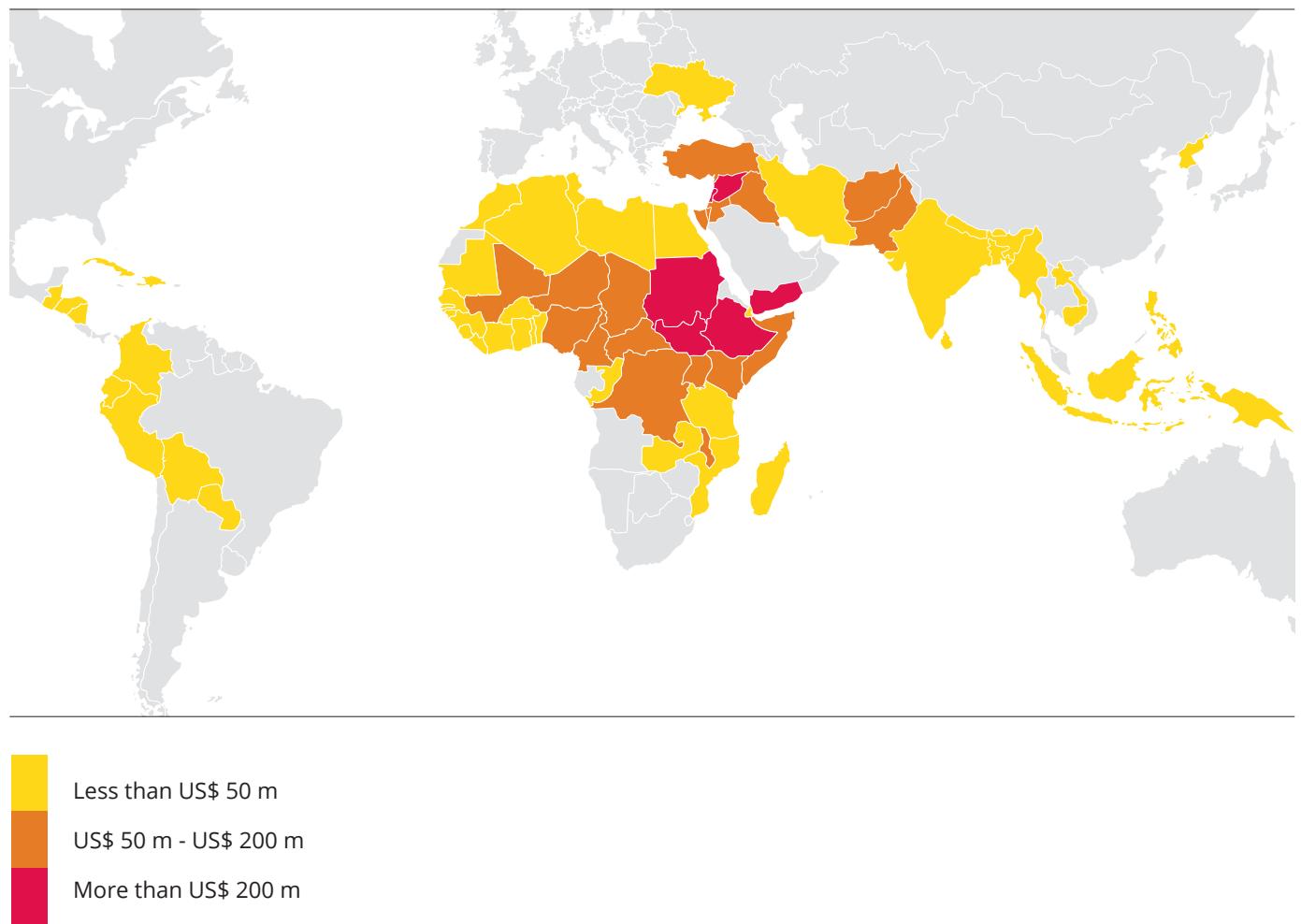


FIGURE 1: Food assistance expenditures by WFP more than doubled between 2009 and 2016



Source: WFP (2017).

FIGURE 2: WFP food assistance expenditures in 2016 were substantial and widespread, but they varied by country



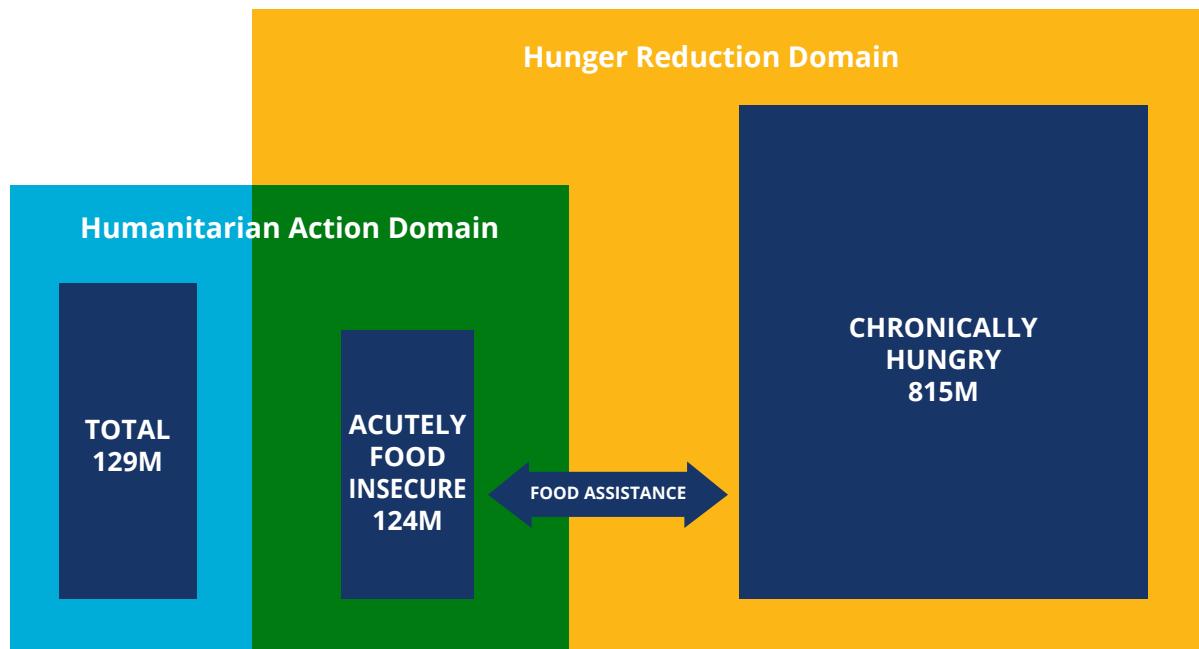
Source: WFP data, 2016-2017.

Food assistance is uniquely positioned at the intersection of short-term humanitarian action and long-term hunger reduction (Figure 3). It is therefore not only a fundamental building block of humanitarian action, but also an essential component of interventions that address vulnerability and food insecurity in transition and development contexts by seeking to enhance the resilience and performance of food systems (WFP, 2017a).

Food assistance expenditures thus constitute a powerful lens through which the drivers of food crises and the determinants of their scale can be examined (Figure 4).

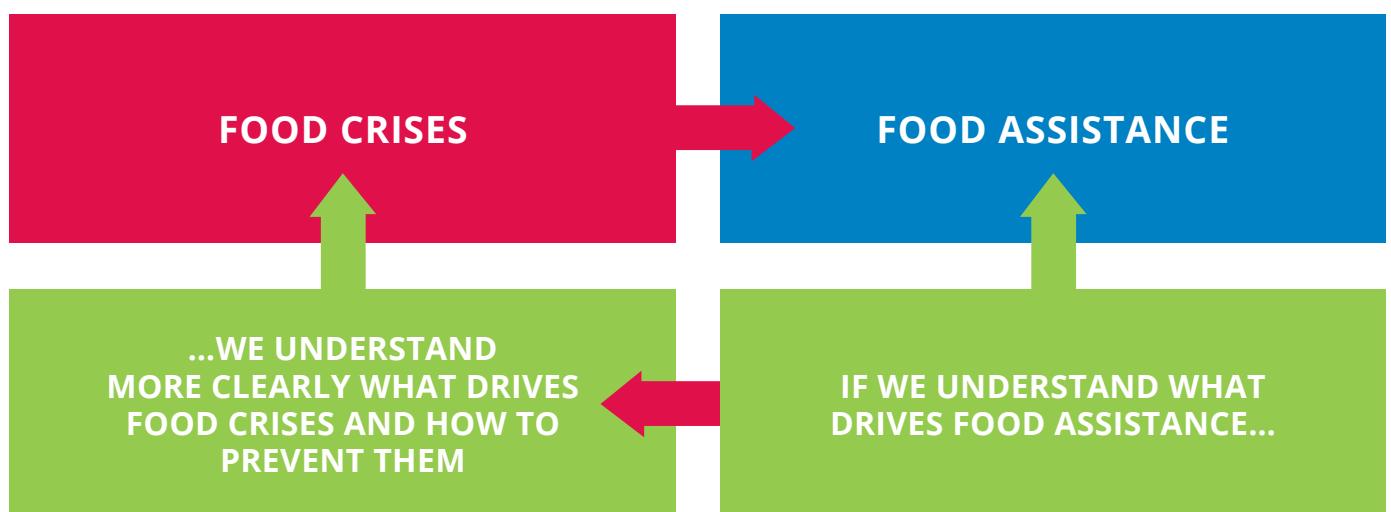
The vision is that increased understanding of the drivers of food assistance will lead to greater comprehension of the causes of food crises, which will increase the chance of preventing them. The next three sections present the analytical approach, empirical modelling strategy and dataset employed to build that understanding. The findings are then presented. Conclusions and implications round out this report.

FIGURE 3: Food assistance is situated at the intersection of short-term humanitarian action and long-term hunger reduction



Sources: FAO (2017); FSIN (2018); OCHA (2018); WFP (2017a).

FIGURE 4: Improved understanding of food assistance can increase understanding of food crises and how to prevent them



Women carry bags filled with sorghum during a food distribution in Gode wereda in Dolo Baad in the Somali region of Ethiopia.

WFP/Michael Tewelde



Questions and Analytical Approach

WoFA 2018 considers three main questions:

1. What causes food crises to break out?
2. What determines the scale of food crises?
3. How can food crises be prevented and diminished?

Coherent answers require a unified analytical approach in which outbreaks and scales of food crises are treated as distinct but highly related phenomena, and in which prevention relates to both (Figure 5).



FIGURE 5: WoFA 2018 seeks to understand how food crises can be prevented by examining the causes of outbreaks and factors that define their scale



The analytical focus is on international food assistance expenditures at the country level. Two broad issues are addressed: i) Does a country receive food assistance or not? If so, why; if not, why not? And ii) If a country receives food assistance, how much does it receive and why? The approach thus requires simultaneous analysis of the recipients and non-recipients of food assistance.

The available data on World Food Programme (WFP) food assistance expenditures and other variables yield a dataset covering 152 countries between 2009 and 2015, of which 77 were recipients of food assistance from WFP over this period and 75 were not. The analytical approach considers all 152 countries together in a two-stage analysis (Figure 6).

In the first stage the probability of a food crisis outbreak in all 152 countries is examined. The presence of WFP food assistance is taken as an indicator of a food crisis somewhere in the country. This stage aims to identify factors influencing the probability that a country will request or need international food assistance, thereby shedding light on what causes food crisis outbreaks.

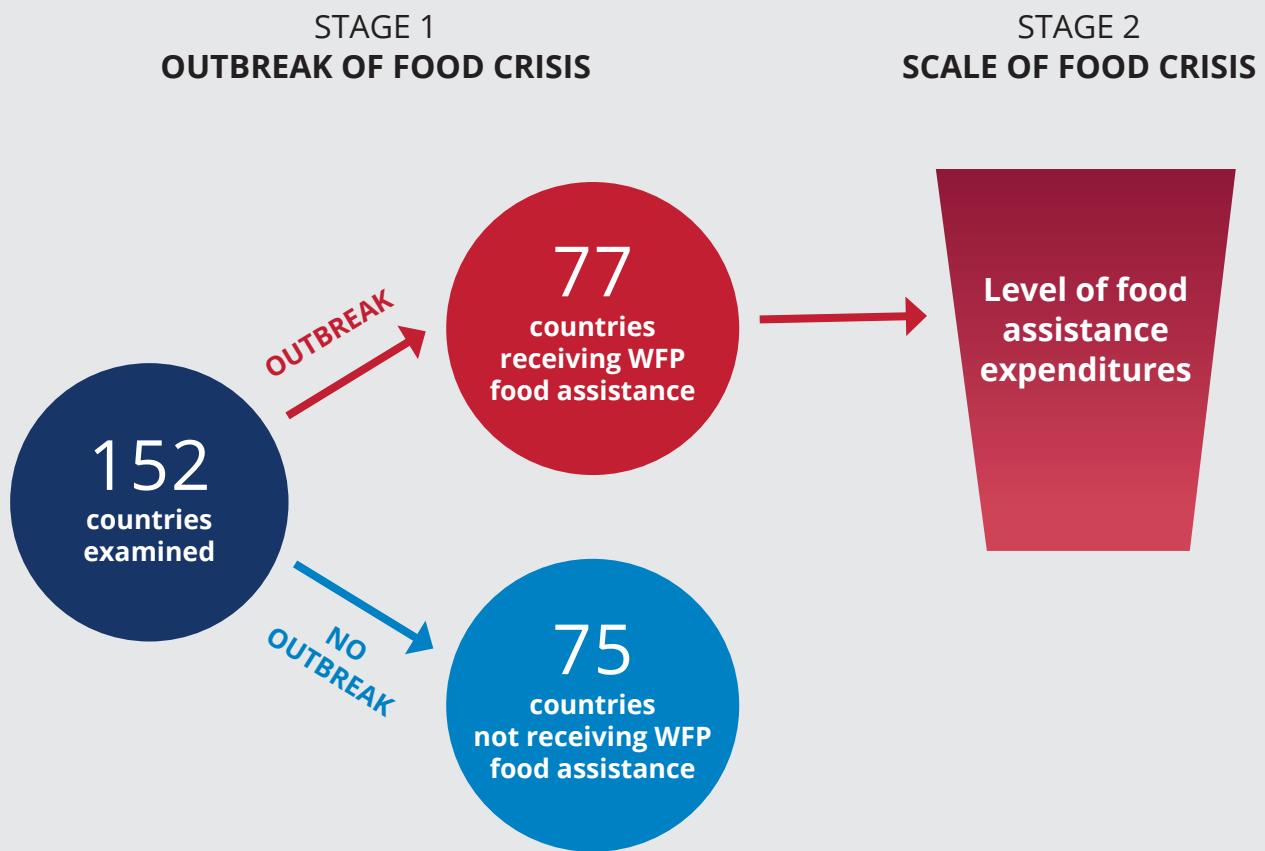
In the second stage, only the 77 countries receiving food assistance from WFP are included. The aim is to identify the factors that influence the level of food assistance expenditures, revealing what determines the scale of underlying food crises.¹



Hoda lives in Zaatari refugee camp with her father. She is one of 500,000 Syrians benefiting from WFP's e-voucher programme in Jordan.

WFP/Giulio d'Adamo

FIGURE 6: The WoFA 2018 analytical approach enables rigorous identification of factors influencing the presence and level of WFP food assistance in a country



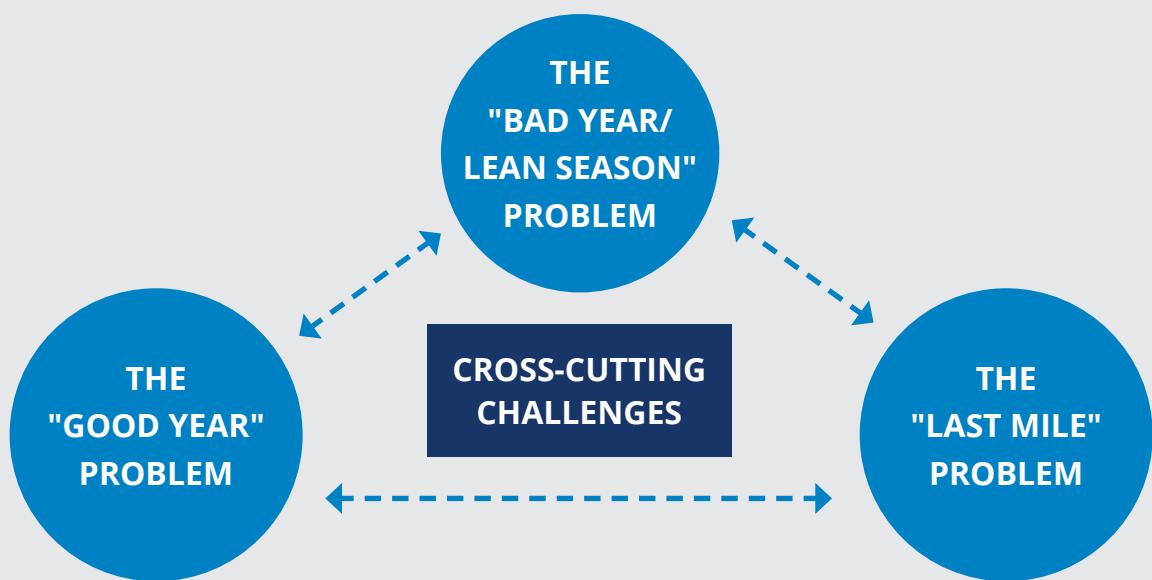
Modelling Strategy

The modelling strategy proposes that the occurrence and scale of food crises are rooted in three systemic problems in food systems, as well as in a number of cross-cutting challenges (Figure 7). The three systemic problems are:

- i. the bad year or lean season problem – linked to a range of unexpected shocks and seasonal factors that severely constrain access to nutritious food;

- ii. the last mile problem – linked to the physical, economic, social and political isolation and marginalization of the hungry poor; and
- iii. the good year problem – linked to the paradoxical challenge of absorbing food surpluses under conditions of limited storage, transport and financial capacity.

FIGURE 7: Food crises are linked to three systemic problems and numerous cross-cutting challenges facing food systems



When ignored or inadequately addressed, the three systemic problems spur and perpetuate hunger. These problems also weaken food systems, increasing the risk that they will collapse under shocks. Such collapses lead to crises that require food assistance. Cross-cutting challenges are linked to conditions and outcomes that determine and reflect the overall performance of the

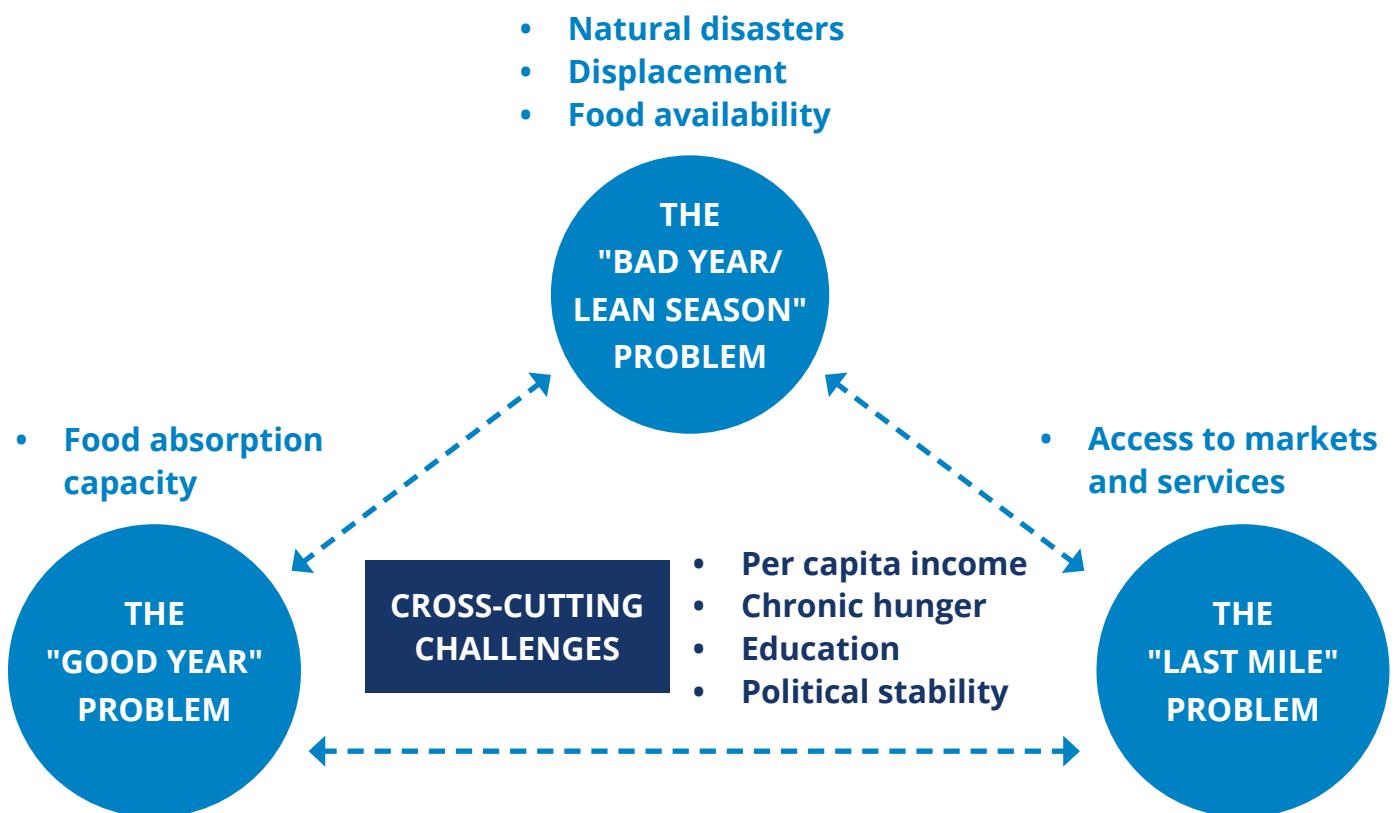
economy, with strong implications for food systems. The argument is that when the three systemic problems and cross-cutting challenges are inadequately dealt with, food crises emerge and deepen. On the other hand, when they are effectively addressed food crises can be prevented or diminished (WFP, 2017a).

Data

Complete and fully comparable data on WFP food assistance expenditures are available for a large number of countries between 2009 and 2015. This period therefore defines the time coverage of the analysis. Data on variables that precisely capture systemic problems and cross-cutting challenges are patchy (e.g. food prices), unreliable (e.g. employment), erratic (e.g. income inequality), or simply non-existent for many countries (e.g. gender inequality).

But a number of existing datasets yield ten highly relevant measures available for 77 WFP countries of operation plus an additional 75 non-WFP countries for a total of 152 countries over this period (Figure 8 and Table 1). Three of the measures are linked to the bad year/lean season problem – natural disasters, uprooted populations and food availability; one is linked to the last mile problem – access to markets and services; and one is linked to the good year problem – food absorption capacity. Five are cross-cutting – per capita income, chronic hunger, education, political stability and country size.

FIGURE 8: The three systemic problems and cross-cutting challenges are captured by several phenomena





A girl attends WFP nutrition activities in Karamoja, Uganda.

WFP/Claire Nevill

The expected relationship between each factor and food assistance expenditures is shown in Table 1. On the basis of trends and patterns of food assistance reported in WoFA 2017 (WFP, 2017a), higher food assistance expenditures are expected to be associated with higher shares of populations that are affected by natural disasters, that are uprooted and that are chronically hungry. Conversely, higher food availability, greater access to markets and

services, greater capacity to absorb food and agricultural surpluses, higher national income, higher education levels and greater political stability are expected to be associated with lower food assistance expenditures. The expected relationship between food assistance expenditures and the size of a country in terms of population is not conclusive *a priori* – it is positive in some cases, negative in others.

TABLE 1: The measures capturing the systemic problems and cross-cutting challenges have distinct expected relationship to food assistance expenditures

PROBLEM	DRIVER/ INFLUENCER	MEASURE	GLOBAL AVERAGE 2009	GLOBAL AVERAGE 2015	EXPECTED RELATIONSHIP
Bad year/ lean season problem	Natural disasters	Share of population affected by natural disasters (%)	1.69	3.31	
	Displacement	Share of population uprooted (%)	0.62	1.18	
	Food availability	Cereal yield growth rate (%)	8.84	2.62	
Last mile problem	Access to markets and services	Road density (km/1,000 people)	3.4	11.01	
Good year problem	Food absorption capacity	(AgGDP/Urban Population) growth rate (%)	1.6	1.33	
Cross- cutting	Per capita income	GDP per capita, PPP (constant 2011 international \$)	15 876	17 367	
	Chronic hunger	Prevalence of undernourishment (%)	12.14	11.34	
	Educational achievement	Years of schooling (years)	7.84	8.35	
	Political stability	Index of political stability (score)	-0.08	-0.09	
	Size of country	Total population (millions)	35.5	38.3	

Findings

The econometric analysis confirms most of the expected relationships.ⁱⁱ It also reveals that the outbreak and scale of food crises are driven by different sets of factors.

Causes of Outbreaks

A country is significantly more likely to experience a food crisis if a share of its population is affected by natural disasters, displaced and/or chronically hungry; in each case, the larger the share, the greater the likelihood. Outbreaks are less likely where food availability, food absorption capacity and access to markets and services are better (Figure 9). Food availability and chronic hunger are important drivers of outbreaks, but do not influence the scale of food crises.

Determinants of Scale

Just as the share of a population affected by natural disaster and displacement raises the probability of a food crisis, it also significantly increases the scale (Figure 10). And just as greater access to markets and services lowers the probability of outbreaks, it also significantly reduces their scale. National income is not a significant determinant of food crises, but it exerts a significant impact on their scale: the higher the income, the lower the scale. Similarly, education level and political stability do not exert significant influences on the probability of food crises – but they are significant determinants of the scale of food crises when they occur: the greater the level of education and the greater the political stability, the smaller the scale of food crises. The size of a country does not affect either the occurrence or the scale of food crises.

FIGURE 9: Some of the factors increase the risk of a food crisis outbreak, others decrease it and others have no quantifiable impact

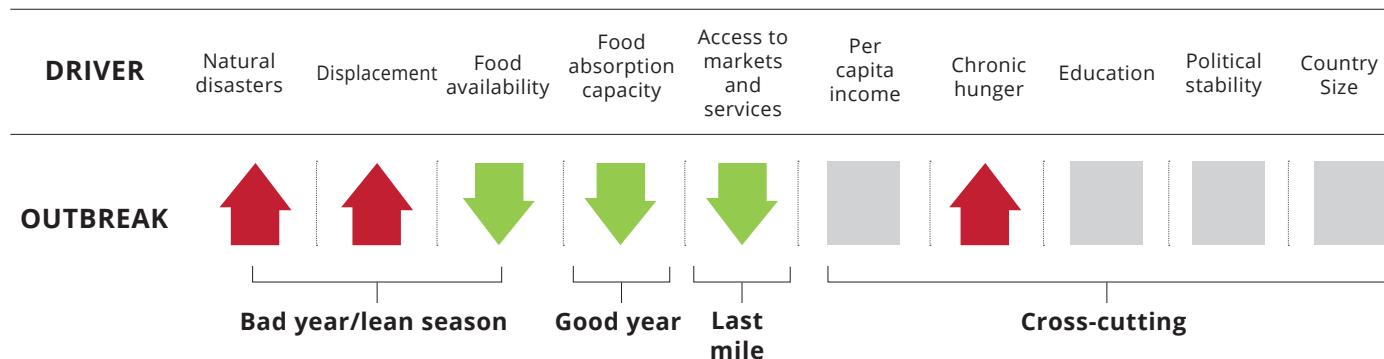
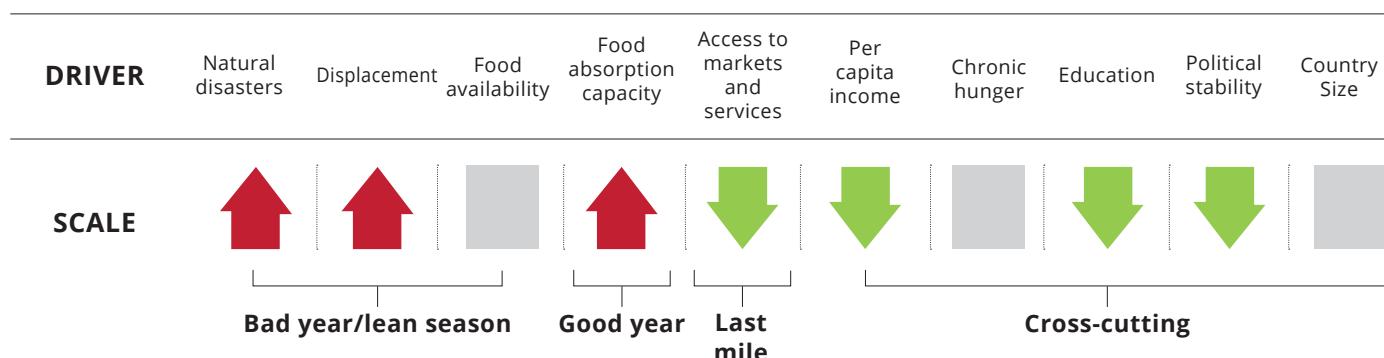


FIGURE 10: A different array of factors can increase the scale of food crises, while others decrease it and some have minimal impact

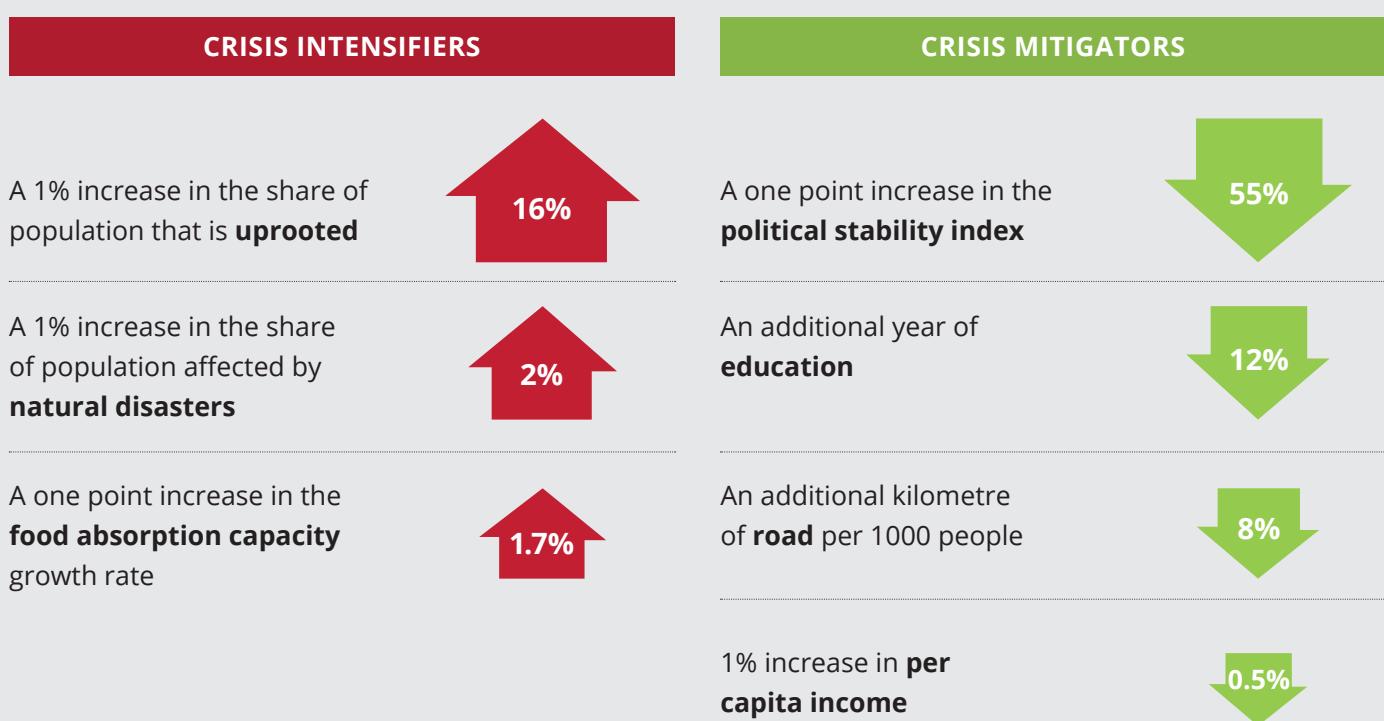


Estimated Impacts

The relative sizes of the quantitative impacts of these effects on food assistance expenditures differ significantly (Figure 11). It is not useful or appropriate to compare them directly. The underlying phenomena are highly diverse in nature, and the variables representing them are constructed in very different ways. The modelled changes are qualitatively dissimilar. But it is evident that none of these estimated impacts is trivial, and each is informative in its own right.

Political instability, displacement, poor education and sparse infrastructure appear to be especially potent drivers of food assistance expenditures, and thus also of the food crises these expenditures reflect. Increases in exposure to natural disasters and food system congestion lead to greater than proportionate increases in food assistance expenditures. Lower income increases food assistance expenditures, but less than proportionately.

FIGURE 11: The identified risk factors have different intensifying or mitigating effects on food crises



Potential Savings

Taken together, the set of estimated impacts presented in Figure 11 would have reduced WFP's global food assistance expenditures in 2016 by US\$ 5.1 billion (Table 2) – 96 percent of the US\$ 5.3 billion WFP actually spent that year. The savings would have been distributed across WFP's operational regions, and across income groupings according to underlying patterns of actual expenditures (Figure 12). The savings would have averaged US\$ 56.7 million per country, with a high of US\$ 562 million in South Sudan and a low of US\$ 63,400 in Togo.

At this time of political ferment and conflict around the world, the quantitative importance of political stability and peace cannot be over-stated. The country-level impacts of even a one-point improvement in the World Bank's Index on Political Stability and Absence of Violent Conflict are significant. On the basis of 2016 expenditures, if Yemen registered a one-point improvement on the World Bank index, there would be an annual reduction in WFP's annual food assistance expenditure of US\$ 205 million. In the Syrian Arab Republic a one-point increase on the index would save WFP US\$ 300 million. Similarly, in Somalia, WFP would save US\$ 85 million.

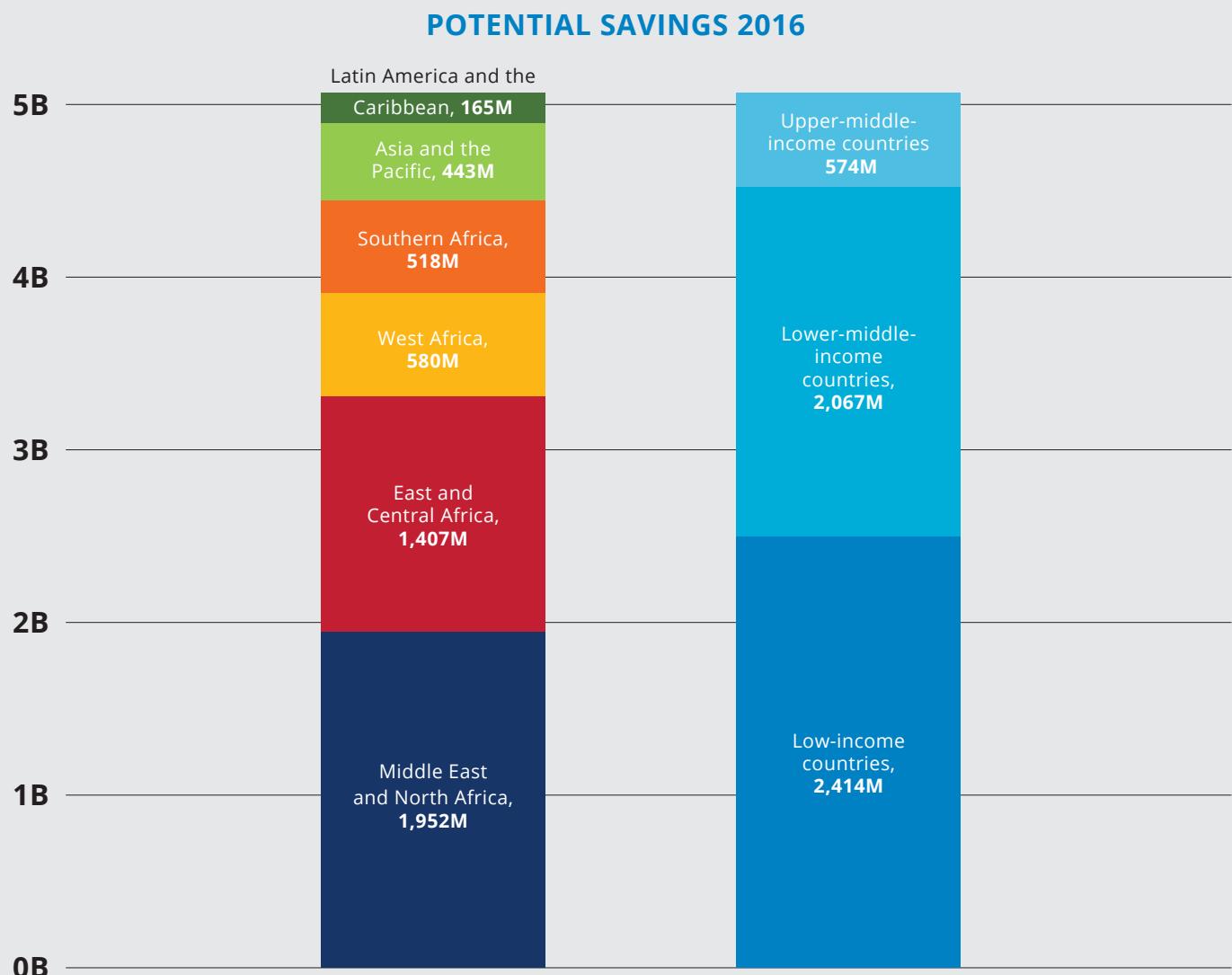
TABLE 2: Changes in crisis drivers could generate major decreases in food assistance expenditures

Change in crisis driver	Estimated % decrease in food assistance expenditures	Estimated associated decrease in annual food assistance expenditures in 2016 (US\$)
A one point increase in the political stability index	55	2.94B
A 1% decrease in uprooted share of population	16	841M
An additional kilometre of road for every 1000 people	12	435M
One additional year of education	8	652M
A 1% decrease in share of population affected by natural disasters	2	115M
A one point increase in food absorption capacity growth rate	1.7	89M
A 1% increase in per capita income	0.5	27M
TOTAL		5.1B

Internally displaced women
and children at Kabasa camp in
Dolow, Somalia.
WFP/Georgina Goodwin



FIGURE 12: The distribution of food assistance savings across regions and income groups fits with patterns of actual expenditures (US\$)



Patterns Across Regions and Income Groups

The countries included in the analysis can be ranked on the basis of each of the identified factors that significantly increase the risk of food crises.ⁱⁱⁱ Taking 2013 to 2015 as a reference point, as expected, these factors are more important in the crisis-affected countries where WFP was operational than they were in the other countries (Figure

13). The blue contour representing the crisis-affected countries lies wholly outside the red contour representing other countries. But the relative importance of each risk factor differs significantly by region and income group (Figures 14 and 15).

Although the analysis is completed at country level, examining regions and income groups builds understanding of patterns of exposure to different risk factors. Between 2013 and 2015, Eastern and Central Africa

(ECA) was the most exposed region, followed by West Africa (WA), Southern Africa (SA), the Middle East and Northern Africa (MENA), the Asia and the Pacific region (APR), and Latin America and the Caribbean (LAC).^{iv} In APR natural disasters, access to markets and services and education were fundamental. In LAC natural disasters, access to markets and services were also important, but so were political stability and chronic hunger. In MENA political stability and displaced populations were clearly significant; access to markets and services was also important. In WA education, income and food availability were prominent. Compared with other regions all risk factors mattered in ECA, with displaced populations, education and income especially prominent. In SA education, income and food availability were the major risk factors.

Low-income countries (LICs) were more exposed than lower-middle-income countries (LMICs), which were more exposed than upper-middle-income countries (UMICs) and high-income countries (HICs).^v In LICs education, access to markets and services, and chronic hunger were the major risk factors in addition to obvious challenges linked to low income levels. In LMICs education, political stability and access to markets and services were major factors. In UMICs and HICs political stability, displaced populations and natural disasters are most important. These differences across regions and income groups may have changed in the years since 2015. For instance, political stability would likely be much more important in West Africa. Unfortunately, the data required to identify such changes are not yet available.

FIGURE 13: The factors that increase the risk of food crises are more important in WFP's operational countries than others

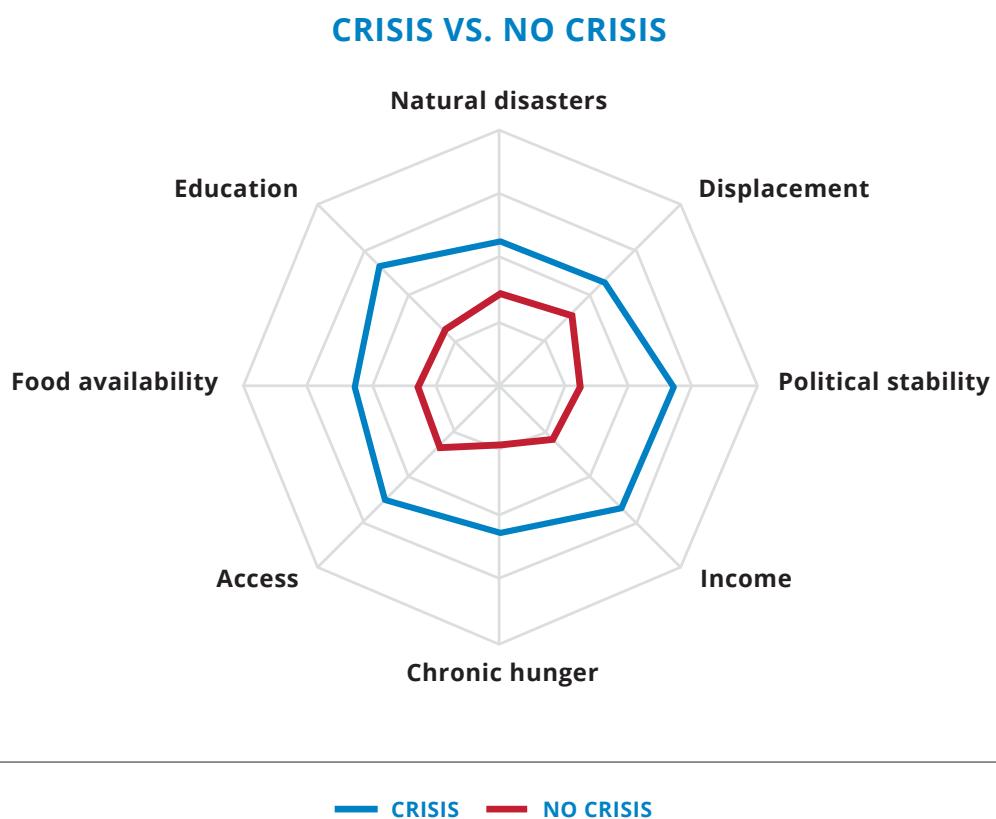
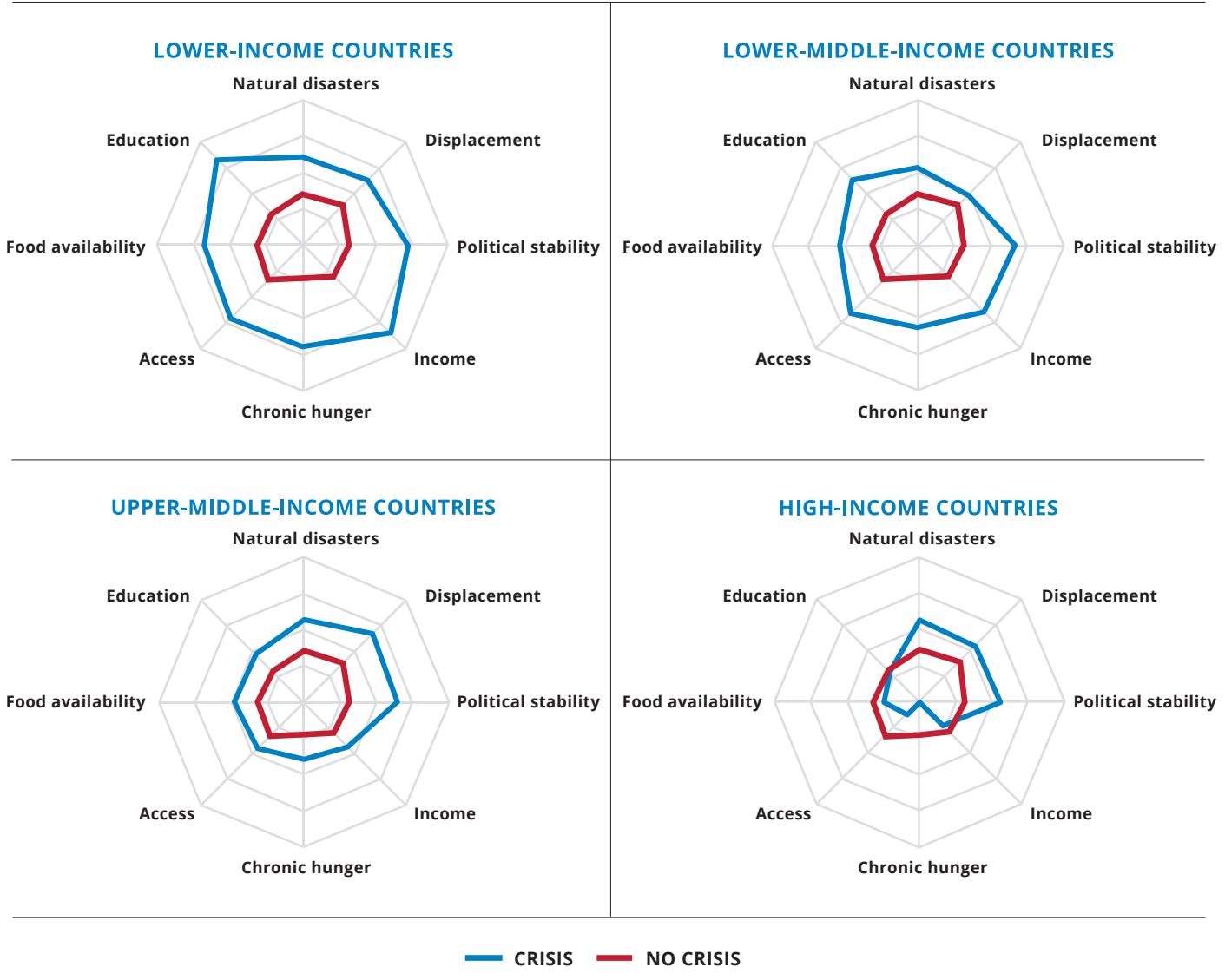


FIGURE 14: Risk factors for food crises differ by region



FIGURE 15: Risk factors for food crises differ by income group



Dividends at the Humanitarian-Development-Peace Nexus

The findings add important insight into challenges and opportunities at the so-called humanitarian-development-peace nexus (World Bank, 2016). The basic recognition is that the identified significant risk factors can be clustered under each of the three dimensions of the nexus (Figure 16). This allows for a simple but coherent estimation of

a food assistance-related humanitarian-development-peace “dividend.” First, the estimated impacts shown in Table 2 are applied to all expenditures by WFP between 2009 and 2016 in all of the countries in which it operated. Second, the computed savings associated with each risk factor are clustered as shown in Figure 16. The results are summarized in Figure 17.

FIGURE 16: Food crisis risk factors straddle the humanitarian-development-peace nexus





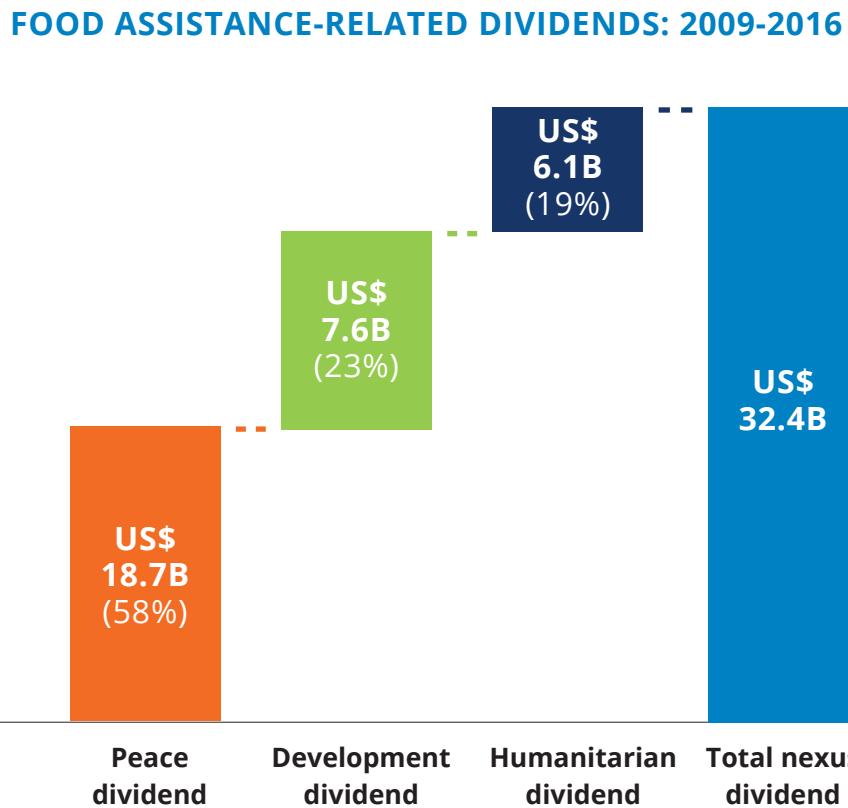
Mothers and their children
shop at a fresh food market in
Bhashantek, Bangladesh.

WFP/Wahid Adnan

The food assistance “nexus dividend” from 2009 to 2016 is estimated at US\$ 32.4 billion. This translates into an average dividend of US\$ 4.04 billion per year, or US\$ 49.7 million per country per year. The peace dividend accounts for the bulk of the total: US\$ 18.7 billion overall, US\$ 2.33 billion per year and US\$ 28.7 million per country per year. This reflects the size of the underlying impact of political instability on food crises. The development and humanitarian dividends are smaller but nonetheless significant: development – US\$ 953 million per year and US\$ 11.7 million per country per year; humanitarian – US\$ 759 million per year and US\$ 9.3 million per country per year.

The focus on international food assistance expenditures by WFP renders these estimates of nexus dividends illustrative rather than definitive. Not only is WFP only one of many providers of international food assistance, national expenditures are far greater than international flows. Nevertheless, the estimates – which represent the first unified attempt to quantify humanitarian-development-peace dividends – are highly informative with regard to the magnitude of potential benefits linked to action and investment at the nexus.

FIGURE 17: Estimated food assistance-related humanitarian-development-peace dividends between 2009 and 2016 are significant



Priorities for Action and Investment

There are similarities and differences in priorities for preventing outbreaks of food crises and for containing them (Table 3). Each component of the prevention agenda requires short-term and long-term action and investment to address the effects of identified risk factors. The identified significant risk factors generate challenges and opportunities in several sectors, but because WoFA 2018 focuses on food crises the priorities in Table 3 relate primarily to challenges and opportunities in the food sector.

Priorities are inherently country-specific, but regional patterns are apparent (Figure 18). Measures to improve political stability, access to markets and services, incomes and education are important in a number of regions. Coping with risks posed by displaced populations is

paramount in MENA and ECA, where complex emergencies dominate food assistance. Measures to address chronic hunger are particularly important in SA, and efforts to increase food availability are especially important in WA. Effective management of and response to natural disasters are particularly significant in APR and LAC.

Priorities also vary by income group (Table 4). The higher a country's income level, the greater the importance of initiatives to promote political stability and the capacity to manage natural and man-made shocks. The lower a country's income level, the more decisive are measures to address factors that induce vulnerability such as access to markets and services, chronic hunger, and education.



Children at a WFP food distribution in Mboro, South Sudan.

WFP/Lara Atanasijevic

TABLE 3: Limiting the scale of food crises requires both short-term and long-term action and investment

Identified risk factor	Time frame	Priority actions and investments to prevent food crises	Priority actions and investments to limit the scale of food crises	Sources
Displacement	Short term	<ul style="list-style-type: none"> Provide timely and targeted support to shock-affected populations before they migrate Support host communities 	<ul style="list-style-type: none"> Provide timely and targeted support to shock-affected populations before they migrate Support host communities 	Mabiso et al. (2014); UNHCR (2016); WFP (2017b); World Bank (2011).
	Long term	<ul style="list-style-type: none"> Enhance emergency preparedness and response systems Improve livelihood resilience for vulnerable groups 	<ul style="list-style-type: none"> Enhance emergency preparedness and response systems Improve livelihood resilience for vulnerable groups 	
Natural disasters	Short term	<ul style="list-style-type: none"> Provide timely and targeted support for affected populations 	<ul style="list-style-type: none"> Provide timely and targeted support for affected populations 	CRS (2013); DFID (2011); FEWS (2017); ISAC (2013); World Bank (2015a).
	Long term	<ul style="list-style-type: none"> Enhance emergency preparedness and response systems Integrate enhanced disaster risk management, reduction and transfer mechanisms and instruments into shock-responsive social protection systems 	<ul style="list-style-type: none"> Enhance emergency preparedness and response systems Integrate enhanced disaster risk management, reduction and transfer mechanisms and instruments into shock-responsive social protection systems 	
Food availability	Short term	-	Not applicable	CFS (2015); FAO (2013); Reardon, T. and Zilberman, D. (2016).
	Long term	<ul style="list-style-type: none"> Improve agricultural research and extension systems Increase the efficiency and effectiveness of public food reserves 	Not applicable	
Food absorption	Short term	Not applicable	<ul style="list-style-type: none"> Liberalize domestic and cross-border trade 	Abrahamsson, M. and Rehme, J. (2010); Del Ninno et al. (2003); Macharia, J. (2015); World Bank (2012).

Identified risk factor	Time frame	Priority actions and investments to prevent food crises	Priority actions and investments to limit the scale of food crises	Sources
Food absorption	Long term	Not applicable	<ul style="list-style-type: none"> Expand aggregation and financing options for smallholder farmers and small and medium scale agrifood enterprises Increase access to improved storage and post-harvest management technologies and practices Upgrade technical and organizational capacities of food supply chain service providers, especially aggregators Expand processing capacity 	Abrahamsson, M. and Rehme, J. (2010); AGRA (2012); Reardon, T. (2015).
	Short term	-	<ul style="list-style-type: none"> Liberalize domestic and cross-border trade 	
Access to markets and services	Long term	<ul style="list-style-type: none"> Extend and upgrade road and communication infrastructures, including market information systems Expand and upgrade physical infrastructure of food markets and supply chains Upgrade technical and organizational capacities among food supply chain service providers, especially aggregators 	<ul style="list-style-type: none"> Extend and upgrade road and communication infrastructures, including market information systems Expand and upgrade physical infrastructure of food market and supply chain Upgrade technical and organizational capacities of food supply chain service providers, especially aggregators 	FAO, IFAD and WFP (2015); FAO (2013); World Bank (2015b).
	Short term	<ul style="list-style-type: none"> Expand nutrition-specific interventions targeting vulnerable groups 	Not applicable	
Chronic hunger	Long term	<ul style="list-style-type: none"> Expand nutrition education for vulnerable groups Develop nutrition-sensitive food systems and value chains Promote supply and uptake of locally produced fortified nutritious foods Integrate nutrition-specific and nutrition-sensitive platforms in social protection systems Improve design and enforcement of food quality and safety standards 	Not applicable	Alderman, H. and Bundy, D. (2012); Hoddinott, J. and de Brauw, A. (2011).
	Short term	Not applicable	<ul style="list-style-type: none"> Expand school meals programmes and make meals more nutritious 	
Education	Long term	Not applicable	<ul style="list-style-type: none"> Integrate nutrition education into school curricula 	

Identified risk factor	Time frame	Priority actions and investments to prevent food crises	Priority actions and investments to limit the scale of food crises	Sources
Income	Short term	Not applicable	<ul style="list-style-type: none"> Develop and strengthen shock-responsive social protection systems 	Del Ninno et al. (2009); De Janvry, A. and Sadoulet, E. (2012); Von Braun, J. and Thorat, S. (2014); World Bank (2015b).
	Long term	Not applicable	<ul style="list-style-type: none"> Enhance productive safety nets within shock responsive social protection systems 	
Political stability	Short term	Not applicable	<ul style="list-style-type: none"> Advocate strongly for adherence to humanitarian principles in conflict-affected areas to enhance access to affected populations Leverage and coordinate food security interventions with peace-building and negotiation processes 	GHAR (2016); Hopp-Nishanda. (2012); Kumar, C. and De la Haye, J. (2012); United Nations (2015a); World Bank (2011).
	Long term	Not applicable	<ul style="list-style-type: none"> Promote political tolerance and conflict resolution Leverage food-oriented community based participatory approaches to strengthen inclusive local institutions 	



FIGURE 18: Priorities for action and investment vary by region, 2013-2015

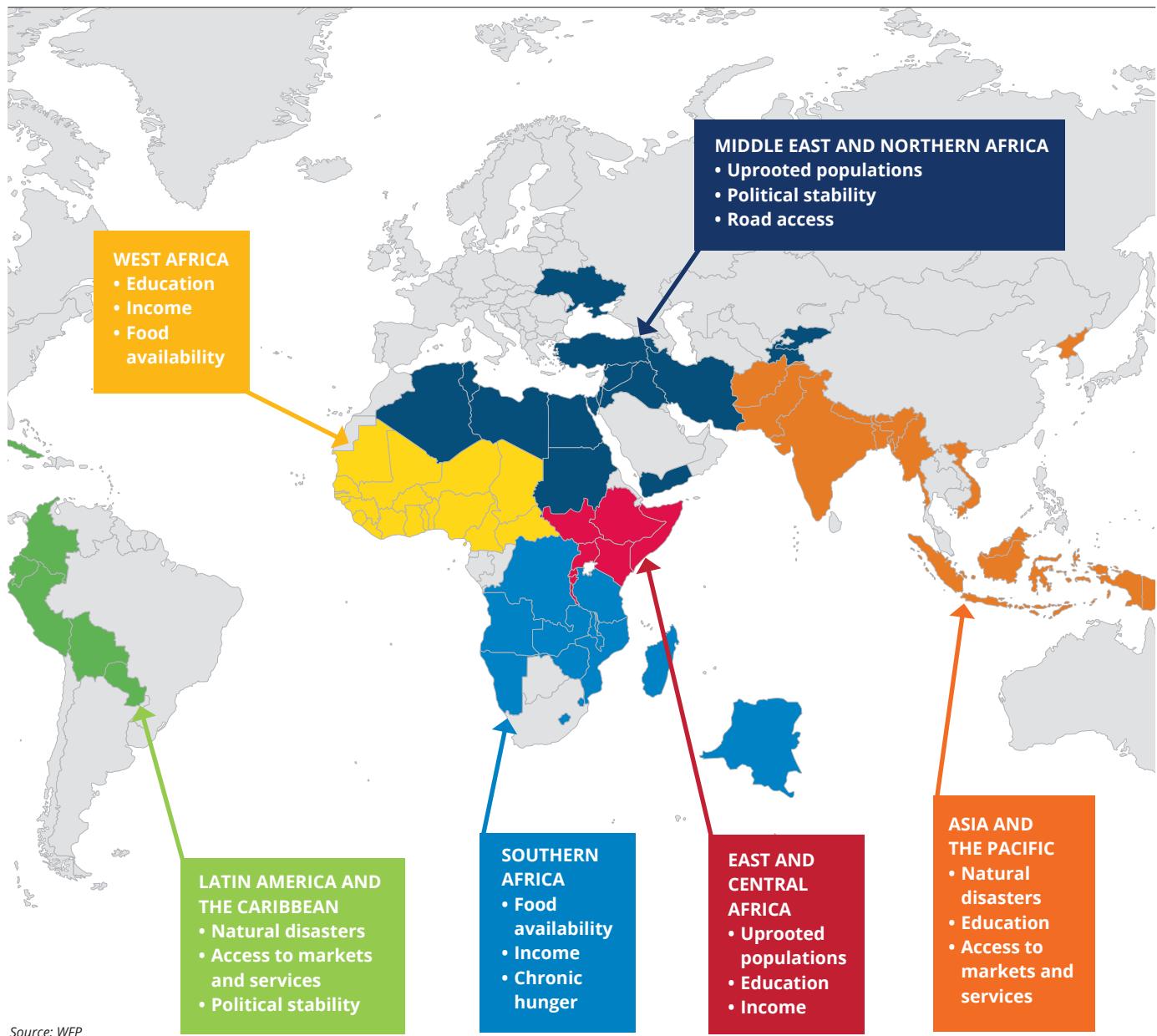


TABLE 4: Priorities for action and investment vary by income level, 2013-2015

LOWER-INCOME COUNTRIES	LOWER-MIDDLE-INCOME COUNTRIES	UPPER-MIDDLE-INCOME COUNTRIES	HIGH-INCOME COUNTRIES
<ul style="list-style-type: none"> Income Education Chronic hunger 	<ul style="list-style-type: none"> Political stability Education Access to markets and services 	<ul style="list-style-type: none"> Uprooted populations Political stability Access to markets and services 	<ul style="list-style-type: none"> Natural disasters Uprooted populations Political stability

Conclusions

The pioneering demonstration of “food assistance analysis” in WoFA 2018 confirms that food crises have short-term and long-term drivers. Preventing food crises entails effective short-term management and responses to factors that cause spikes in hunger, along with long-term investments to combat the underlying drivers of hardship and exclusion. Additional analysis with more complete and refined data is required to implement the modelling strategy in full, but the findings affirm its core logic.

To prevent food crises, countries must recognize: i) that in any given year segments of their food systems will be experiencing bad years, lean seasons or good years; and ii)

that the negative impacts of bad years, lean seasons and good years will be felt most strongly in the communities and households in the last mile. Four general rules emerge for preventing food crises (Figure 19):

1. Manage the current bad year or lean season and prepare for the next one, focusing on people in the last mile.
2. Leverage the current good year and prepare for the next one, again focusing on people in the last mile.
3. Address the root causes of isolation and exclusion in the last mile.
4. Address cross-cutting challenges, especially those with a political dimension.

FIGURE 19: Preventing food crises entails management, leverage and preparation for food system outcomes



A core argument of WoFA 2018 is that international food assistance signals the existence of food crises. The analysis shows that these crises are linked to myriad performance gaps in national food sectors, economies, political systems and social organization. The analysis also shows that international food assistance reveals challenges

and opportunities at the humanitarian-development-peace nexus: the greater the level of international food assistance, the greater the challenges and opportunities. The identified priorities for action and investment to prevent food crises can therefore justifiably be interpreted as priorities to achieve major dividends at the nexus.



This shop vendor in Umerkot in Pakistan participates in WFP's blockchain-based cash-based transfer programme.

WFP/Alexandra Alden

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Technical Annex

DATA DESCRIPTION

1. FOOD ASSISTANCE EXPENDITURES

These are WFP's total direct expenditures in US\$, not including Indirect Support Costs.

Source: WFP Information Network and Global Systems (WINGS), accessed in January 2017.

2. SHARE (%) OF POPULATION AFFECTED BY NATURAL DISASTERS

Total number of people affected by natural disasters divided by total population.

Source: EM-DAT: The Emergency Events Database - Université catholique de Louvain (UCL) - CRED, D. Guha-Sapir - www.emdat.be, Brussels, Belgium

Construction: The total number of people affected by natural disasters is the sum of the injured, homeless, and affected.

Injured: People suffering from physical injuries, trauma or an illness requiring immediate medical assistance as a direct result of a disaster.

Homeless: Number of people whose house is destroyed or heavily damaged and therefore need shelter after an event.

Affected: People requiring immediate assistance during a period of emergency, i.e. requiring basic survival needs such as food, water, shelter, sanitation and immediate medical assistance.

3. SHARE (%) OF POPULATION UPROOTED

This is the total number of refugees and internally displaced persons by destination country divided by total population.

Source: UNHCR Population Statistics Reference Database

Construction: Refugees include individuals recognised under the 1951 Convention relating to the Status of Refugees; its 1967 Protocol; the 1969 OAU Convention Governing the Specific Aspects of Refugee Problems in Africa; those recognised in accordance with the UNHCR Statute; individuals granted complementary forms of protection; or those enjoying temporary protection. Since 2007, the refugee population also includes people in a refugee-like situation.

Internally displaced persons (IDPs) are people or groups of individuals who have been forced to leave their homes or places of habitual residence, in particular as a result of, or in order to avoid the effects of armed conflict, situations of generalised violence, violations of human rights, or natural or man-made disasters, and who have not crossed an international border. For the purposes of UNHCR's statistics, this population only includes conflict-generated IDPs to whom the Office extends protection and/or assistance. Since 2007, the IDP population also includes people in an IDP-like situation. For global IDP estimates, see www.internal-displacement.org

4. CEREAL YIELD GROWTH RATE (LAG1)

This is the year-on-year growth rate of country-level cereal yield.

Source: Food and Agriculture Organization of the United Nations (FAO)

5. ROAD DENSITY (KM PER 1000 PEOPLE)

Road density is computed as the ratio of the length in kilometers of the road network divided by the population measured in thousands. The cumulated length of the road network includes motorways, highways, and main or national roads, secondary or regional roads, and all other roads in a country. It is computed as a 3-year moving average.

Source: OSM © OpenStreetMap contributors.

6. GDP PER CAPITA, PPP (CONSTANT 2011 INTERNATIONAL \$)

GDP per capita based on purchasing power parity (PPP). PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States.

Source: World Bank: World Development Indicators: <https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD>

Construction: GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2011 international dollars.

7. MEAN YEARS OF SCHOOLING

Average number of years of education received by people aged 25 and older, converted from education attainment levels using official durations of each level.

Source: HDRO based on UNESCO Institute for Statistics (2016), Barro and Lee (2016), ICF Macro Demographic and Health Surveys and UNICEF's Multiple Indicator Cluster Surveys.

8. TOTAL POPULATION

Total population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship. The values shown are midyear estimates.

Source: World Bank, WDI.

9. PREVALENCE OF UNDERNOURISHMENT

The prevalence of undernourishment shows the percentage of the population whose food intake is insufficient to meet dietary energy requirements continuously. The prevalence of undernourishment is a three-year moving average that measures food deprivation based on average food available for human consumption per person, the level of inequality in access to food, and the minimum calories required for an average person.

Source: Food and Agriculture Organization of the United Nations (FAO), State of Food Insecurity in the World.

10. POLITICAL STABILITY AND ABSENCE OF VIOLENCE/TERRORISM

The Political Stability and Absence of Violence/Terrorism indicator measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. Political Stability and Absence of Violence/Terrorism is part of the process by which governments are selected, monitored, and replaced.

Source: Annually computed data available at the World Bank. Detailed documentation of the WGI, interactive tools for exploring the data, and full access to the underlying source data available at www.govindicators.org

"NUMBER OF FOOD ASSISTANCE PROGRAMMES"

"Number of food assistance programmes" is the number of years in which a country receives food assistance in the 2009-2016 period.

Source: WFP Information Network and Global Systems (WINGS), accessed in January 2017.

Estimation Methodology

Analysing the determinants of food assistance allocations contends with the fact that not only do countries receive different amounts of aid, many countries do not receive any aid at all. In other words, two stages can be distinguished in the process of aid allocation. The first stage is the OUTBREAK stage where it is determined which countries receive aid. The second stage is the SCALE stage, where it is determined how much aid is allocated to a country, which has been selected as an aid recipient in the first stage.

We frame our econometric analysis to ensure that we not only account for both decisions, but also account for the fact that they are interdependent.

We follow the lead of McGillivray and Oczkowski (1992) and Neumayer (2003) in aid allocation literature, and adopt Heckman's (1979) sample selection model, which explicitly allows the error terms from both stages of aid allocation to be correlated. In our application, the two stages are estimated jointly via maximum likelihood estimation. Regression estimates using the non-selection hazard (what Heckman (1979) referred to as the inverse of the Mills' ratio from the selection equation) provide starting values for maximum likelihood estimation.

The general model (ignoring recipient/time detail) is therefore given as:

$$\begin{aligned} y_i &= \mathbf{x}_i\beta + u_{1i} && \text{Scale stage} \\ \mathbf{z}_i\gamma + u_{2i} &> 0 && \text{Outbreak stage} \end{aligned}$$

Where:

$$\begin{aligned} u_1 &\sim N(0, \sigma) \\ u_2 &\sim N(0, 1) \\ \text{corr}(u_1, u_2) &= \rho \end{aligned}$$

The log-likelihood function for observation i , $\ln l_i = l_i$, is

$$l_i = w_i \ln \Phi \left\{ \frac{\mathbf{z}_i\gamma + (y_i - \mathbf{x}_i\beta)\rho/\sigma}{\sqrt{1-\rho^2}} \right\} - \frac{w_i}{2} \left(\frac{y_i - \mathbf{x}_i\beta}{\sigma} \right)^2 - w_i \ln(\sqrt{2\pi}\sigma)$$

if y_i observed

and

$$l_i = w_i \ln \Phi(-\mathbf{z}_i\gamma)$$

if y_i not observed

Where $\Phi(\cdot)$ is the standard cumulative normal and w_i is an optional weight for observation i . In the maximum likelihood estimation σ and p are not directly estimated. Directly estimated are $\ln\sigma$ and $\operatorname{atanh} p$:

$$\operatorname{atanh} p = \frac{1}{2} \ln \left(\frac{1+p}{1-p} \right)$$

The standard error of $\lambda = p\sigma$ is approximated through the propagation of error (delta) method; that is,
 $\text{Var}(\lambda) \approx \mathbf{D} \text{Var}\{\operatorname{atanh} p \ln\sigma\} \mathbf{D}'$

Where \mathbf{D} is the Jacobian of λ with respect to $\operatorname{atanh} p$ and $\ln\sigma$.

On these grounds, we estimate the following empirical model.

The outbreak stage is expressed as follows:

$$\begin{aligned} \text{Selection}_{it} = & \alpha_0 + \alpha_1 \ln(\text{GDP per capita})_{it} + \\ & \alpha_2 \text{share of population affected by natural disasters}_{it} + \\ & \alpha_3 \text{share of population uprooted}_{it} + \alpha_4 \text{prevalence of} \\ & \text{undernourishment}_{it} + \alpha_5 \text{cereal yield growth rate}_{it-1} + \alpha_6 \text{road} \\ & \text{density}_{it} + \alpha_7 \text{political stability}_{it} + \alpha_8 \text{mean years of schooling}_{it} + \\ & \alpha_9 \text{food absorption capacity growth rate}_{it} + \\ & \alpha_{10} \text{Number of food assistance programmes}_{t-1} + u_{it} \end{aligned} \quad (1)$$

The scale stage is expressed as follows:

$$\begin{aligned} \ln(\text{food assistance expenditures})_{it} = & \beta_0 + \beta_1 \ln(\text{GDP per capita})_{it} + \\ & \beta_2 \text{share of population affected by natural disasters}_{it} + \\ & \beta_3 \text{share of population uprooted}_{it} + \beta_4 \text{prevalence of} \\ & \text{undernourishment}_{it} + \beta_5 \text{cereal yield growth rate}_{it-1} + \\ & \beta_6 \text{road density}_{it} + \beta_7 \text{political stability}_{it} + \beta_8 \text{mean years of} \\ & \text{schooling}_{it} + \beta_9 \text{food absorption capacity growth rate}_{it} + v_{it} \end{aligned} \quad (2)$$

Regional and year dummies are included in both equations but are suppressed for brevity in Table B. The data for the 7 years are pooled. To allow for the use of robust standard errors and to correct for unspecified serial correlation within countries, while assuming independence between them, the data are clustered by country.

The Heckman two-step estimator requires an exclusionary variable that has a significant impact upon the first-step (the outbreak stage), but not upon the second step (the scale stage) for the purpose of model identifiers. "Number of food assistance programs" is our exclusionary variable. This variable is defined as the number of years in which a country receives food assistance in the period under analysis. For example, if a country participates in food assistance only twice during the period 2009-2015 then "number of food assistance programs" takes a value of two.

The rationale is that the number of years in which a country participates in food assistance programs signals the "fixed cost" incurred by WFP to set up a programme in that country. Hence the more frequently the country is selected as a recipient of food assistance programs the more likely it will continue to receive assistance. Nevertheless, as the fixed cost has been paid and become sunk, it should not affect how much the country receives. Therefore, it is reasonable to exclude the variable from the level equation.

TABLE A: Overall descriptive statistics

Variable	Observations	Mean	Standard deviation	Min	Max
Food assistance expenditures (thousand US\$)	648	48 114.26	86 451.84	0.5	546 824.90
Share of population affected by natural disasters (%)	1 530	1.87	6.74	-	95.30
Share of population uprooted (%)	1 531	0.86	2.82	-	40.52
GDP per capita, PPP (constant 2011 international \$)	1 466	16 691.03	18 755.08	588.39	129 349.90
Prevalence of undernourishment (%)	1 166	11.51	11.02	2.40	58.60
Cereal yield growth rate (%)	1 227	4.39	24.61	- 83.89	337.36
Cereal yield (kg per hectare)	1 228	3 478.26	4 653.85	177.80	74 205.60
Road density (km/1 000 people)	1 319	7.51	9.63	0.03	81.25
Food absorption capacity growth rate (%)	1 376	2.15	8.18	- 49.30	59.60
Political stability (score)	1 526	- 0.09	0.99	- 3.31	1.55
Population (millions)	1 531	37.10	138.14	0.01	1 378.67
Mean years of schooling (years)	1 304	8.13	3.11	1.40	13.40

TABLE B: Model Estimation Results

	Stage 1 (Outbreak)		Stage 2 (Scale)	
	Coeff.	Rob. Std. Err.	Coeff.	Rob. Std. Err.
Ln(food assistance expenditures)				
Share of population affected by natural disasters	0.061**	(0.024)	0.021**	(0.010)
Share of population uprooted	0.168***	(0.057)	0.147***	(0.044)
Prevalence of undernourishment (%)	0.071*	(0.041)	0.011	(0.011)
Cereal yield growth rate (Lag1)	-0.0058*	(0.0027)	0.00095	(0.0013)
Food absorption capacity growth rate	-0.026*	(0.014)	0.017**	(0.008)
Road access (km/1000 people)	-0.088**	(0.038)	-0.085***	(0.026)
Ln(GDP per capita)	0.295	(0.273)	-0.509**	(0.237)
Political stability	0.069	(0.219)	-0.807***	(0.203)
Ln(population)	0.076	(0.075)	0.135	(0.128)
Mean years of schooling	0.008	(0.055)	-0.131*	(0.069)
Year dummies	yes		yes	
Region dummies	yes		yes	
Number of food assistance programs	0.77***	(0.097)		
Constant	-6.94***	(2.77)	17.35***	(2.69)
Observations	1053			
Wald test of indep. eqns.	p = 0.0001			

*p<0.1; **p<0.05; ***p<0.01

TABLE C: Country averages for each identified risk factor, 2009-2016

Country	Food assistance expenditures (thousand USD)	Share of population affected by natural disasters (%)	Share of population uprooted (%)	GDP per capita, PPP (constant 2011 international \$)	Prevalence of undernourishment (%)	Cereal yield growth rate (%)	Cereal yield (kg per hectare)	Road density (km/1000 people)	Food absorption capacity growth rate (%)	Political stability (score)	Population (millions)	Mean years of schooling (years)
Afghanistan	142 611.22	0.93	2.56	1 715.94	22.91	2.71	1 894.67	2.66	6.13	-2.56	31.26	3.36
Albania	127.18	1.28	0.00	10 462.27	6.36	4.04	4 662.17	6.32	3.04	0.06	2.90	9.40
Algeria	18 149.57	0.01	0.25	13 263.00	5.40	4.29	1 484.47	2.82	7.96	-1.22	37.99	7.46
Andorra		-	-					6.66		1.32	0.08	9.85
Angola	23.92	1.21	0.07	6 051.75	17.00	11.92	681.50	1.60		-0.37	25.60	4.81
Antigua and Barbuda		0.66	0.00	19 620.90	27.39	-0.06	1 596.53	11.71	1.24	0.94	0.10	9.26
Argentina		0.20	0.01	18 824.39	3.76	3.62	4 371.56	9.57	1.86	0.03	42.32	9.73
Armenia	2 932.43	0.33	0.35	7 477.81	5.06	3.78	2 626.31	5.89	4.33	-0.08	2.90	11.26
Australia		0.18	0.13	42 687.20	2.50	9.12	1 937.30	30.00	2.26	0.95	22.91	13.03
Austria		0.00	0.68	43 842.61	2.50	3.85	6 622.47	32.29	0.07	1.18	8.49	11.09
Azerbaijan		0.13	6.49	16 123.46	2.51	-0.61	2 527.14	2.39	3.02	-0.54	9.35	11.10
Bahamas, The		0.59	0.00	22 461.92	11.23	11.35	6 935.61	12.47	-2.74	1.01	0.37	10.90
Bahrain		-	0.02	42 390.36				2.36	2.68	-0.86	1.31	9.11
Bangladesh	44 544.06	1.96	0.15	2 790.10	16.39	2.00	4 350.04	0.13	3.76	-1.34	156.67	5.09
Barbados		0.11	0.00	15 390.52	4.74	0.36	2 878.83	7.43	-1.63	1.15	0.28	10.09
Belarus		0.06	0.01	16 936.20	2.50	4.90	3 309.96	16.40	1.92	0.10	9.48	11.99
Belgium		0.00	0.24	41 190.25	2.50	1.55	9 195.81	11.14	-1.27	0.78	11.11	11.27
Belize		1.05	0.02	7 920.01	6.00	4.87	3 177.19	13.34	-1.86	0.09	0.34	10.49
Benin	2 740.18	1.42	0.04	1 907.52	11.23	6.08	1 352.91	1.27	1.91	0.21	9.88	3.06
Bhutan	1 554.90	0.34	-	7 048.58		7.87	2 741.23	2.88	2.71	0.87	0.76	2.67
Bolivia, Plurinational State of	3 240.10	2.87	0.01	5 966.49	23.59	3.10	2 079.99	8.42	3.31	-0.37	10.32	8.01
Bosnia and Herzegovina	22.92	3.71	2.97	10 243.10	2.51	4.98	3 930.43	9.22	0.32	-0.49	3.63	8.24
Botswana		0.06	0.13	14 540.03	26.57	-5.52	348.40	18.61	0.52	1.05	2.11	9.06
Brazil		2.28	0.00	14 721.79	2.50	4.19	4 213.23	3.96	1.71	-0.13	201.40	7.24
Brunei Darussalam		-	-	78 255.36	2.83	4.73	785.44	3.96	1.46	1.19	0.40	8.87
Bulgaria		0.08	0.12	16 114.31	4.76	17.17	4 125.86	9.91	-2.15	0.21	7.29	10.67
Burkina Faso	21 462.19	5.36	0.12	1 496.56	20.46	4.31	1 097.86	1.93	0.58	-0.54	16.85	1.40
Burundi	22 496.83	0.31	1.43	767.22		0.56	1 225.73	0.93	1.90	-1.57	9.48	2.81
Cambodia	15 191.53	5.29	0.00	2 906.35	17.53	3.13	3 074.47	1.96	2.53	-0.17	14.91	4.43
Cameroon	25 795.75	0.21	1.01	2 810.33	9.71	0.13	1 672.19	1.99	4.76	-0.75	21.40	5.67
Canada		0.08	0.43	41 917.03	2.50	3.47	3 593.20	28.45	2.53	1.13	34.95	12.87
Cape Verde	261.86	0.57	-	5 937.38	14.90	23.51	220.83	4.16	1.32	0.76	0.52	4.51
Central African Republic	41 520.75	0.22	7.29	761.25	43.67	7.93	1 370.97	4.37	-4.00	-2.01	4.50	4.17
Chad	124 693.87	4.98	3.68	1 935.16	37.40	3.62	773.56	1.63	3.20	-1.31	12.94	2.09
Chile	55.53	3.03	0.01	21 153.19	3.97	1.60	6 331.59	8.45	1.66	0.48	17.38	9.87
China		6.00	0.02	11 548.54	10.93	1.47	5 690.43	0.60	4.00	-0.55	1 354.42	7.37
Colombia	15 098.79	1.25	10.71	11 994.90	9.43	2.52	3 582.23	2.40	2.05	-1.31	47.08	7.30
Comoros		1.49	-	1 419.81		0.39	1 342.93	1.15	1.74	-0.38	0.73	4.50
Congo	8 600.19	0.06	1.90	5 286.12	28.99	1.09	800.97	2.37	5.46	-0.42	4.69	6.19
Congo, Democratic Republic of the	122 031.09	0.08	3.43	673.00		0.01	771.77	2.55	3.60	-2.15	70.32	5.74
Costa Rica		0.75	0.35	13 945.29	5.41	1.12	3 619.21	5.02	1.58	0.64	4.68	8.44

Country	Food assistance expenditures (thousand USD)	Share of population affected by natural disasters (%)	Share of population uprooted (%)	GDP per capita, PPP (constant 2011 international \$)	Prevalence of undernourishment (%)	Cereal yield growth rate (%)	Cereal yield (kg per hectare)	Road density (km/1000 people)	Food absorption capacity growth rate (%)	Political stability (score)	Population (millions)	Mean years of schooling (years)
Côte d'Ivoire	18 843.31	0.01	0.99	2 905.79	15.77	5.45	1 998.67	1.55	2.45	-1.17	21.74	4.53
Croatia		0.04	0.03	20 485.48	2.51	5.74	5 645.74	15.96	-4.17	0.62	4.28	10.96
Cuba	3 140.19	0.56	0.00		2.50	0.79	2 545.71	5.14	1.19	0.43	11.40	11.43
Cyprus		-	0.41	31 788.90	4.57	-5.79	1 635.17	17.16	-2.87	0.54	1.14	11.51
Czech Republic		1.56	0.03	29 037.75	2.50	5.74	5 256.90	17.03	3.87	1.01	10.51	12.33
Denmark		-	0.34	44 617.27	2.50	2.82	6 276.74	20.95	3.85	0.96	5.61	12.86
Djibouti	10 328.03	2.94	2.02	2 818.46	18.66	1.60	1 895.99	2.22		-0.11	0.89	4.03
Dominica		4.93	-	10 145.54	5.64	1.89	1 521.40	13.05	2.59	1.01	0.07	7.86
Dominican Republic	873.40	2.41	0.01	12 042.33	14.90	-0.71	4 153.54	2.54	5.56	0.14	10.21	7.47
Ecuador	5 848.06	1.25	0.77	10 201.54	12.09	2.63	3 050.10	4.01	3.63	-0.37	15.54	7.91
Egypt	21 680.90	0.00	0.18	9 896.80	4.46	-0.20	7 163.76	0.87	3.06	-1.32	88.92	6.77
El Salvador	10 202.13	2.40	0.00	7 584.04	12.49	-0.41	2 690.16	1.72	0.61	0.03	6.24	6.43
Equatorial Guinea		-	-	32 162.00				3.63	6.99	0.04	1.06	5.50
Eritrea	18.40	-	0.11	1 446.22		6.45	527.14	0.60		-0.80	4.39	3.89
Estonia		-	0.01	25 416.69	2.67	3.80	2 976.21	31.23	3.04	0.66	1.32	12.34
Ethiopia	349 414.16	3.10	0.46	1 292.31	30.53	7.19	1 926.93	0.77	5.83	-1.52	93.77	2.43
Fiji	415.06	7.06	0.00	7 946.62	4.49	-0.73	2 452.66	4.42	0.37	0.16	0.88	10.04
Finland		-	0.21	39 521.82	2.50	0.51	3 552.80	42.92	2.40	1.29	5.42	10.69
France		0.10	0.36	37 342.19	2.50	2.44	7 162.79	18.51	0.23	0.39	65.82	11.19
Gabon		0.59	0.19	16 129.36	8.16	-0.53	1 601.97	5.56	3.64	0.19	1.79	7.83
Gambia	3 898.69	3.80	0.51	1 585.81	9.81	0.29	949.09	1.89	-0.51	-0.06	1.83	3.04
Georgia	1 193.65	0.54	7.64	7 935.08	7.57	2.97	1 978.91	13.38	1.51	-0.57	3.82	12.19
Germany		0.00	0.57	42 364.57	2.50	4.09	7 118.30	19.49	-3.80	0.82	81.30	13.07
Ghana	8 699.15	0.19	0.06	3 573.71	6.24	4.24	1 689.53	1.42	4.00	0.01	26.05	6.83
Greece	14.53	0.09	0.11	25 719.50	2.50	1.06	4 303.87	15.47	1.01	-0.17	10.98	10.33
Grenada		-	0.00	11 709.00	25.47	0.05	1 008.97	9.20	9.81	0.60	0.11	8.50
Guatemala	11 799.22	5.59	0.00	6 992.45	15.89	-1.93	2 066.96	1.30	3.46	-0.71	15.44	5.27
Guinea	19 783.79	0.18	0.10	1 210.79	17.33	-2.38	1 278.53	2.48	5.19	-1.18	11.44	2.20
Guinea-Bissau	5 386.57	0.46	0.50	1 418.46	24.61	-0.01	1 489.81	1.80	2.42	-0.71	1.66	2.74
Guyana		3.24	0.00	6 480.63	10.14	3.15	4 517.23	5.02	1.26	-0.35	0.76	8.33
Haiti	82 307.42	13.78	0.00	1 606.20	49.13	0.80	1 008.16	1.97		-0.79	10.36	4.91
Honduras	26 183.14	2.05	0.48	4 146.36	15.49	0.41	1 688.74	1.92	3.86	-0.42	8.58	5.69
Hungary		0.09	0.04	23 351.73	2.50	11.41	4 975.59	13.26	-0.15	0.70	9.92	11.80
Iceland		-	0.03	41 084.71	2.50			67.60	0.01	1.23	0.32	11.41
India	4 179.71	3.90	0.02	5 028.52	15.27	2.12	2 809.20	0.52	3.36	-1.17	1,270.15	5.69
Indonesia	5 369.31	0.27	0.00	9 418.26	9.80	1.92	4 933.40	0.65	3.87	-0.61	250.36	7.63
Iran, Islamic Republic of	2 465.35	0.09	1.25	16 684.65	5.66	-2.54	1 947.43	1.98	5.23	-1.22	76.96	8.44
Iraq	81 026.37	0.03	6.97	14 211.90	26.90	8.33	1 906.17	1.48	5.87	-2.15	33.42	6.53
Ireland		0.00	0.15	49 865.73	2.50	3.14	7 626.89	21.35	3.52	0.96	4.62	11.84
Israel		3.23	0.45	30 901.61	2.50	7.57	3 450.37	4.53	0.60	-1.16	8.00	12.57
Italy		0.03	0.14	35 064.63	2.50	1.56	5 389.76	10.70	0.17	0.44	59.96	10.13
Jamaica		1.90	0.00	8,080.13	8.94	-0.89	1,263.69	2.80	4.77	-0.02	2.84	9.57
Japan		0.13	0.00	36,592.37	2.49	0.08	6 052.57	7.48	-3.40	0.98	127.55	11.99
Jordan	91 362.55	-	6.52	8,957.46	3.86	13.67	1,563.44	2.99	3.39	-0.50	8.18	9.96
Jordan	91 362.55	-	6.52	8,957.46	3.86	13.67	1,563.44	2.99	3.39	-0.50	8.18	9.96

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Kazakhstan		0.06	0.01	21 982.36	2.74	10.42	1 121.50	7.68	4.01	0.02	16.93	11.56
Kenya	199 102.99	3.90	1.54	2 647.45	21.66	0.31	1 559.84	1.26	4.05	-1.27	44.28	6.21
Kiribati		0.19	-	1 805.16	3.40			4.41	1.86	1.15	0.11	7.76
Korea, Democratic People's Republic of	33 119.57	11.32	-		41.46	5.41	3 711.49	1.07		-0.50	24.92	
Korea, Rep.		0.03	0.00	32 142.28	2.50	1.46	6 443.56	1.85	-0.06	0.27	50.30	11.87
Kuwait		-	0.01	75 207.14	2.50	42.63	10 723.34	2.30	2.71	0.16	3.47	6.99
Kyrgyzstan	8 748.81	4.72	0.97	3 031.18	7.46	-0.01	2 596.50	5.51	2.31	-0.87	5.69	10.66
Lao People's Democratic Republic	10 344.44	2.50	-	4 701.72	18.81	2.44	4 120.79	3.35	2.77	0.14	6.46	4.91
Latvia		-	0.01	21 007.57	2.50	3.42	3 199.59	24.43	3.88	0.45	2.03	11.73
Lebanon	109 105.46	2.14	9.54	14 526.30	4.76	2.89	2 615.41	2.21	1.95	-1.63	5.10	8.31
Lesotho	10 338.63	9.99	0.00	2 579.70	13.60	32.33	574.73	4.38	3.79	0.11	2.11	5.91
Liberia	30 866.45	1.76	1.11	756.38	38.66	-0.74	1 291.30	2.36	1.91	-0.61	4.23	4.26
Libya	8 669.74	0.00	2.58	23 086.07		1.13	656.67	8.34		-1.33	6.20	7.27
Liechtenstein		-	0.30					17.23		1.47	0.04	12.23
Lithuania		-	0.03	24 318.47	2.50	5.18	3 466.99	23.87	1.57	0.76	2.99	12.47
Luxembourg		-	0.42	92 432.76	2.50	2.26	5 788.66	21.98	3.77	1.39	0.54	11.86
Macedonia, FYR		0.95	0.05	11 937.77	4.29	7.07	3 410.67	5.89	-0.95	-0.34	2.08	9.27
Madagascar	15 972.31	2.52	0.00	1 381.77	35.13	5.05	3 313.60	1.54	0.65	-0.62	22.69	6.06
Malawi	62 225.83	6.91	0.04	1 055.67	22.46	-3.87	1 924.39	1.42	2.89	-0.02	16.36	4.31
Malaysia		1.06	0.30	22 959.85	3.23	1.29	3 779.30	2.07	1.52	0.11	29.42	9.99
Maldives		0.04	-	11 299.31	9.47	3.01	2 328.67	1.41	0.19	0.08	0.39	5.54
Mali	62 214.87	3.41	0.61	1 865.66	6.06	8.88	1 489.93	5.47	5.19	-1.21	16.27	2.11
Malta		-	1.72	30 758.94	2.50	1.76	4 723.70	6.31		1.12	0.42	10.27
Marshall Islands		6.54	-	3 578.53				3.48	8.12	1.06	0.05	
Mauritania	23 067.84	5.42	1.51	3 475.68	7.06	15.81	1 103.26	2.75	2.80	-0.91	3.89	4.01
Mauritius		0.00	-	17 399.67	5.11	-10.09	4 034.16	2.18	2.74	0.87	1.26	8.63
Mexico		0.64	0.00	16 133.49	4.49	1.05	3 435.54	2.69	1.73	-0.73	121.62	8.37
Micronesia, Fed. Sts.		16.10	-	3 314.37		4.41	1 530.50	4.08	1.79	1.12	0.10	9.69
Moldova		0.09	0.01	4 360.54	10.63	39.69	2 651.76	10.44	5.30	-0.22	3.56	11.50
Mongolia		8.37	0.00	9 819.16	19.64	10.05	1 475.03	18.24	7.20	0.64	2.84	9.77
Montenegro		0.23	1.66	14 574.12	2.50	9.43	3 432.54	15.45	2.53	0.45	0.62	11.20
Morocco	125.24	0.34	0.01	6 853.63	4.60	27.56	1 483.33	3.20	4.96	-0.40	33.60	4.60
Mozambique	20 542.25	1.66	0.02	1 014.17	28.44	-1.23	816.99	1.41	3.47	-0.05	26.11	3.30
Myanmar	34 487.39	0.78	0.60	4 354.66	15.99	-0.00	3 733.81	0.73	1.62	-1.08	51.27	4.43
Namibia	319.70	12.78	0.17	9,109.74	33.46	4.14	512.94	27.69	1.92	0.84	2.30	6.44
Nauru		-	1.38	9,437.68				5.49		0.96	0.01	
Nepal	39,943.77	2.95	0.21	2,131.73	9.16	3.29	2,503.36	1.12	2.62	-1.21	27.84	3.69
Netherlands		-	0.48	45,808.82	2.50	3.47	8,569.16	9.53	1.12	1.02	16.78	11.86
New Zealand		1.77	0.04	33,577.80	2.50	0.47	7,537.90	20.66	2.37	1.37	4.46	12.29
Norway		0.00	0.90	62,937.69	2.50	3.33	3,827.76	23.26	1.77	1.26	5.04	12.61
Nepal	39,943.77	2.95	0.21	2,131.73	9.16	3.29	2,503.36	1.12	2.62	-1.21	27.84	3.69
Nauru		-	1.38	9,437.68				5.49		0.96	0.01	
New Zealand		1.77	0.04	33,577.80	2.50	0.47	7,537.90	20.66	2.37	1.37	4.46	12.29
Japan		0.13	0.00	36,592.37	2.49	0.08	6 052.57	7.48	-3.40	0.98	127.55	11.99
Kazakhstan		0.06	0.01	21 982.36	2.74	10.42	1 121.50	7.68	4.01	0.02	16.93	11.56
Kenya	199 102.99	3.90	1.54	2 647.45	21.66	0.31	1 559.84	1.26	4.05	-1.27	44.28	6.21

Country	Food assistance expenditures (thousand USD)	Share of population affected by natural disasters (%)	Share of population uprooted (%)	GDP per capita, PPP (constant 2011 international \$)	Prevalence of undernourishment (%)	Cereal yield growth rate (%)	Cereal yield (kg per hectare)	Road density (km/1000 people)	Food absorption capacity growth rate (%)	Political stability (score)	Population (millions)	Mean years of schooling (years)
Nicaragua	6,331.23	1.77	0.00	4,515.22	19.07	3.32	2,045.99	2.66	1.61	-0.25	5.91	6.24
Niger	121,477.51	11.09	0.46	854.59	10.89	3.39	443.39	2.75		-1.12	18.15	1.56
Nigeria	7,823.88	0.68	0.39	5,364.29	6.76	2.73	1,459.81	0.59	4.54	-2.03	169.83	5.63
Norway		0.00	0.90	62,937.69	2.50	3.33	3,827.76	23.26	1.77	1.26	5.04	12.61
Oman		0.02	0.00	42 638.19	5.54	21.39	7 542.94	10.36	4.55	0.64	3.62	8.00
Pakistan	224 029.42	2.67	1.46	4 483.33	20.80	0.12	2 699.94	0.46	2.11	-2.60	179.94	4.87
Palau		0.75	0.01	13 183.95				13.35	-2.29	1.10	0.02	12.20
Palestine, State of	61 529.12	0.28	-	2 611.43		2.93	1 670.73	4.30	-3.71	-1.99	4.12	8.70
Panama	6.11	0.22	0.45	18 290.02	11.37	3.67	2 246.97	2.86	-0.98	0.08	3.81	9.56
Papua New Guinea	950.94	4.50	0.13	2 300.74		2.88	4 362.47	1.51	3.90	-0.59	7.51	4.16
Paraguay	667.44	4.52	0.00	7 860.51	12.21	6.80	3 139.00	7.96	6.85	-0.48	6.42	7.86
Peru	750.81	0.93	0.00	10 934.13	9.53	2.13	3 973.80	2.68	2.18	-0.72	30.37	8.83
Philippines	30 594.22	11.79	0.09	6 197.68	13.89	1.34	3 399.64	1.37	0.77	-1.24	97.71	9.20
Poland		0.03	0.04	23 499.32	2.50	4.09	3 614.54	12.87	0.08	0.91	38.04	11.80
Portugal		0.01	0.01	26 475.15	2.50	4.02	3 879.93	13.73	-0.45	0.81	10.47	8.29
Qatar		-	0.00	122 289.93		1.43	5 856.96	3.91	7.50	1.10	2.14	9.31
Republic of South Sudan ^{vi}	356 792.88	10.46	8.43	2 658.34		37.16	903.90	2.29		-1.96	10.98	4.80
Romania		0.02	0.01	19 115.18	2.50	21.48	3 384.01	7.77	1.89	0.20	20.03	10.69
Russian Federation	62.05	0.04	0.09	24 044.74	2.50	4.40	2 187.79	11.41	1.87	-0.91	143.45	11.96
Rwanda	17 355.39	0.03	0.75	1 527.70	36.06	10.89	1 898.46	0.78	5.33	-0.21	10.94	3.66
Samoa		1.22	-	5 570.98	3.21			8.60	-0.39	1.02	0.19	10.17
Sao Tome and Principe	485.20	-	-	2 775.49	14.36	0.05	1 954.57	2.97	2.13	0.12	0.19	5.16
Saudi Arabia		0.01	0.00	48 595.49	5.81	-3.75	5 035.77	3.90	3.15	-0.44	29.50	9.26
Senegal	19 126.96	1.92	0.12	2 220.53	12.40	8.96	1 132.86	1.55	4.61	-0.21	13.94	2.59
Serbia		0.34	-	13 065.46	5.86	11.21	4 814.87	6.35	1.07	-0.13	7.19	10.57
Seychelles		1.06	-	23 544.16				4.24	-0.56	0.72	0.09	8.74
Sierra Leone	21 637.62	0.12	0.07	1 384.72	26.74	5.70	1 663.94	2.14	3.63	-0.19	6.85	3.19
Singapore		0.03	0.00	76 003.19				0.90	3.12	1.29	5.32	11.39
Slovak Republic		0.00	0.01	26 551.89	3.90	11.07	4 658.91	13.58	4.22	0.96	5.41	11.94
Slovenia		0.39	0.01	28 612.03	2.50	4.27	5 696.74	16.19	1.07	0.94	2.06	11.94
Solomon Islands		3.45	0.00	1 956.76	12.23	-6.64	2 135.66	1.62		0.37	0.56	5.20
Somalia	154 094.52	13.02	10.19			14.98	704.33	10.73		-2.80	12.98	
South Africa		0.70	0.14	12 254.72	3.97	9.57	4 257.79	5.07	-0.12	-0.09	52.98	9.91
Spain		0.01	0.01	31 960.08	2.50	-0.46	3 376.91	13.88	1.27	0.02	46.56	9.61
Sri Lanka	18 420.68	5.57	0.68	9 889.05	24.36	0.46	3 731.53	1.32	3.39	-0.56	20.54	10.84
St. Kitts and Nevis		-	0.00	22 663.36					-2.73	0.85	0.05	8.17
St. Lucia		3.63	0.00	10 720.47	17.16				-3.82	0.83	0.17	9.06
St. Vincent and the Grenadines		5.57	-	10 222.99	6.31	11.97	21 459.19		1.20	0.87	0.11	8.46
Sudan	321 662.38	1.79	6.21	3 934.27	25.75	0.55	568.96	1.10	3.85	-2.40	36.50	3.30
Suriname		-	0.00	14 563.87	8.16	0.63	4 293.34	11.79	6.06	0.17	0.54	8.04
Swaziland	3 668.47	4.58	0.05	7 635.39	22.07	11.71	1 205.51	5.51	1.29	-0.36	1.26	6.59
Sweden		-	1.29	43 805.22	2.50	1.59	4 999.27	26.57	-0.05	1.09	9.58	12.10
Switzerland		0.00	0.72	55 993.84	2.50	1.04	6 360.04	16.30	-0.43	1.34	8.05	13.33
Syrian Arab Republic	222 043.51	0.00	21.18			2.20	1 399.73	3.00		-2.17	19.91	6.07

Country	Food assistance expenditures (thousand USD)	Share of population affected by natural disasters (%)	Share of population uprooted (%)	GDP per capita, PPP (constant 2011 international \$)	Prevalence of undernourishment (%)	Cereal yield growth rate (%)	Cereal yield (kg per hectare)	Road density (km/1000 people)	Food absorption capacity growth rate (%)	Political stability (score)	Population (millions)	Mean years of schooling (years)
Tajikistan	9 926.91	0.14	0.03	2 381.90	34.26	5.50	2 873.61	1.63	7.29	-0.98	8.09	10.40
Tanzania, United Republic of	29 893.34	0.37	0.28	2 290.74	32.81	4.32	1 413.34	1.37	3.19	-0.18	49.97	5.37
Thailand		8.25	0.16	14 328.17	8.99	0.44	3 111.90	2.82	0.42	-1.17	67.94	7.61
Timor-Leste	3 936.39	1.20	0.00	1 979.34	29.03	14.70	2 352.16	2.50	0.98		1.17	4.40
Togo	606.06	0.22	0.25	1 277.30	17.27	0.56	1 165.23	1.46	1.53	-0.23	6.96	4.47
Tonga		0.58	0.00	5 069.16				8.60	0.98	0.79	0.11	10.94
Trinidad and Tobago		-	0.00	31 039.50	7.56	-2.98	1 583.57	5.75	-2.69	0.12	1.34	10.84
Tunisia	1 209.40	0.00	0.01	10 498.65	4.70	4.31	1 615.93	4.18	3.65	-0.60	10.96	6.84
Turkey	28 996.51	0.02	1.27	20 724.99	2.50	2.84	2 860.49	4.35	3.39	-1.24	75.28	7.47
Turkmenistan		-	0.00	12 606.04	5.20	1.12	2 437.17	3.26		0.18	5.32	9.90
Tuvalu		5.24	-	3 219.76				3.75	-0.08	1.35	0.01	
Uganda	61 875.31	0.36	1.07	1 627.85	33.73	4.73	2 028.04	1.09	2.45	-0.89	37.01	5.41
Ukraine	6 339.24	0.04	1.18	7 952.91	2.50	13.36	3 508.50	7.55	3.62	-0.89	45.52	11.30
United Arab Emirates		-	0.01	62 085.48	5.04	3.00	51 856.44	3.82	-0.69	0.80	8.75	9.24
United Kingdom		0.02	0.26	37 206.19	2.50	2.53	6 989.93	8.09	0.61	0.39	63.94	13.13
United States		3.33	0.09	50 892.83	2.50	2.42	6 932.56	35.34	3.26	0.55	315.07	13.07
Uruguay		0.16	0.01	18 542.73	2.53	0.05	4 074.59	12.20	2.00	0.90	3.40	8.46
Uzbekistan	34.02	-	0.00	4 959.04	7.57	1.39	4 641.74	2.10	6.65	-0.54	29.95	11.47
Vanuatu	485.82	11.59	0.00	2 897.29	6.30	1.61	579.81	6.28	3.79	0.95	0.25	6.74
Venezuela, RB		0.07	0.64	17 184.86	6.17	2.53	3 614.11	2.13	-0.53	-1.07	30.09	9.14
Vietnam		2.16	0.00	5 060.88	12.47	2.04	5 286.06	0.75	2.42	0.17	89.32	7.69
Yemen	137 040.17	0.10	3.94	3 619.49	25.74	-0.61	1 012.07	0.86	-3.54	-2.52	25.26	2.84
Zambia	7 667.69	0.60	0.24	3 460.29	48.24	3.34	2 498.31	1.94	-0.12	0.40	14.97	6.73
Zimbabwe	62 149.15	5.07	0.18	1 727.84	36.87	3.54	569.84	2.74	6.26	-0.83	14.92	7.51

TABLE D: Country rankings by identified risk factor

Country	Share of population affected by natural disasters	Share of population uprooted	Political stability	GDP per capita	Prevalence of undernourishment	Road density	Cereal yield	Mean years of schooling
Afghanistan	117	176	188	165	141	125	113	171
Albania	125	54	71	92	71	67	31	74
Algeria	72	127	167	79	66	109	128	113
Andorra	1	1	6			72		63
Angola	69	102	124	118	121	149	165	152
Antigua and Barbuda	1	61	30	58	150	50	130	83
Argentina	122	73	94	59	53	48	40	70
Armenia	132	146	108	110	62	66	87	39
Australia	96	116	29	17	1	5	108	3
Austria	53	152	9	15	1	4	14	41
Azerbaijan	1	181	136	64	1	119	96	44
Bahamas, The	128	52	26	53	105	41	8	49
Bahrain	1	87	164	16		122		79
Bangladesh	143	114	171	145	127	188	41	148
Barbados	1	28	11	69	65	70	88	56
Belarus	106	79	89	62	1	27	75	25
Belgium	1	130	48	21	1	46	4	38
Belize	145	65	90	109	83	30	67	57
Benin	102	56	86	160	106	174	141	174
Bhutan	1	1	33	112		113	85	177
Bolivia, Plurinational State of	162	70	120	117	139	54	117	103
Bosnia and Herzegovina	178	175	118	96	1	49	63	90
Botswana	87	108	19	68	143	20	175	84
Brazil	168	55	113	71	1	93	38	116
Brunei Darussalam	1	1	13	4	47	100	159	88
Bulgaria	75	115	91	66	55	47	45	51
Burkina Faso	175	120	144	171	136	148	151	187
Burundi	86	163	173	182		178	149	179
Cambodia	167	34	95	142	129	139	80	159
Cameroon	123	166	149	146	94	141	126	139
Canada	100	138	14	19	1	7	59	6
Cape Verde	107	1	54	119	118	87	176	158
Central African Republic	119	187	186	184	167	80	131	166
Chad	1	177	169	158	158	144	162	184
Chile	153	77	67	52	54	62	16	67
China	150	88	134	81	104	184	20	117
Colombia	104	188	166	82	92	123	62	118
Comoros	131	1	114	173		173	144	156
Congo	64	162	130	122	153	132	163	131
Congo, The Democratic Republic of the	99	178	182	183		134	164	134
Costa Rica	116	134	57	75	76	79	68	93
Cote d'Ivoire	1	145	159	143	124	156	106	154
Croatia	90	84	60	54	1	21	26	45
Cuba	120	51	62		1	75	89	32
Cyprus	1	140	61	35	68	23	138	33
Czech Republic	164	92	23	36	1	24	27	16

Country	Share of population affected by natural disasters	Share of population uprooted	Political stability	GDP per capita	Prevalence of undernourishment	Road density	Cereal yield	Mean years of schooling
Denmark	1	136	34	13	1	15	15	7
Djibouti	1	173	128	144	123	128	116	167
Dominica	184	1	16	98	81	36	125	107
Dominican Republic	88	66	77	83	115	121	54	115
Ecuador	147	154	101	91	111	96	81	102
Egypt	49	128	176	100	63	177	11	122
El Salvador	165	38	96	111	113	152	93	129
Equatorial Guinea	1	1	110	34		114		145
Eritrea			147				169	169
Estonia	1	74	51	39	48	3	74	11
Ethiopia	160	148	174	172	154	179	104	183
Fiji	152	40	70	105	64	90	101	59
Finland	1	126	10	23	1	2	65	47
France	61	137	73	25	1	18	10	37
Gabon	1	100	81	63	89	126	129	104
Gambia	136	144	99	169	107	145	161	176
Georgia	124	182	125	102	88	32	107	19
Germany	59	131	41	18	1	19	9	4
Ghana	98	101	97	134	87	155	121	123
Greece	113	109	112	47	1	25	48	58
Grenada	1	31	55	86	144	63	157	96
Guatemala	158	41	141	113	128	167	112	141
Guinea	103	103	148	177	130	118	150	182
Guinea-Bissau	1	143	143	174	147	146	143	180
Guyana	177	43	115	115	100	82	32	98
Haiti	161	24	140	167	166	142	154	150
Honduras	151	150	132	132	126	151	123	136
Hungary	114	93	49	46	1	34	33	24
Iceland	1	95	8	20	1	1		22
India	179	83	161	123	122	185	86	137
Indonesia	112	46	133	99	91	183	29	110
Iran, Islamic Republic of	109	165	160	67	75	140	120	92
Iraq	85	186	184	73	148	162	103	128
Ireland	1	112	32	10	1	12	7	20
Israel	176	142	163	31	1	84	50	8
Italy	63	117	66	28	1	44	24	55
Jamaica	134	36	87	106	101	110	147	76
Japan	91	48	24	26	1	57	19	13
Jordan	1	184	137	103	57	106	132	65
Kazakhstan	71	57	105	48	1	61	155	34
Kenya	140	164	170	149	135	168	124	132
Kiribati	126	1	31	164	51	88		112
Korea, Democratic People's Republic of	190	1	155		163	164	51	
Korea, Rep.	50	49	79	29	1	147	17	18
Kuwait	1	85	93	5	1	127	3	120

Country	Share of population affected by natural disasters	Share of population uprooted	Political stability	GDP per capita	Prevalence of undernourishment	Road density	Cereal yield	Mean years of schooling
Liberia	89	161	139	181	162	124	145	161
Libya	67	179	181			55	166	119
Liechtenstein	1	133	2			26		14
Lithuania	1	94	44	40	1	9	57	10
Luxembourg	1	125	3	2	1	16	21	28
Macedonia, FYR	146	98	109	85	60	69	77	77
Madagascar	121	26	135	175	161	150	70	133
Malawi	186	96	98	178	142	170	119	162
Malaysia	155	135	78	45	49	135	56	64
Maldives	1	1	68	87	98	161	99	138
Mali	94	158	178	163	70	76	133	185
Malta	1	170	17	30	1	74	36	43
Marshall Islands	166	1	28	135		98		
Mauritania	83	171	145	137	80	116	146	165
Mauritius	57	1	40	60	73	136	72	85
Mexico	95	47	146	65	61	115	71	99
Micronesia, Fed. Sts.	183	1	21	140		86	127	73
Moldova	1	76	111	130	96	45	100	31
Mongolia	181	30	53	90	134	17	135	71
Namibia	189	104	46	101	155	11	172	127
Nauru	1	174	50	88		83		
Nepal	174	113	157	155	97	171	92	168
Netherlands	1	141	22	12	1	60	5	30
New Zealand	97	91	1	27	1	14	6	12
Nicaragua	157	59	103	128	133	117	109	130
Niger	170	151	168	180	108	133	174	186
Nigeria	78	149	180	120	90	186	142	140
Norway	1	160	12	7	1	13	60	9
Oman	81	60	56	22	78	51	39	106
Pakistan	137	167	187	131	137	187	91	151
Palau	1	53	27	78		37		15
Palestine, State of	129	1	179	151		97	115	89
Panama	73	139	82	55	103	111	102	68
Papua New Guinea	182	110	127	152		154	42	164
Paraguay	156	50	117	104	112	56	79	105
Peru	133	58	138	89	93	112	49	87
Philippines	187	107	152	116	119	160	66	81
Poland	54	97	37	44	1	38	55	29
Portugal	70	69	43	41	1	31	46	91
Qatar	1	63	18	1		89	25	69
Republic of South Sudan ^a	142	189	185	161		137	160	155
Romania	68	78	84	56	1	59	73	53
Russian Federation	92	111	153	43	1	42	105	26
Rwanda	65	156	107	168	160	181	111	170
Samoa	1	1	15	121	50	53		61
Sao Tome and Principe	1	1	83	147	117	104	110	146

Country	Share of population affected by natural disasters	Share of population uprooted	Political stability	GDP per capita	Prevalence of undernourishment	Road density	Cereal yield	Mean years of schooling
Saudi Arabia	55	42	129	11	69	94	37	75
Senegal	144	106	102	156	110	157	152	181
Serbia	118	1	85	80	79	65	30	54
Seychelles	154	1	59	42		91		82
Sierra Leone	108	89	104	170	151	129	122	175
Singapore	1	25	7	3		176		36
Slovak Republic	1	82	25	38	52	39	34	21
Slovenia	130	81	35	37	1	28	22	23
Solomon Islands	173	32	64	159	116	153	118	147
Somalia	188	185	188			43	158	
South Africa	141	122	106	84	59	78	44	62
Spain	52	80	80	33	1	33	76	72
Sri Lanka	169	124	119	94	140	163	61	50
St. Kitts and Nevis	1	35	52	49				100
St. Lucia	163	45	42	95	131			86
St. Vincent and the Grenadines	171	1	38	97	82		2	95
Sudan	139	183	183	133	145	172	171	172
Suriname	1	27	75	70	95	40	43	101
Swaziland	66	99	131	108	138	77	148	125
Sweden	1	168	20	14	1	8	28	17
Switzerland	51	153	4	8	1	29	18	1
Syrian Arab Republic	62	191	191			103	140	142
Tajikistan	105	90	156	153	156	158	83	60
Tanzania, United Republic of	76	129	122	154	157	165	136	143
Thailand	149	121	162	72	99	107	82	108
Timor-Leste	84	1		157	152	120	97	163
Togo	58	132	116	176	114	159	153	160
Tonga	138	39	39	127		52		46
Trinidad and Tobago	1	62	76	32	77	68	137	48
Tunisia	1	68	154	93	67	85	134	121
Turkey	60	172	172	50	1	81	84	111
Turkmenistan	1	37	92	76	74	105	90	66
Tuvalu	185	1	5	139		92		
Uganda	110	159	150	166	159	169	114	144
Ukraine	56	169	175	107	1	58	58	42
United Arab Emirates	1	64	45	6	58	95	1	80
United Kingdom	79	123	65	24	1	64	13	2
United States	74	105	58	9	1	6	12	5
Uruguay	115	72	36	57	1	35	52	97
Uzbekistan	1	33	123	125	84	130	35	27
Vanuatu	191	29	47	148	85	71	170	126
Venezuela, RB	82	147	158	61	102	131	53	78
Vietnam	148	1	88	124	109	182	23	109
Yemen	111	180	190	138	146	175	156	178
Zambia	80	118	74	136	165	143	94	124
Zimbabwe	180	119	142	162	164	108	168	114

Endnotes

ⁱ Please refer to the Technical Annex for a full description of the Heckman two-step estimator used to implement this analytical approach.

ⁱⁱ Please refer to the Technical Annex for a detailed presentation of the econometric results.

ⁱⁱⁱ Please refer to the Technical Annex for the country rankings.

^{iv} APR = Asia and Pacific – Afghanistan, Bangladesh, Bhutan, Cambodia, India, Indonesia, Korea DPR, Laos, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Timor-Leste, Vanuatu.

ECA = Eastern and Central Africa – Burundi, Djibouti, Ethiopia, Kenya, Republic of South Sudan, Rwanda, Somalia, Uganda.

LAC = Latin America and the Caribbean – Bolivia, Colombia, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Paraguay, Peru.

MENA = Middle East and North Africa – Albania, Algeria, Armenia, Egypt, Greece, Iran, Iraq, Jordan, Kyrgyzstan, Lebanon, Libya, Morocco, Palestinian Territories, Sudan, Syrian Arab Republic, Tajikistan, Tunisia, Turkey, Ukraine, Yemen.

SA = Southern Africa – Republic of the Congo, Democratic Republic of the Congo, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Swaziland, Tanzania, Zambia, Zimbabwe.

WA = West Africa – Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, São Tomé and Príncipe, Senegal, Sierra Leone, Togo.

^v Low-income = Afghanistan, Benin, Burkina Faso, Burundi, Central African Republic, Chad, Democratic Republic of Congo, Ethiopia, The Gambia, Guinea, Guinea-Bissau, Haiti, Korea DPR, Liberia, Madagascar, Malawi, Mali, Mozambique, Nepal, Niger, Rwanda, Senegal, Sierra Leone, Somalia, South Sudan, Togo, Uganda, Tanzania, Zimbabwe.

Low-middle-income = Armenia, Bangladesh, Bhutan, Bolivia, Cambodia, Cameroon, Cabo Verde, Republic of Congo, Côte d'Ivoire, Djibouti, Egypt, El Salvador, Ghana, Guatemala, Honduras, India, Indonesia, Kenya, Kyrgyzstan, Laos, Lesotho, Mauritania, Morocco, Myanmar, Nicaragua, Nigeria, Pakistan, Palestinian Territories, Philippines, São Tomé and Príncipe, Sri Lanka, Sudan, Swaziland, Syrian Arab Republic, Tajikistan, Timor-Leste, Tunisia, Ukraine, Vanuatu, Yemen, Zambia.

Upper-middle-income = Fiji, Albania, Algeria, Azerbaijan, Bosnia and Herzegovina, Colombia, Cuba, Dominican Republic, Ecuador, Georgia, Iran, Iraq, Jordan, Lebanon, Libya, Namibia, Paraguay, Peru, Turkey.

High-income = Greece.

^{vi} Country averages for the Republic of South Sudan are computed over the period 2011–2016.

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Cover photo: In Umerkot in Pakistan
many families can feed their children
thanks to WFP's blockchain technology,
which makes cash-based transfers
more secure and efficient.

WFP/Farman Ali



Global Network
Against Food Crises



2020 GLOBAL REPORT ON FOOD CRISES

JOINT ANALYSIS FOR BETTER DECISIONS

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2020 GLOBAL REPORT ON FOOD CRISES

JOINT ANALYSIS FOR BETTER DECISIONS

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Global Network
Against Food Crises



FOREWORD

The number of people battling acute hunger and suffering from malnutrition is on the rise yet again. In many places, we still lack the ability to collect reliable and timely data to truly know the magnitude and severity of food crises gripping vulnerable populations. And the upheaval that has been set in motion by the COVID-19 pandemic may push even more families and communities into deeper distress.

At this time of immense global challenges, from conflicts to climate shocks to economic instability, we must redouble our efforts to defeat hunger and malnutrition. This is crucial for achieving the Sustainable Development Goals and building a more stable and resilient world.

We have the tools and the know-how. What we need is political will and sustained commitment by leaders and nations. This report should be seen as a call to action and I commend its contents to a wide global audience.

António Guterres

Secretary-General of the United Nations



Food and Agriculture
Organization of the
United Nations



GRFC 2020 in brief

The data and the analyses in this report were prepared before the global crisis of the COVID-19 pandemic and do not account for its impact on vulnerable people in food-crisis situations.

The Global Report on Food Crises (GRFC) 2020 is the result of a joint, consensus-based assessment of acute food insecurity situations around the world by 16 partner organizations.

At 135 million, the number of people in Crisis or worse (IPC/CH Phase 3 or above) in 2019 was the highest in the four years of the GRFC's existence. This increase also reflected the inclusion of additional countries and areas within some countries.

When comparing the 50 countries that were in both the 2019 and the 2020 reports, the population in Crisis or worse (IPC/CH Phase 3 or above) rose from 112 to 123 million. This reflected worsening acute food insecurity in key conflict-driven crises, notably the Democratic Republic of the Congo and South Sudan and the growing severity of drought and economic shocks as drivers in countries such as Haiti, Pakistan and Zimbabwe.

Around 183 million people in 47 countries were classified in Stressed (IPC/CH Phase 2) conditions, at risk of slipping into Crisis or worse (IPC/CH Phase 3 or above) if confronted by an additional shock or stressor.



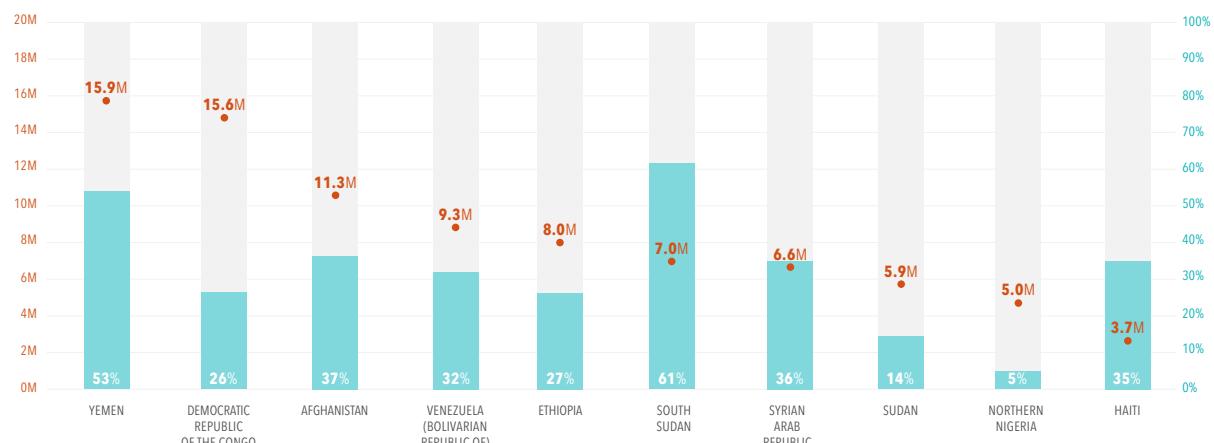
The number of acutely food-insecure people in Crisis or worse (IPC/CH Phase 3 or above) across 55 countries and territories analysed

More than half of the affected population were in Africa



Source: FSN, GRFC 2020

The 10 worst food crises in 2019 by number of people in Crisis or worse (IPC/CH Phase 3 or above)



● Number of people (in millions) in Crisis or worse (IPC/CH Phase 3 or above)

● Percentage of population analysed in Crisis or worse (IPC/CH Phase 3 or above)

Source: FSN, GRFC 2020

An estimated 75 million stunted children were living in the 55 food-crisis countries analysed. These children have limited access to sufficient dietary energy, nutritionally diverse diets, clean drinking water, sanitation and health care, which weakens their health and nutrition status, with dire consequences for their development and long-term productivity.

Drivers of acute food insecurity

Conflict/insecurity was still the main driver of food crises in 2019, but weather extremes and economic shocks became increasingly significant. Over half of the 77 million acutely food-insecure people in countries where conflict was identified as the primary driver were in the Middle East and Asia. Regional crises continued to see high levels of acute food insecurity, particularly in the Lake Chad Basin and Central Sahel.

Africa had the largest numbers of acutely food-insecure people in need of assistance in countries badly affected by weather events, particularly in the Horn of Africa and Southern Africa, followed by Central America and Pakistan.

In East Africa, armed conflicts, intercommunal violence and other localized tensions continued to affect peace and security, particularly in South Sudan, and continued to maintain large refugee populations in neighbouring countries, such as Uganda.

The report reflects the growing influence of economic crises on acute food insecurity levels, particularly in the Bolivarian Republic of Venezuela, Zimbabwe, Haiti and the Sudan.

An estimated 79 million people remained displaced globally as of mid-2019 – 44 million of them internally displaced and 20 million were refugees under UNHCR's mandate. More than half of these refugees were hosted in countries with high numbers of acutely food-insecure people. In countries where funding constraints have reduced assistance in refugee camps, refugees' food security was severely threatened.

Short-term outlook for 2020

The acute food insecurity forecasts for 2020 were produced before COVID-19 became a pandemic and do not account for its likely impact in food crisis countries.

The combined effects of conflict, macroeconomic crisis, climate-related shocks and crop pests, including fall armyworm and desert locusts, were likely to ensure that Yemen remained the world's worst food crisis.

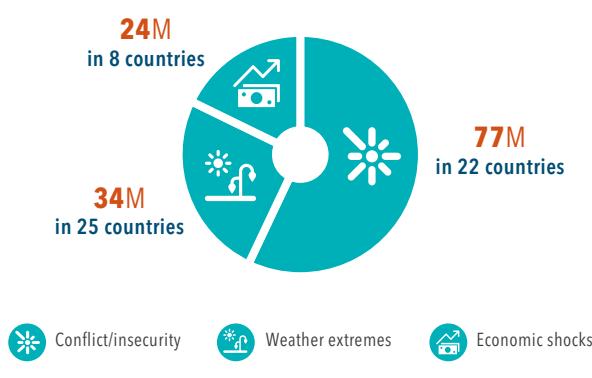
In East Africa, abundant seasonal rains benefitted crops and rangelands, but fostered a severe desert locust outbreak that will likely aggravate acute food insecurity in complex and fragile contexts.

Protracted conflicts will either maintain or increase acute food insecurity levels in parts of Central Africa. In Southern Africa, post-harvest improvements are likely to be short-lived as poor

 **17M**

The number of acutely malnourished children under 5 years across the 55 countries/territories analysed in 2019

Numbers of acutely food-insecure people in Crisis or worse (IPC/CH Phase 3 or above) (millions) by key driver



Source: FSN, GRFC 2020

 **Conflict/insecurity, weather extremes, desert locusts, economic shocks and COVID-19 are expected to be 2020 the key drivers of acute food insecurity**

rains, high food prices and unresolved political and economic instability could worsen acute food insecurity levels. Increasing violence, displacements and disrupted agriculture and trade in tandem with adverse climate in West Africa and Sahel countries will worsen acute food insecurity conditions in many areas.

Violent conflict and currency depreciation will drive alarming rates of acute food insecurity and acute malnutrition levels across the most troubled areas of the Middle East and Asia.

In Latin America and the Caribbean, sociopolitical crises, weather extremes, lack of employment and high food prices are likely to lead to deteriorating acute food insecurity in some countries.

The drivers of food crises, as well as lack of access to dietary energy and diversity, safe water, sanitation and health care will continue to create high levels of child malnutrition, while COVID-19 is likely to overburden health systems.

The pandemic may well devastate livelihoods and food security, especially in fragile contexts and particularly for the most vulnerable people working in the informal agricultural and non-agricultural sectors. A global recession will majorly disrupt food supply chains.

While all partners are in broad agreement with the data and information presented in this report, FEWS NET's analyses suggest that the population requiring emergency food assistance in 2019 was lower than the IPC estimates for Afghanistan, the Democratic Republic of the Congo, Ethiopia and Haiti.

Pandemic alert 

Mobilizing for the impact of COVID-19 in food-crisis countries

The novel coronavirus disease (COVID-19) is having an unprecedented impact around the world, both in health and socioeconomic terms. By 11 April, 1.6 million cases and nearly 100 000 deaths had occurred globally (WHO, 11 April 2020).

While COVID-19 does not discriminate, the 55 countries and territories that are home to 135 million acutely food-insecure people in need of urgent humanitarian food and nutrition assistance are the most vulnerable to the consequences of this pandemic as they have very limited or no capacity to cope with either the health or socioeconomic aspects of the shock.

These countries may face an excruciating trade-off between saving lives or livelihoods or, in a worst-case scenario, saving people from the corona virus to have them die from hunger. To prevent these tens of millions of people already facing food crises from succumbing to the virus or to its economic consequences, all actors need to mobilize and coordinate along a set of operational and strategic priorities.

In addition to the countries covered in the GRFC 2020, the pandemic may drive up acute food insecurity levels in other countries. For instance, Small Island Developing States (SIDS) and oil-exporting countries may be severely affected as they are net importers of food with populations that are dependent on income from remittances and tourism.

The impact on health and nutrition

In most of the countries covered in this report, national health systems are already over-stretched, with an alarming dearth of equipment, medicines and trained staff.

Poor people, including displaced people, often lack sufficient economic resources to access health care and/or live in remote areas far from services. Some groups are fearful of being stigmatized or discriminated against in accessing public services.

People in food crises often have higher rates of underlying health conditions, including non-communicable diseases and malnutrition (acute, chronic and micronutrient deficiencies), which weaken the immune system and increase the risk of people developing severe COVID-19 symptoms.

Rising levels of food insecurity and lack of access to healthcare – either because of movement restrictions, strained health systems

or falling incomes – are likely to increase malnutrition rates, particularly among children, pregnant and lactating women and the elderly.

There are also urgent concerns for the nutritional status of children in families that rely on school feeding programmes to fill food gaps.

The impact on food availability

On the food supply side, harvests have been good and the 2020 outlook for staple crops is promising. However, movement restrictions necessary to contain the spread of the virus will disrupt the transport and processing of food and other critical goods, increasing delivery times and reducing availability of even the most basic food items. For households dependent on food production and livestock rearing, any disruption in the supply chain of agricultural inputs or the inability to access livestock markets, will likely lead to declines in crop and livestock production and sales.

The food security consequences of the pandemic on nomadic and semi-nomadic pastoralists will likely be grave if national governments close borders, disrupting livestock migration routes, including across the fragile Sahel region. In countries where crop and livestock production are affected by the desert locust outbreak, the restrictions on movement may hinder locust control operations with dramatic consequences for crop production.

The impact on food access

Rising unemployment and under-employment is likely to severely reduce people's purchasing power. Urban populations, particularly daily wage earners in the informal economies and service sector employees, are particularly at risk of losing their income sources as a result of regulations on social distancing and government restrictions to minimize transmission.

Those who are reliant on remittances to meet their basic needs and those who cross borders on a regular basis to engage in livelihood activities will lose their income sources. As households face reduced purchasing power, there is great potential for a decline in consumer demand – particularly for higher value products – further weakening the income of producers, including those who produce high-value food products.

Movement restrictions (and illness) are likely to limit the availability of agricultural labour, which will contribute to rising food prices. Protectionism policies, such as tariffs and export bans, could also drive up food prices, while food crisis countries that rely heavily on food imports to cover consumption requirements, such as the Democratic Republic of the Congo, the Sudan, the Syrian Arab Republic and Yemen, will experience rising food prices if their currencies depreciate further relative to the US dollar. If major importers resort to panic buying, the price of globally traded food commodities could increase, particularly in the short term. Whether or not localized food price spikes will trickle down to remote rural markets will depend on the level of integration of local markets, as well as other factors such as harvest performance, seasonality, infrastructure and security.

Simulations developed by the Organization for Economic Co-operation and Development (OECD) indicated that the expected 2020 GDP growth of 2.9 percent (forecast in November 2019) could be downgraded to 1.5 percent if the disease spreads widely across Asia-Pacific, Europe and North America.

Growing fear in global markets could result in a severe decline in international financing and portfolio outflows from food-insecure countries. As these countries often have limited fiscal and external buffers, this trend would pose a significant risk to their governments' ability to fight the pandemic and maintain existing support to vulnerable households.

The impact on displaced populations

Displaced people living in camps and displaced/host populations in urban areas are particularly vulnerable in overcrowded settings with poor access to adequate health care, lack of clean water, hand-washing facilities and sanitation, where social distancing is difficult, if not impossible. The legal status of refugees often prevents them from being included in national social protection support, putting them at serious risk of rising poverty levels given their severely limited ability to access income. Restrictions on border crossings may prevent asylum seekers from realizing their right for protection and assistance.

Social tensions and conflict

COVID-19 could create the conditions for social and political unrest, especially in the most vulnerable food-crisis countries. Uncertainty of future impacts of the pandemic combined with restrictions on movement, soaring unemployment, limited access to food, and the erosion of already fragile livelihoods may generate discontent, fueling violence and conflict.

A lack of food/goods in refugee camps may increase tension among refugees and host communities. Perceptions that the virus is brought by non-nationals may escalate discrimination and social exclusion, particularly in areas hosting displaced populations.

Any postponement of elections may jeopardize the democratic process and generate tensions between ruling parties and oppositions. The disease could hinder international mediation efforts for conflict resolution, as well as peacekeeping operations.

Violence and exploitation, including sexual exploitation and abuse and intimate partner violence, are likely to increase during epidemic outbreaks due to increased confinement and exposure to perpetrators, increased stress, and reduced income and access to basic needs. Many children who are no longer attending school during the day face increased protection risks at home.

Impacts on humanitarian assistance

A major compounding factor for food-crisis countries is that the pandemic is likely to have significant repercussions on the delivery of humanitarian assistance. Resources may be diverted to support COVID-19 efforts, affecting budgets for assistance. Movement restrictions are likely to affect the mobility of supplies and staff including the ability to conduct field work. Humanitarian delivery costs may increase as a result.

Pre-empting the socioeconomic impacts of COVID-19: priorities for action

Given the unprecedented nature of the crisis, creating a better understanding of the potential impacts of COVID-19 and taking rapid collective action to pre-empt its impact on food security and food systems are of paramount importance and urgency.

Anticipatory actions must be undertaken now to safeguard the livelihoods of the most vulnerable people and related agri-food systems to protect the critical food supply chain. Such interventions must comply with government measures and health guidelines and should be designed and implemented in partnership and close coordination between governments, humanitarian and development actors.

Expand near-real time, remote food security monitoring systems to provide up-to-date information on the impacts of the outbreak on food security and livelihoods, health, access to services, markets and supply chains, among others, for early action and mitigation.

Preserve critical humanitarian food, livelihood and nutrition assistance to vulnerable groups – adapted to potential COVID-19 impacts – to ensure that needs are fully met.

Position food in food-crisis countries to reinforce and scale up social protection systems, ensuring the most vulnerable who are affected or at high risk of COVID-19 can still access food.

Scale up support for food processing, transport and local food markets, and advocate for trade corridors to remain open to ensure the continuous functioning of the critical food supply chain and agri-food systems in food-crisis countries.

Overview 2016-2018

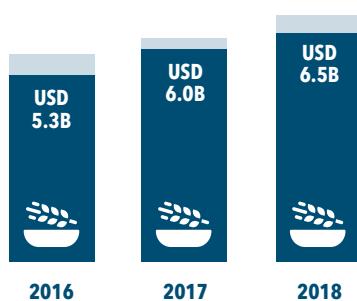
Humanitarian and development assistance to food-crisis countries

According to an analysis of external financial flows for humanitarian and development assistance in 32 of the 53 food crisis countries in the GRFC 2019, humanitarian contributions dedicated to food security, agriculture and nutrition sectors in major food crisis hotspots increased from USD 5.3 billion in 2016 to USD 6.5 billion in 2018 (see figure 1).

The 32 countries analysed represented 106 million people out of 113 million people identified as experiencing acute hunger (IPC/CH Phase 3 or above) in 2018. Unsurprisingly, these 32 most severe food crises accounted for the vast majority of humanitarian contributions to food security, agriculture and nutrition assistance worldwide (between 82 and 86 percent in 2016–2018).

As figure 2 shows, deep inequalities exist between recipient countries with similar levels of needs in terms of acute food insecurity. For instance, Yemen, the Democratic Republic of the Congo and Afghanistan each had more than 10 million acutely

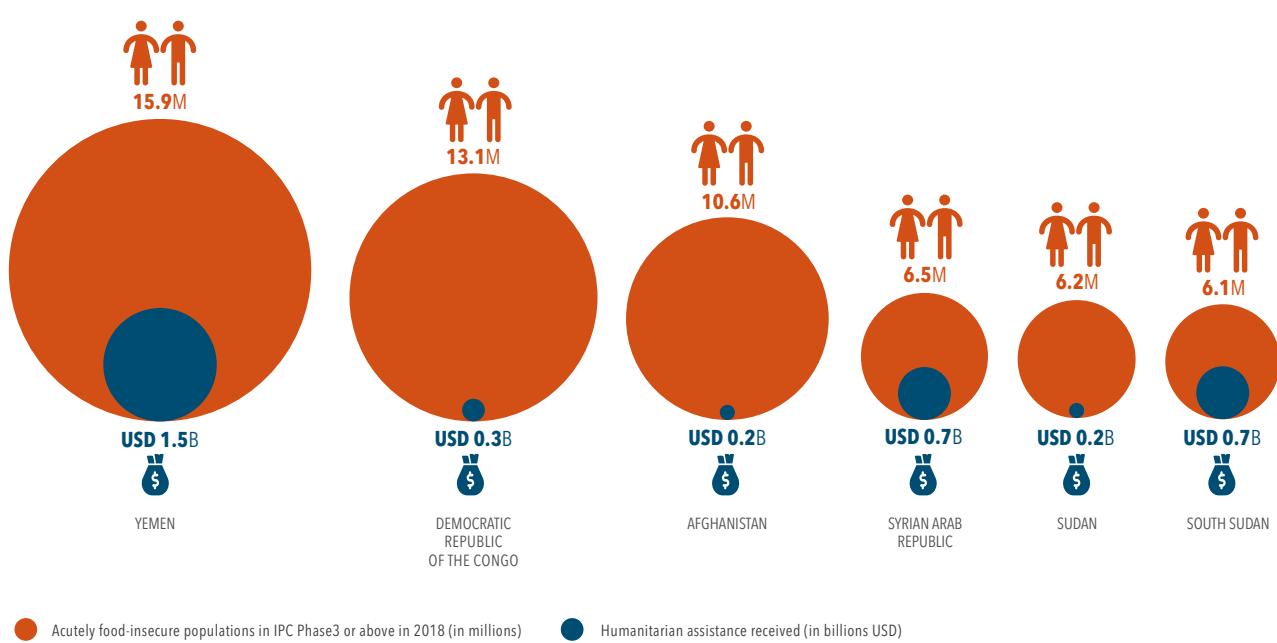
Figure 1
Growth of humanitarian assistance to meet rising commitments to food crises



- Food security, nutrition and agriculture humanitarian assistance to 32 countries
- Food security, nutrition and agriculture humanitarian assistance to other countries

Source: GNAFC 2019, based on data extracted from OCHA FTS and 3RP Annual reports 2016–2018

Figure 2
Inequalities in humanitarian assistance allocation in 2018



Source: GNAFC 2019, based on data extracted from Global Report on Food Crises 2019 and OCHA FTS

food insecure people in need of assistance, but Yemen received five times more humanitarian assistance than the Democratic Republic of the Congo and seven times more than Afghanistan.

However, some of these inequalities may be the result of higher costs of response in certain contexts due to relatively poorer infrastructures and restricted access to populations in need, for instance.

Similarly, South Sudan, the Syrian Arab Republic, and the Sudan each accounted for 6.0–6.5 million people in acute food insecurity and had similar needs, but South Sudan and the Syrian Arab Republic received almost four times more assistance than the Sudan.

Although Afghanistan had almost 5 million more people in need of urgent food, nutrition and livelihoods assistance than South Sudan, the latter received about three times more humanitarian assistance than Afghanistan. However, these significant differences in external assistance provided between countries must again be considered in the light of the variety of contexts and the various levels of domestic response provided by governments to food crisis situations (i.e. domestic response is not considered in the analysis presented here).

Looking at investment in development, the analysis revealed that the 32 countries/territories with major food crises received significant development assistance (USD 4.2 billion) for food security, agriculture and nutrition sectors in 2017 (figure 3). This represented roughly 40 percent of the total ODA (official development assistance) for these three sectors to food-crisis countries in 2017.

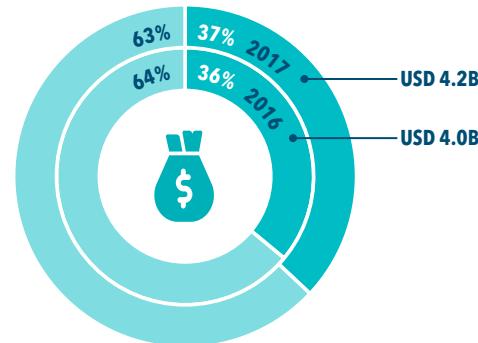
Overall, around USD 4.2 billion was allocated to development and USD 6 billion to humanitarian assistance in food-related sectors in the 32 countries in 2017. In many countries, especially those affected by protracted conflict, the spending on humanitarian assistance far outweighed that on development assistance (figure 4).

For instance, in 2017 South Sudan received almost USD 700 million in humanitarian assistance and less than USD 200 million for development.

In Yemen, also in 2017, humanitarian assistance reached more than USD 1 billion, while less than USD 100 million was provided for development assistance. Some countries had more balanced spending on the humanitarian and development assistance. The Democratic Republic of the Congo received comparable levels of humanitarian and development assistance, though both were limited. Ethiopia represents another case where the assistance is balanced and large-scale, most probably due to the presence of relatively stable and well-established investment environment and policy frameworks.

There is much room to improve the coordination between humanitarian and development efforts in order to enhance

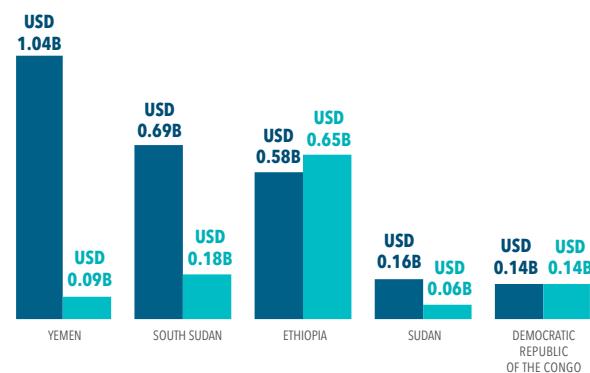
Figure 3
Development assistance in food crises in 2016 and 2017



● Food security, nutrition and agriculture development assistance to 32 major food crises
● Food security, nutrition and agriculture development assistance to other countries

Source: GNAFC 2019, based on data extracted from OECD CRS

Figure 4
Humanitarian assistance and development assistance to food crises in USD in 2017



● Food security, nutrition and agriculture humanitarian assistance
● Food security, nutrition and agriculture development assistance

Source: GNAFC 2019, based on data extracted from OCHA FTS and OECD CRS

impact and address the root causes of protracted crises. Much more analysis is needed at the country level to gain better understanding of how development assistance is best allocated in support of lasting food security and nutrition and resilient agriculture and food supply chains, and how it could be better aligned and coordinated with the humanitarian efforts, particularly in fragile and conflict-affected contexts.

The analysis of funding flows for humanitarian and development assistance in the major food crisis hotspots was carried out by non profit organization Development Initiatives, and members of the Global Network technical support unit (GNAFC, 2019).

ACRONYMS

3RP	Regional Refugee and Resilience Plan	GNAFC	Global Network Against Food Crises
ACAPS	Assessment Capacities Project	gNC	Global Nutrition Cluster
ACLED	Armed Conflict Location and Event Data Project	GRFC	Global Report on Food Crises
ALPS	Alert for Price Spikes indicator	HDP	Humanitarian – Development – Peace nexus
ALG	Liptako-Gourma Authority (Autorité de Développement Intégré de la Région du Liptako Gourma)	HIV/AIDS	Human Immunodeficiency Virus Infection and Acquired Immune Deficiency Syndrome
ASAL	Arid and semi-arid lands	HNO	Humanitarian Needs Overview
BAY	Borno, Adamawa and Yobe states	HRP	Humanitarian Response Plan
CADC	Central America Dry Corridor	ICRC	International Committee of the Red Cross
CARI	Consolidated Approach to Reporting Indicators of Food Security	IDMC	Internal Displacement Monitoring Centre
COVID-19	Corona virus disease 2019	IDP	Internally Displaced People
CFSAM	Crop and Food Security Assessment Mission	IFPRI	International Food Policy Research Institute
CFSVA	Comprehensive Food Security and Vulnerability Analysis	IFRC	International Federation of the Red Cross
CH	Cadre Harmonisé	IGAD	Intergovernmental Authority on Development (in Eastern Africa)
Cholera/AWD	Cholera and Acute Watery Diarrhoea	IMF	International Monetary Fund
CILSS	Permanent Interstate Committee for Drought Control	IOM	International Organization for Migration
CPI	Consumer Price Index	IPC	Integrated Food Security Phase Classification
DEVCO	International Cooperation and Development of the European Commission	IPC AMN	Integrated Food Security Phase Classification Acute Malnutrition
DHS	Demographic and Health Survey	ISIL	Islamic State of Iraq and the Levant
DTM	Displacement Tracking Matrix	IYCF	Infant and Young Child Feeding
ECHO	European Civil Protection and Humanitarian Aid Operations of the European Commission	JMP	Joint Monitoring Programme
EC-JRC	European Commission – Joint Research Centre	JRP	Joint Response Plan
ECOWAS	Economic Community of West African States	LGA	Local government area
(or CEDEAO)	(Communauté économique des États de l'Afrique de l'Ouest)	MAD	Minimum Acceptable Diet
EFSA	Emergency Food Security Assessment (Evaluación de Seguridad Alimentaria de Emergencia)	MAEP	Ministry of Agriculture, Livestock and Fishery (Ministère de l'Agriculture, de l'Élevage et de la Pêche)
EHES	Eswatini Household Income and Expenditure survey	MAM	Moderate Acute Malnutrition
FAO	Food and Agriculture Organization of the United Nations	MARN	Ministry of Environment and Natural Resources (Ministerio de Medio Ambiente y Recursos Naturales)
FAO-GIEWS	Food and Agriculture Organization of the United Nations - Global Information and Early Warning System	MCNA	Multi-Cluster Needs Assessment
FCS	Food Consumption Score	MDD	Minimum Dietary Diversity
FCT	Federal Capital Territory	MICS	Multiple Indicator Cluster Survey or Ministry and National Institute for Health (Ministerio de Salud-Instituto Nacional de Salud)
FEWS NET	Famine Early Warning Systems Network	MoPH	Ministry of Public Health
FSIN	Food Security Information Network	MPI	Multi-dimensional poverty index
FSNAU	Food Security and Nutrition Assessment Unit	MUAC	Mid-Upper Arm Circumference
FSNMS	Food Security and Nutrition Monitoring System	(WFP's)	World Food Programme's mobile Vulnerability
FSNWG	Food security and nutrition working group	mVAM	Analysis and Mapping
GAM	Global Acute Malnutrition	NDVI	Normalized Difference Vegetation Index
GDP	Gross Domestic Product	NM	Nautical Miles
gFSC	Global Food Security Cluster	NNS	National Nutrition Survey
GIFMM	Interagency Group on Mixed Migration Flows – Colombia (Grupo Interagencial de Flujos Migratorios Mixtos)	NRC	Norwegian Refugee Council
		OCHA	United Nations Office for the Coordination of Humanitarian Affairs
		OECD	Organisation for Economic Co-operation and Development
		PDM	Post-Distribution Monitoring

ACRONYMS cont...

PDS	Public Distribution System
R-ARCSS	Revitalized Agreement on the Resolution of the Conflict in the Republic of South Sudan
rCSI	Reduced Coping Strategy Index
REVA	Refugee influx Emergency Vulnerability Assessment
RMRP	Refugee and Migrant Response Plan
RPCA	Food Crisis Prevention Network (Réseau de Prévention des Crises Alimentaires)
SADC	Southern African Development Community
SAM	Severe Acute Malnutrition
SDG	Sustainable Development Goal
SENS	Standardised Expanded Nutrition Survey
SICA	Central American Integration System (Sistema de la Integración Centroamericana)
SIDS	Small Island Developing states
SIPRI	Stockholm International Peace Research Institute
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SNNPR	Ethiopian Southern Nations, Nationalities, and Peoples' Region
SOFI	The State of Food Security and Nutrition in the World
SPLM-N	Sudan People's Liberation Movement – North
TMC	Transitional Military Council
UAG	Unidentified Armed Groups
UEMOA	West African Economic and Monetary Union (Union économique et monétaire ouest-africaine)
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNAMA	United Nations Assistance Mission in Afghanistan
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNMISS	United Nations Mission in South Sudan
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
UNSC	United Nations Security Council
USAID	United States Agency for International Development
USD	United States Dollar
USDA GAIN	United States Department of Agriculture - Global Agricultural Information Network
VAC	Vulnerability Assessment Committee
VAM	Vulnerability Analysis and Mapping
WASH	Water, Sanitation and Hygiene
WB	World Bank
WFP	World Food Programme
WHS	World Humanitarian Summit
WHO	World Health Organization

ICONOGRAPHY

Drivers of acute food insecurity

-  Conflict/insecurity
-  Weather extremes
-  Economic shocks
-  Pests
-  Health shocks
-  Disease

Nutrition

-  Acute malnutrition (wasting)
-  Chronic malnutrition (stunting)
-  Dietary diversity
-  Breastfeeding
-  Anaemia
-  Access to safe drinking water

Displacement

-  Internally displaced people (IDPs)
-  Refugees/asylum-seekers
-  Returnees

Maps

The boundaries and names shown and the designations used on all the maps in this document do not imply official endorsement or acceptance by the United Nations.

Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

Final status of the Abyei area is not yet determined.

A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

Introduction and methods

WHY THIS REPORT?

Reliable data and analysis are important tools in tackling the root causes of food crises

The Global Report on Food Crises is the result of a joint assessment of acute food insecurity situations around the world by 16 partners.

By carrying out collective analysis and providing clear, independent evidence the partners aim to guide coherent and coordinated strategic humanitarian and development investments. The report tracks the numbers and locations of people most in need of emergency food, nutrition and livelihood assistance and it captures how acute food

insecurity and malnutrition conditions have changed over time. It identifies the main drivers of acute food insecurity and malnutrition – and explores whether and how conflict, weather extremes and economic shocks interact and exacerbate food crisis situations. It also examines how chronic, structural or seasonal issues combine with shocks to exacerbate situations.

The data and evidence presented here can inform cost-efficient and needs-based humanitarian and resilience-building actions, and ultimately enable agencies to seek high-level political action and coordinate policies and actions for durable and innovative ways to tackle the root causes of food crises. In concrete terms, agencies, governments and



**Global Network
Against Food Crises**

The Global Network Against Food Crises was co-founded by the European Union, FAO and WFP at the 2016 World Humanitarian Summit (WHS) in response to the call for new approaches to tackle protracted crises and recurrent disasters, reduce vulnerability and better manage risks by bridging the divide between development, humanitarian and conflict-preventing action. The latter is often referred to as the humanitarian-development-peace (HDP) nexus.

The Global Network brings together partners from across the spectrum of interventions to tackle food crises, incorporating humanitarian and development actions and linking to other sectors, such as education, health, the environment and peace. It aims to develop evidence-based approaches, build capacities and provide knowledge to more effectively prevent, prepare for and respond to food crises, ultimately contributing to longer-term recovery, development and resilience-building efforts.

The Global Network addresses the multiple facets of food crises that cannot be successfully tackled by individual actors working under their own specific mandates. It

facilitates a fundamental change in the way international and local actors interact and promotes a holistic approach to address food crises worldwide. Partners in the Global Network work together and achieve results at national, regional and global level in three key areas:

- Evidence-based analyses of food crisis risks and of people's resilience to various shocks; knowledge management and communication monitoring, evaluation and learning.
- Strategic investments for addressing and preventing food crises.
- Synergies and coordination with other sectors to address the full spectrum of humanitarian, development and peace-building needs. This aims to deliver a more inclusive, equitable, resilient and sustainable set of context-specific responses and solutions.

Within the Global Network's framework and approach, the Food Security Information Network (FSIN) facilitates the consensus-building process around food security and nutrition analyses, and ensures a constant flow of information and exchange between stakeholders at country, regional and global level around food security and nutrition analysis.

other key stakeholders can use the information to bolster the case for changing food systems, building resilience to extreme weather events, resolving conflict, promoting durable peace and upholding international humanitarian law.

This report is the flagship publication of a series of analytical products facilitated by the Food Security Information Network (FSIN) and produced under the initiative of the Global Network Against Food Crises.

The humanitarian-development-peace (HDP) nexus has emerged as a major focus of policy debate in the years since the United Nations Secretary General's 2015 report for the World Humanitarian Summit. The Commitment to Action signed at the WHS called on humanitarian, development and other relevant actors to work collaboratively towards collective outcomes that reduce needs, risks and vulnerabilities over multiple years through a "New Way of Working".

Funding and financing tools, instruments, policies and approaches have not had time to adapt to the new HDP policy agenda proposed at the WHS. Moreover, practical challenges in the operationalization of the humanitarian and development collaboration in links with peace are emerging. In particular, stakeholders at country level report lack of clarity regarding roles and rules of engagement, as well as significant divergences in principles and practices, limiting the convergence between actors along the nexus.

The Global Network Against Food Crises is an attempt to foster greater collaboration and cohesive action along the nexus.

WHAT IS FOOD INSECURITY?

Food insecurity refers to the lack of secure access to sufficient amounts of safe and nutritious food for normal human growth and development and an active and healthy life. For people to be food secure, food must be both **consistently available** and **accessible** in sufficient quantities and diversity and households must be able to **utilize** (store, cook, prepare and share) the food in a way that has a positive nutritional impact.

Acute food insecurity

Acute food insecurity is any manifestation of food insecurity at a specific point in time of a severity that threatens lives, livelihoods or both, regardless of the causes, context or duration. These acute states are highly susceptible to change and can manifest in a population within a short amount of time, as a result of sudden changes or shocks that negatively impact on the determinants of food insecurity and malnutrition (IPC, 2019). Transitory food insecurity is a short-term or temporary inability to meet food consumption requirements related to sporadic crises, indicating a capacity to recover.

Chronic food insecurity

Chronic food Insecurity is a long-term or persistent inability to meet dietary energy requirements (lasting for a significant period of time during the year), FAO defines this as 'undernourishment' and it is the basis for the SDG indicator 2.1.1 published in SOFI.

People experiencing moderate food insecurity face uncertainties about their ability to obtain food and have been forced to reduce, at times during the year, the quality and/or quantity of food they consume due to lack of money or other resources. It thus refers to a lack of consistent access to food, which diminishes dietary quality, disrupts normal eating patterns, and can have negative consequences for nutrition, health and well-being. People facing severe food insecurity, on the other hand, have likely run out of food, experienced hunger and, at the most extreme, gone for days without eating, putting their health and well-being at grave risk (FAO et al., 2019).

In 2018 'More than 820 million people in the world were undernourished; [...] more than 700 million people were exposed to severe levels of food insecurity' and 'an additional 1.3 billion people, have experienced food insecurity at moderate levels' (*The State of Food Security and Nutrition in the World 2019*).

Drivers of acute food insecurity

The drivers of acute food insecurity are often interlinked and mutually reinforcing, making it difficult to pinpoint the specific trigger or driver of each food crisis. The GRFC 2020 takes a practical approach by estimating which are the most salient for each country/territory out of the broad categories explained below.

Conflict/insecurity

This includes interstate conflicts, internal violence, regional or global instability, civil unrest or political crises leading to displacements.

In conflict civilians are frequently deprived of their income sources and pushed into acute food insecurity. Food systems and markets are disrupted, pushing up food prices and sometimes leading to scarcities of water and fuel, or of food itself. Landmines, explosive remnants of war and improvised explosive devices often destroy agricultural land, mills, storage facilities, machinery etc.

Conflict prevents businesses from operating and weakens the national economy, reducing employment opportunities, increasing poverty levels and diverting government spending towards the war effort. Health systems are usually damaged or destroyed leaving people reliant on humanitarian support – yet increasingly insecurity and roadblocks prevent humanitarian convoys from reaching the most vulnerable. Or

aid agencies face lengthy delays, restrictions on personnel or the type or quantity of aid supplies, or insufficient security guarantees. Parties to conflict can deny people access to food as a weapon of war, especially in areas under blockade/embargo. Food insecurity itself can become a trigger for violence and instability, particularly in contexts marked by pervasive inequalities and fragile institutions. Sudden spikes in food prices tend to exacerbate the risk of political unrest and conflict (FAO et al., 2017).

Weather extremes

These include droughts, floods and the untimely start of rainy seasons.

Weather-related events can directly affect crops and/or livestock, cut off roads and prevent markets from being stocked. Poor harvests push up food prices and diminish agricultural employment opportunities, lowering income at a time when households are more market-reliant because of reduced food stocks.

Adverse weather events are particularly grave for smallholder farmers who cannot afford to invest in the systems and inputs required to withstand and recover from the impacts of such shocks, and for pastoralists who are vulnerable because they rely on rain-fed rangeland for grazing livestock and have very few fixed assets.

People's vulnerability to weather shock events rests on their capacity to adapt, the scale and frequency of shocks and their dependence on the affected sector. Repeated events further erode capacity to withstand future shocks. Weather events and changes in climate can often lead to an intensification of conflict between pastoralist herders and farmers over access to water and grazing. There is ample evidence suggesting that natural disasters – particularly droughts – contribute to aggravating existing civil conflicts.

Economic shocks

Economic shocks can affect the food insecurity of households or individuals through various channels. Macroeconomic shocks, characterized by high inflation or hyperinflation, significant currency depreciation, worsening terms of trade, high unemployment rates and loss of income, a significant contraction in exports and a critical decrease in investments and other capital inflows tend to coincide with increases in acute food insecurity. Increases in prices of staple grains, oil or agricultural inputs can affect food availability, food prices and incomes. Microeconomic shocks are characterized by rising food prices, lack of income sources and consequent reduction in purchasing power, which directly affect households' food security.

Countries with weak governance and institutions, or facing armed conflict, civil unrest or instability, are particularly vulnerable to the impact of economic decline. High debt

constrains economic growth, increases vulnerability to economic shocks and detracts from development spending.

Other drivers

Other drivers are used in the GRFC but are not recorded as the primary driver in any of the countries analysed.

Health shocks Disease outbreaks (occurrence of disease cases in excess of normal expectancy) are usually caused by an infection, transmitted through person-to-person contact, animal-to-person contact, or from the environment or other media. Water, sanitation, food and air quality are vital elements in the transmission of communicable diseases and in the spread of diseases prone to cause epidemics. Displaced populations – particularly in overcrowded camps – are more susceptible to disease outbreaks which strained health systems cannot prevent or control (WHO).

Epidemics and pandemics can also affect the ability of people to carry on their activities and livelihoods and, in the worst cases when widespread, may also affect markets and supply chains.

Crop pests and animal diseases Fall armyworms, desert locusts, etc can damage crops and may lead to severe production shortfalls. Peste des petits ruminants (PPR), foot-and-mouth disease (FMD), or Rift Valley fever (RVF) often affect livestock and pastoralists' livelihoods in food-crisis contexts.

Natural disasters (non-weather related) Disasters such as earthquakes, tsunamis and volcanic eruptions can lead to major property, infrastructure and/or environmental damage as well as loss of human life.

Displacement

Displacement is often a side-effect of conflict, food insecurity and weather shocks. Displaced people are often more vulnerable to food insecurity and malnutrition having had to abandon their livelihoods and assets, undertake arduous journeys and settle in areas or camps with limited access to basic services or former social networks. Their rights are often restricted due to host country legal frameworks, resulting in a lack of access to land, employment and freedom of movement. They are often dependent on humanitarian assistance to meet their food needs.

Forced displacement is the movement of people who have been obliged to leave their homes, particularly to avoid the effects of armed conflict, generalized violence, violations of human rights or natural or human-made disasters.

A refugee is someone who has been forced to flee his or her country because of persecution, war or violence. Refugees are recognized under various international agreements. Some are recognized as a group or on a 'prima facie' basis while others undergo an individual investigation before being

Methodology

Criteria for selecting countries for inclusion in GRFC 2020**71** countries were selected for inclusion in GRFC 2020

48 countries that requested external assistance for food and/or faced shocks as assessed by FAO GIEWS:

- ▶ in 2019 or
- ▶ at least once in the past 3 years or
- ▶ at least 3 years in the past 10 years.



23 low or middle-income countries that did not meet GIEWS criteria, but had populations in need of humanitarian assistance as a result of:

- ▶ hosting refugee populations who were assisted by UNHCR and WFP
- ▶ having over 1 million or at least 20% of its population forcibly displaced
- ▶ having populations affected by weather shocks
- ▶ having populations affected by conflict and insecurity.

High income countries, countries that did not ask for FAO and WFP humanitarian assistance to cope with the shock(s) or countries in which the shock(s) had little impact on food security were not included.



35 of the selected countries were identified as major crises in 2019 based on the following non-mutually exclusive criteria

- ▶ at least 20% of the population analysed in IPC/CH Phase 3 or above
- ▶ at least 1 million people in IPC/CH Phase 3 or above
- ▶ any area in IPC/CH Phase 4 or above
- ▶ included in the IASC humanitarian system-wide emergency response – level 3.



given refugee status. The 1951 Convention and 1967 Protocol Relating to the Status of Refugees provide the full legal definition of a refugee.

An asylum-seeker is a person seeking sanctuary in a country other than their own and waiting for a decision about their status. The legal processes related to asylum are complex and variable, which is a challenge when it comes to counting, measuring and understanding the asylum-seeking population. When an asylum application is successful, the person is awarded refugee status.

Internally displaced people (IDPs) are those forced to flee their homes as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights, or natural or human-made disasters, and who have not crossed an international border.

A stateless person is someone who does not have a nationality of any country. Some people are born stateless, but others

become stateless due to a variety of reasons, including sovereign, legal, technical or administrative decisions or oversights. The Universal Declaration of Human Rights underlines that 'Everyone has the right to a nationality' (UNGA, 1948, article 15).

Acute food insecurity data sources for the GRFC 2020

IPC/CH analyses for the peak number of acutely food-insecure people in 2019

In the 39 countries where the government and food security stakeholders have adopted the IPC/CH as the protocols for classifying the severity and magnitude of acute food insecurity, the number of people in Crisis or worse (IPC/CH Phase 3 or above) corresponds to the highest estimates registered for the calendar year, independent of seasonality. For a summary of the IPC/CH classification system refer to

Table 1

IPC/CH acute food insecurity phase description and response objectives

Phase	Technical description	Priority response objective
1 None/Minimal	Households are able to meet essential food and non-food needs without engaging in atypical and unsustainable strategies to access food and income.	Resilience building and disaster risk reduction.
2 Stressed	Households have minimally adequate food consumption but are unable to afford some essential non-food expenditures without engaging in stress-coping strategies.	Disaster risk reduction and protection of livelihoods.
3 Crisis	Households either: • Have food consumption gaps that are reflected by high or above-usual acute malnutrition; <i>OR</i> • Are marginally able to meet minimum food needs but only by depleting essential livelihood assets or through crisis-coping strategies.	URGENT ACTION REQUIRED to protect livelihoods and reduce food consumption gaps.
4 Emergency	Households either: • Have large food consumption gaps which are reflected in very high acute malnutrition and excess mortality; <i>OR</i> • Are able to mitigate large food consumption gaps but only by employing emergency livelihood strategies and asset liquidation.	URGENT ACTION REQUIRED to save lives and livelihoods.
5 Catastrophe/Famine	Households have an extreme lack of food and/or other basic needs even after full employment of coping strategies. Starvation, death, destitution and extremely critical acute malnutrition levels are evident. (For Famine classification, area needs to have extreme critical levels of acute malnutrition and mortality.)	URGENT ACTION REQUIRED to revert/prevent widespread death and total collapse of livelihoods.

table 1, and for the full version of the IPC acute food insecurity reference table, see annex 1 on page 220. The 2019 acute food insecurity estimates are reported in table 5 on page 24, and the latest updates of acute food insecurity estimates available in 2019 are in table 9, annex 3.

Populations in Crisis (IPC/CH Phase 3), Emergency (IPC/CH Phase 4) and Catastrophe (IPC/CH Phase 5) are deemed to be those in need of urgent food, livelihood and nutrition assistance. Populations in Stressed (IPC/CH Phase 2) require a different set of actions – ideally disaster risk reduction and livelihood protection interventions – and are also indicated in chapter 2. A wide range of sources are used to examine the drivers of acute food insecurity and complement the analysis.

Other sources for countries with no IPC/CH analysis
 For the handful of countries that have not adopted the IPC or the CH classifications or did not conduct such analyses in 2019, the data sources were FEWS NET IPC-compatible analyses¹ (4 countries), WFP assessments using CARI methodology² (6 countries) and Humanitarian Needs Overviews (HNO)³ (6 countries). See annex 3, table 9.

Sources for the 2020 forecasts

The sources for the outlook and projected trends for 2020 vary. IPC/CH projections are estimated by outlining the main assumptions driving the evolution of food security in the projected period. The focus is on the 'most likely scenario' which helps to devise the potential changes on population distribution across IPC/CH phases. Also, it takes into account the potential effects of planned, funded and likely-to-occur humanitarian assistance in the area of analysis.⁴

FEWS NET food assistance outlook briefs provide information on the projected severity and magnitude of acute food insecurity (using ranges) and indicate each country's food-insecure population in need of urgent humanitarian food assistance (IPC Phase 3 or above). FEWS NET projections are based on a scenario development approach where a set of assumptions regarding the evolution of food security drivers and their impacts on food security outcomes in the absence of humanitarian food assistance. The report presents projections considered to be the most-likely scenario.

CH projections forecast the number of people in CH Phase 3 or above for West Africa, the Sahel and Cameroon in a scenario in which no food assistance is provided.

¹ IPC compatible products are generated using key IPC protocols but are not built on multi-partner technical consensus

² The Consolidated Approach for Reporting Indicators of Food Security (CARI) is used to classify individual households according to their level of food insecurity. All five indicators included within the CARI approach can be incorporated within IPC analysis. The IPC technical manual provides guidance on where each indicator sits within the IPC analytical framework. For details see <https://resources.wfp.org/data-analysis/quantitative/food-security/cari-the-consolidated-approach-for-reporting-indicators-of-food-security>.

³ The HNO includes an assessment of the food security situation, the impact of the crisis, the breakdown of the people in need and the required funds.

⁴ For more details on forecasting methods, see : http://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/manual/IPC_Technical_Manual_3_Final.pdf
<http://www.cils.int/index.php/2019/10/04/cadre-harmonise-manuel-version-2-0/> <https://fews.net/sectors-topics/approach/fews-net-guidance-document-series>

WHAT IS MALNUTRITION?

Malnutrition exists in different forms; it includes undernutrition and overnutrition. Undernutrition is more than a lack of food – it is a combination of factors: insufficient energy, protein and micronutrients exacerbated by frequent infections or disease. Malnutrition stunts children's growth, deprives them of essential vitamins and minerals, and makes them more susceptible to frequent and severe disease and infections (UNICEF).

There are also other forms of malnutrition. While not a focus of this report, it may also refer to overnutrition leading to obesity. This form of malnutrition is on the rise in almost every country in the world. Undernutrition and overnutrition frequently coexist within the same country, community, and even within the same individual. Stunted children, for example, face a greater risk of becoming overweight as adults (UNICEF).

Acute malnutrition

A child being too thin for his or her height as a result of rapid weight loss or the failure to gain weight is a sign of acute malnutrition (wasting) which, although treatable, can lead to illness, disability or death. Moderate acute malnutrition (MAM) using the weight for height indicator is identified by weight for height z scores (WHZ) below -2 and above -3 of the reference population, and severe acute malnutrition (SAM) by WHZ below -3. Global acute malnutrition (GAM) reflects both MAM and SAM in a population. Acute malnutrition can also be defined by Mid-Upper Arm Circumference (MUAC) measurements ≤ 12.5 cm, with severe acute malnutrition defined with a measurement of ≤ 11.5 cm. Children affected require urgent feeding, treatment and care to survive. Acute malnutrition rates depict the nutrition situation in the general population at a specific time: they can show marked seasonal patterns and can change quickly over time. See table 2.

Chronic malnutrition

A child being too short for his or her age (stunting) is considered chronically malnourished. This condition is preventable from the 1 000 days between a woman's pregnancy and the time her child turns two. The physical and cognitive damage caused by stunting can be irreversible and has far-reaching consequences, from diminished learning and school performance to lower future earnings, and can affect the next generation. Stunted children under 5 years old are identified by a height for age z score (HAZ) below -2 of the reference population. Severe stunting is defined as HAZ below -3. See table 3.

Micronutrient deficiencies

Deficiencies of vitamin A, iron and zinc are often referred to as 'hidden' hunger because it develops gradually over time, and a large percentage of the population may be deficient without showing any clinical symptoms or signs of deficiency.

Drivers of malnutrition in food crises

The immediate cause of acute malnutrition is a severe nutritional restriction either as a result of inadequate food intake, or a recent bout of illness, such as diarrhoea, that hinders appropriate intake and absorption of nutrients. The determinants of malnutrition also include inadequate access to healthcare, water and sanitation services, inappropriate child feeding and care practices, as described in the UNICEF framework .

Children require an adequate amount of nutrient dense foods for their optimum growth and development, to build immunity to infections and protect against disease. Exclusive breastfeeding in the first six months of life followed by the timely introduction of safe and nutritionally adequate complementary foods with continued breastfeeding until 2 years of age or beyond, ensures children receive all the nutrients they need. Pregnant and lactating women also need to consume foods from a variety of food groups, with adequate and appropriate nutrients and energy to meet the increased physiological requirements, to sustain healthy fetal growth and development, and support lactation.

During humanitarian crises, access to nutritious foods may be limited by food shortages or disrupted food systems

Table 2

Severity index for prevalence of wasting in children aged 6–59 months

Prevalence ranges	Label	
< 2.5%	Very low	
2.5–< 5%	Low	
5–< 10%	Medium	
10–< 15%	High	
$\geq 15\%$	Very high	

Table 3

Severity index for prevalence of stunting in children aged 0–59 months

Prevalence ranges	Label	
< 2.5%	Very low	
2.5–10%	Low	
10–< 20%	Medium	
20–<30%	High	
$\geq 30\%$	Very high	

De Onis et al. Public Health Nutrition, 2018. Available at: <https://www.who.int/nutrition/team/prevalence-thresholds-wasting-overweight-stunting-children-paper.pdf>

compromising the availability of adequate and safe complementary foods for vulnerable children. When food production is limited, and/or markets and infrastructure are functioning poorly the cost of food increases and vulnerable households with limited purchasing power struggle to provide children with the nutritious diet they require.

In addition, caregivers during emergencies may have reduced time to prepare nutritious meals and care for children because they may, for instance, have to take on additional agricultural tasks, care for other vulnerable family members or take longer to access services and water. In some contexts – such as during displacements – the precarious living conditions may also hinder the hygienic preparation of meals.

Displaced populations often face severely compromised access to safe water and improved sanitation and are at increased risk of frequent outbreaks of infectious disease, which weakened health systems cannot treat, prevent or control. Measles, cholera, Ebola and dengue fever outbreaks are illnesses that have a negative impact on the overall health and nutritional status of individuals, especially young children. In crises children are often not able to access other preventive services such as micronutrient supplementation and immunization, further increasing the risk of malnutrition. Displacement can also result in the break-down of familial and community networks that provide the necessary support and guidance needed for looking after young children.

Nutrition data sources for the GRFC 2020

The nutrition analysis was conducted only for countries facing a food crisis to complement the acute food insecurity analysis. The nutritional status of children and related contributing factors was assessed using globally agreed indicators and standards.

The GRFC reviews and analyses most recent available country data on anthropometry, dietary intake, infant and young child feeding (IYCF) practices, health and WASH indicators from national and sub-national nutrition surveys. These include representative SMART (Standardized Monitoring and Assessment for Relief and Transitions) surveys, Demographic and Health Surveys (DHS), Multiple Indicators Cluster Surveys (MICS), National Vulnerability Assessments and Analysis, and Infant and Young Child Feeding – Knowledge Attitude and Practices Assessments (IYCF KAP). For refugee populations nutrition data comes from UNHCR Standardized Expanded Nutrition Surveys (SENS).

The GRFC uses the Joint Child Malnutrition Estimates 2019 (UNICEF, WHO, WB) for the number of children affected by stunting and acute malnutrition globally. In chapter 3, it uses in-country calculations approved by the nutrition clusters/ sectors and shared in key planning documents such as HNOs and Humanitarian Response Plans (HRP) including projections. For the drivers, it consults the above surveys and WHO, UNICEF, OCHA, ACAPS, UNHCR and other sources.

In 2019, 10 countries (Chad, Kenya, Madagascar, Mozambique, the Niger, Nigeria, Pakistan, Uganda, Somalia and South Sudan) conducted an IPC acute malnutrition analysis in areas known to have high rates of acute malnutrition. The results of these analyses are shared in this report.

The IPC analysis process reviews all contributing factors affecting acute malnutrition in the area of analysis and classifies the severity of a nutrition situation in a population, using defined indicators. See table 4 below. The level of Global Acute Malnutrition (GAM) is used to classify the severity of acute malnutrition and key factors such as dietary intake, disease, feeding and care practices, health and WASH environment and contextual information such as access to services, mortality etc are all included in the analysis.

Table 4

IPC/CH acute malnutrition technical descriptions and response objectives

Phase	Technical description	Priority response objectives
1 Acceptable	Less than 5% of children are acutely malnourished.	Maintain the low prevalence of acute malnutrition.
2 Alert	5–9.9% of children are acutely malnourished.	Strengthen existing response capacity and resilience. Address contributing factors to acute malnutrition. Monitor conditions.
3 Serious	10–14.9% of children are acutely malnourished.	Scaling up of treatment and prevention of affected populations.
4 Critical	15–29.9% children are acutely malnourished. The mortality and morbidity levels are elevated or increasing. Individual food consumption is likely to be compromised.	Significant scale up and intensification of treatment and protection activities to reach additional population affected.
5 Extremely Critical	30% of children are acutely malnourished widespread morbidity and/or very large individual food consumption gaps are likely evident.	Addressing widespread acute malnutrition and disease epidemics by all means.

Additional nutrition indicators used in GRFC 2020



Minimum dietary diversity for children aged 6-23 months

This indicator refers to the percentage of children aged 6-23 months who receive foods from more than five out of eight food groups a day. The eight food groups are: i. breastmilk; ii. grains, roots and tubers; iii. legumes and nuts; iv. dairy products (infant formula, milk, yogurt, cheese); v. flesh foods (meat, fish, poultry and liver/organ meats); vi. eggs; vii. vitamin-A rich fruits and vegetables; viii. other fruits and vegetables.

In some surveys minimum dietary diversity is calculated based on seven food groups, excluding breastmilk. In these cases, the indicator refers to the percentage of children aged 6-23 months who receive foods from more than four out of seven food groups a day.



Minimum meal frequency

The indicator refers to the proportion of breastfed and non-breastfed children aged 6-23 months who receive solid, semi-solid or soft foods at least the minimum number of recommended times a day.



Minimum acceptable diet

This composite indicator combines meal frequency and dietary diversity to assess the proportion of children aged 6-23 months consuming a diet that meets the minimum requirements for growth and development.



Percentage of households not consuming micronutrient-rich food (analysed in refugee populations)

This refers to the proportion of households with no member consuming any vegetables, fruits, meat, eggs, fish/seafood, and milk/milk products over a reference period of 24 hours. The food group of vegetables, fruits, meat, eggs, fish/seafood, and milk/milk products are the same as the 12 food groups defined by FAO (2011).



Exclusive breastfeeding

This indicator refers to the percentage of infants fed exclusively with breast milk up to six months of age, as recommended by WHO.



Prevalence of anaemia

This indicator refers to the proportion of children aged 6-59 months and of reproductive age women (15-49 years) who are anaemic.

Anaemia is a condition in which the number of red blood cells or their oxygen-carrying capacity is insufficient to meet physiological needs, which varies by age, sex, altitude, smoking and pregnancy status. Iron deficiency is thought to be the most common cause of anaemia globally, although other conditions, such as folate, vitamin B12 and vitamin A deficiencies, chronic inflammation, parasitic infections and inherited disorders can all cause anaemia. In its severe form, it is associated with fatigue, weakness, dizziness and drowsiness. Pregnant women and children are particularly vulnerable (WHO).



Access to basic drinking water services

Improved drinking water sources are those which, by nature of their design and construction, have the potential to deliver safe water. The WHO and UNICEF Joint Monitoring Program for Water Supply Sanitation and Hygiene (JMP) subdivides the population using improved sources into three groups (safely managed, basic and limited) according to the level of service provided. In order to meet the criteria for a safely managed drinking water service, people must use an improved source meeting three criteria: accessible on premises; available when needed; free from contamination.

If the improved source does not meet any one of these criteria but a round trip to collect water takes 30 minutes or less, then it is classified as a basic drinking water service. If water collection from an improved source exceeds 30 minutes, it is categorized as a limited service (WHO and UNICEF).

For refugees, the indicator refers to the type of drinking water source used by the household and serves to indicate whether their drinking water is of a suitable quality or not.

LIMITATIONS

Consensus

All partners are in agreement with the approximate degree of magnitude and severity of acute food insecurity indicated for the countries included in this report, except in the cases of Afghanistan, the Democratic Republic of the Congo, Haiti and Ethiopia, for which FEWS NET's analyses of available evidence suggest that the population requiring emergency food assistance in 2019 was lower than the estimates based on the IPC. The differences stem from varying interpretations of the data related to factors contributing to acute food insecurity.

Data gaps and challenges

Omission of 16 countries because of insufficient evidence to produce estimates of people in Crisis or worse (IPC/CH Phase 3 or above, or equivalent) Bolivia (Plurinational State of), Comoros, Congo, Democratic People's Republic of Korea, Djibouti, Syrian refugees in Egypt and Jordan, Eritrea, Iran (Islamic Republic of), Kyrgyzstan, Lao People's Democratic Republic, Nepal, Venezuelan migrants in Peru, Philippines and Tajikistan and displaced populations in Algeria/Western Sahara.

Underestimation of numbers of people in Crisis or worse (IPC/CH Phase 3 or above, or equivalent) for many countries Data collection is not always national, and may only take place in accessible areas or those affected by a localized shock. Data collection might also have been conducted out of the peak season or the analysis did not include a projection for the timing of peak needs. In addition, the number of people in Crisis or worse (IPC/CH Phase 3 or above) does not necessarily reflect the full population in need of urgent action to decrease food gaps and protect and save lives and livelihoods. This is because some households may only be classified in IPC/CH Phase 1 or 2 because they receive assistance, and are in fact in need of continued action. The number in Crisis or worse (IPC/CH Phase 3 or above) refers to populations in need of action further to that already taken.

Absence of estimates for populations in Stressed (IPC/CH Phase 2) pending data sources Bangladesh, Burundi, Iraq, Libya, Nicaragua, Rwanda, Uganda and Ukraine. This is mainly the case when using FEWS NET, HNOs or to a lesser extent WFP analyses as the source.

Lack of data availability and comparability for refugee food security Refugee food security is measured in various ways across refugee populations and data are not systematically collected, disaggregated, consolidated or shared. Detailed, comparative analysis on refugee food security at country, regional or global level is not possible with current systems and processes, and particularly not in a comparable way to IPC/CH protocols.

Limited availability and frequency of national nutrition surveys and/or IPC acute malnutrition analyses Only 10 countries – Chad, Kenya, Madagascar, Mozambique, the Niger, Nigeria, Pakistan, Somalia, South Sudan and Uganda – conducted an IPC acute malnutrition analysis in 2019.

Limited predictive analysis (acute food insecurity and malnutrition) For several countries with no IPC/CH or compatible products where alternative estimates are used, predictive analyses are not available. In some cases where IPC/CH is used, data collection and analysis updates are not as frequent as might be needed to provide estimates for the forecast section of this report. IPC-compatible analyses offer range values for forecasts rather than precise estimates. Not all countries with a 2019 IPC acute malnutrition analysis had a projection beyond publication of the GRFC 2020.

Comparability challenges

Most IPC results presented in this report are based on the IPC Technical Manual Version 3.0, which was launched in April 2019 and CH Technical Manual Version 2.0 for analyses carried out in October–November 2019. The use of these revised protocols does not affect the comparability of numbers of food-insecure people with previous analysis periods and between countries.

For some countries, the coverage of food security analyses within and between years varies in terms of population (e.g. rural only vs. rural and urban) and/or areas analysed (e.g. part of the country vs. whole country). This affects the comparability of the number of acutely food-insecure people between time periods. In a few countries (e.g. Bangladesh, Burundi, Djibouti), no IPC acute food insecurity analysis was conducted in 2019. Depending on whether other comparable sources of information could be found, this hampers comparability with previous years and highlights the importance for food-crisis countries to conduct an IPC analysis at least once a year.

Data can be missing because it is



not collected/
area is inaccessible



not disaggregated by age,
gender or IPC/CH phases



scattered across
various sources



not comparable across time
or geographical areas



incomplete

URGENT CALL TO ACTION TO IMPROVE DATA ANALYTICS

If governments, humanitarian actors and development agencies are to prevent food crises from getting worse in both severity and magnitude they need reliable, timely and accessible data and analysis to inform early warning and early action.

Across most editions of the GRFC, data has been missing for seven countries (Congo, the Democratic People's Republic of Korea, Eritrea, Kyrgyzstan, Nepal, the Philippines and Sri Lanka), while for the first time in the 2020 report an assessment provided an estimate for the Bolivarian Republic of Venezuela.

While all partners are in broad agreement with the analysis provided in the report, divergences in interpreting the data related to the factors contributing to acute food insecurity in Afghanistan, the Democratic Republic of the Congo and Haiti

have led to a disclaimer for these countries since the report was launched in 2017.

Major data availability challenges, both for food security and nutrition, remain in inaccessible areas of countries and this year's report highlights that there is no comparable analysis available for refugee populations.

The humanitarian and development community need to come together to better address the gaps in existing data collection systems, identify data and analysis standards where they don't exist, engage with countries where there is limited data or consistent divergences in their interpretation.

The need to invest in technology-savvy monitoring systems and predictive analysis has become even more apparent in the context of COVID-19. The data community must adapt its tools to provide timely, reliable measurement of the impact of COVID-19 on food security and make the data easy to access, interpret and use by policymakers to enable them to make evidence-based decisions.

How to use this report



Chapter 2 starts with a graphical and textual analysis of the key findings of the GRFC 2020. It provides the main list of 55 countries and territories in food crises, supplying the peak number of acutely food-insecure people in 2019.

Refer to the rest of the chapter for regional overviews of 2019 food crises for which data was available: three regions of Africa; Asia and the Middle East; Latin America and the Caribbean.



Chapter 3 covers the 35 most serious food crises in alphabetical order from Afghanistan to Zimbabwe. There is a graphical overview page for each country crisis providing the key relevant food security and nutrition data; a summary of the main drivers in order of their contribution to the country's food crisis and the displacement figures that are most relevant for the country/territory.

The rest of each country profile provides a more granular analysis of the acute food insecurity and nutrition situation in 2019 and discusses the drivers in some depth. Each profile is illustrated with maps that give a sense of severity by region and, where possible, graphs that convey changes over time.



Chapter 4 provides a table with pre-COVID-19 pandemic estimates of the number of acutely food-insecure people in need of urgent action in 2020.

It further provides an analysis of expected trends by country/territory in 2020. It explains the assumptions underlying the acute food insecurity forecasts for 2020. Regional maps of Africa, Asia and Latin America/Caribbean indicate the projected ranges of the numbers of people in IPC/CH Phase 3 or above as well as primary drivers and risks by country.

Analysis of food crises in 2019

FOOD CRISES IN 2019

In 2019, almost 135 million people in 55 countries or territories, or 16 percent of the total population analysed, were classified in Crisis conditions or worse (IPC/CH Phase 3 or above). This marks the highest number in the four years since the GRFC launched.

Does this represent a major increase compared with previous years?

The number of people in Crisis or worse (IPC/CH Phase 3 or above) increased by 22 million between 2018 and 2019, as a result of worsening acute food insecurity conditions in key conflict-driven crises, notably the Democratic Republic of the Congo and South Sudan, and more severe droughts and economic shocks in Guatemala, Haiti, Pakistan, Zambia and Zimbabwe. Burkina Faso and the Niger in the Sahel, and Cameroon also saw big increases in the number of people in Crisis or worse (CH Phase 3 or above), largely as a result of intensified conflict and greater displacement of people.

However, the increase between 2018 and 2019 also reflects increased geographical coverage thanks to greater data availability: in 2019, data became available for Angola, Namibia, Rwanda, the United Republic of Tanzania and the Bolivarian Republic of Venezuela, which added an additional 11.4 million people in Crisis or worse (IPC/CH Phase 3 or above) to the global total. The 2019 total also significantly exceeds that of 2017 (124 million people) and 2016 (108 million), but again availability of data played an important role in the difference between the years.

When comparing the 50 countries that were in both the 2019 and the 2020 reports, the population in Crisis or worse (IPC/CH Phase 3 or above) rose from 112 to 123 million. When comparing the same 40 countries that have featured in each edition of the GRFC, the total number was also the highest in 2019 (see figure 6).

 **135M** people
2019 in 55 countries were in Crisis or worse (IPC/CH Phase 3 or above)

Numbers in previous years

2016	2017	2018
108M people in 48 countries	124M people in 51 countries	113M people in 53 countries

Figure 5

Numbers of acutely food-insecure people in Crisis or worse (IPC/CH Phase 3 or above) by region

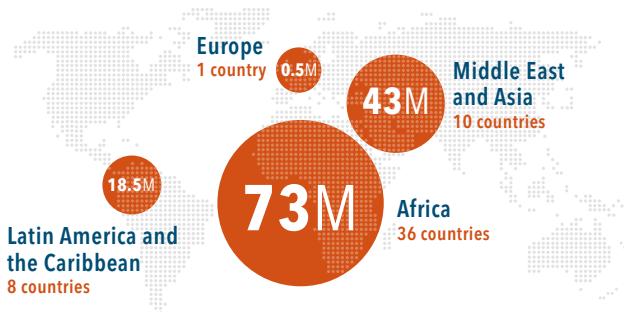
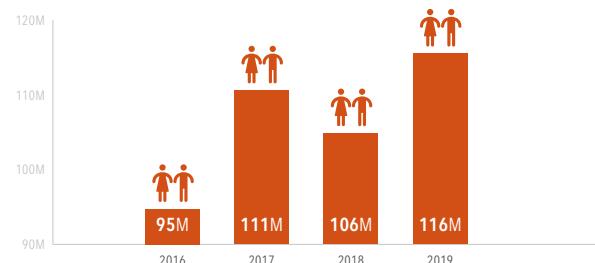


Figure 6

Numbers of people in Crisis or worse (IPC/CH Phase 3 or above) in 40 comparable countries 2016–2019



Source: FSIN, GRFC 2020

Which are the worst-affected countries and regions?

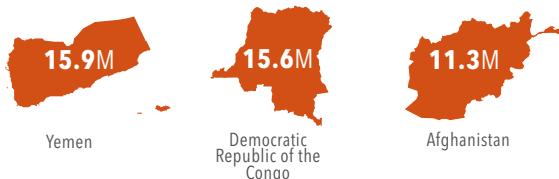
For the second year in a row, three conflict-affected countries – Yemen, the Democratic Republic of the Congo and Afghanistan – had the largest populations in Crisis or worse (IPC Phase 3 or above), representing 32 percent of the total population in food crises. Venezuela (Bolivarian Republic of) appeared as the world's fourth largest food crisis with 9.3 million people acutely food insecure and in need of urgent assistance as new data became available in 2019.

Ten countries – Yemen, the Democratic Republic of the Congo, Afghanistan, Venezuela (Bolivarian Republic of), Ethiopia, South Sudan, Syrian Arab Republic, the Sudan, Nigeria and Haiti – constituted the worst food crises and accounted for 65 percent of the total population in Crisis or worse (IPC/CH Phase 3 or above) or 88 million people.

In terms of prevalence, seven countries – South Sudan, Yemen, the Central African Republic, Zimbabwe, Afghanistan, the Syrian Arab Republic and Haiti – stood out as major food crises in 2019, each with more than 35 percent of their population analysed in Crisis or worse (IPC/CH Phase 3 or above), peaking at 61 percent in South Sudan, followed by 53 percent in Yemen.¹ Two migrant/refugee populations analysed in hosting countries had a very high prevalence of acute food insecurity: Venezuelan refugees in Ecuador (76 percent) and Colombia (55 percent).

Africa remained as the continent most affected by food crises, accounting for 54 percent of the global total number of people in Crisis or worse (IPC/CH Phase 3 or above). The number in Southern Africa was the highest at 30.4 million, increasing from

Three countries accounted for one third of the global number of people in Crisis or worse (IPC/CH Phase 3 or above)



Source: FSN, GRFC 2020

23.3 million in 2018, partly due to the addition of three countries (United Republic of Tanzania, Angola and Namibia) where data was unavailable last year, but also due to a deterioration in the acute food insecurity situation in the Democratic Republic of the Congo, Zambia and Zimbabwe.

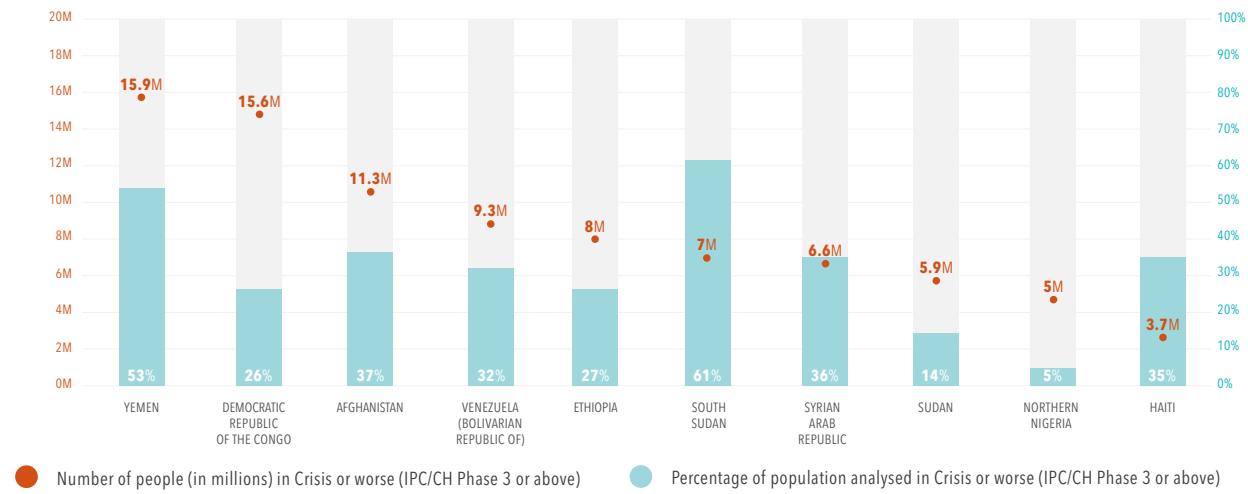
The six East African countries in the Intergovernmental Authority on Development (IGAD) region accounted for 27.5 million people in food crisis, representing a slight increase from 2018 (26.7 million), mainly due to weather-related shocks in Kenya, conflict and persistent economic challenges in South Sudan and the refugee influx and weather extremes in Uganda.

Countries in West Africa and the Sahel, and Cameroon accounted for more than 12 million people in Crisis or worse (CH Phase 3 or above). This represents a slight rise from 11 million in 2018 due to a notable increase in acute food insecurity in Burkina Faso, the Cameroon and the Niger. Although there was a year-on-year decline in Chad and Senegal, and a stabilisation in northern Nigeria and Mali, the situation deteriorated towards the end of 2019 in all these countries.

Asia and the Middle East accounted for 32 percent of the total with an increase in the number of people in Crisis or worse (IPC Phase 3 or above) in Pakistan. Afghanistan also faced an

¹ Angola and Pakistan were not included as only 3 percent of their total populations were analysed, even though a high percentage of these were in Crisis or worse (IPC Phase 3 or above).

Figure 7
The 10 worst food crises in 2019 by number of people in Crisis or worse (IPC/CH Phase 3 or above)



● Number of people (in millions) in Crisis or worse (IPC/CH Phase 3 or above)

● Percentage of population analysed in Crisis or worse (IPC/CH Phase 3 or above)

increase although this is explained by the inclusion of the urban population.

In Latin America and the Caribbean, the total number of people in food crisis was 18.6 million across eight countries and represented around 14 percent of the global population facing Crisis or worse (IPC Phase 3 or above) worldwide.

Why is the situation worsening?

As shown, the number of people in Crisis or worse (IPC/CH Phase 3 or above) continued to increase and the severity of food crises appears to be deepening. Conflict/insecurity was still the primary driver of food crises in 2019. The total number of people in Crisis or worse (IPC/CH Phase 3 or above) living in conflict-driven food crises rose from 74 million in 21 countries in 2018 to more than 77 million people in 22 countries, in 2019. As figure 8 shows, the majority of these people (40 million) lived in nine countries in Asia/the Middle East where protracted armed conflict and violence continued to be fuelled by political, social and economic grievances or geopolitical tensions.

In East Africa, armed conflicts, violent extremism, intercommunal violence and other localized tensions continued to affect peace and security, particularly in South Sudan and continued to maintain large refugee populations in neighbouring countries, such as Uganda.

In West Africa, there were two major hotspots: the Lake Chad Basin – which consists of sub-national areas in Cameroon, Chad, the Niger and northern Nigeria – and the Central Sahel where Burkina Faso, Mali and the Niger are affected. In both areas, insecurity led to massive displacement of populations, destruction or closure of basic social services, disruption of productive activities, markets and trade flows. Burkina Faso was



13M additional people

in countries where **economic shocks** formed the main driver mainly because of the inclusion of Venezuela (Bolivarian Republic of) and worsening situation in Haiti and Zimbabwe



5M additional people

were pushed into Crisis or worse (IPC Phase 3 or above) since 2018 by **adverse weather extremes** because of the worsening situation in Central America, parts of Africa and Pakistan¹



3M additional people

were in **conflict-affected** countries, with violence increasing in Burkina Faso, Cameroon and the Niger and persisting in numerous other countries including Afghanistan, South Sudan and Yemen



27M people

2019 people in 34 countries were in **Emergency** (IPC/CH Phase 4) or equivalent.



84 500 people

2019 people in South Sudan and Yemen were in **Catastrophe** (IPC Phase 5).

Source: FSN, GRFC 2020

Figure 8

Numbers of people in Crisis or worse (IPC/CH Phase 3 or above) by driver in each region (millions)



Source: FSN, GRFC 2020

¹ and also the inclusion of Angola, Namibia and the United Republic of Tanzania.

one of the world's fastest growing crises with the daily lives and livelihoods of hundreds of thousands of civilians disrupted by insecurity and violence mainly in central and northern regions.

The growing intensity and severity of extreme weather events also contributed to the increased number of people in food crises in 2019 by comparison with 2018. As figure 9 shows, weather extremes were the primary driver of the acute food insecurity situation of almost 34 million people in 25 countries in 2019 by comparison with 29 million in 2018. All but five of these countries were in Africa with the largest numbers of people in Crisis or worse (IPC/CH Phase 3 or above) in countries badly affected by weather events in the IGAD region (13.2 million) and Southern Africa (11.2 million). Four of the countries were in Central America (4.4 million people). Drought-affected Sindh and Balochistan provinces in Pakistan accounted for 3.1 million people.

While still considered the tertiary driver of acute food insecurity globally, economic shocks were considered the main driver for 24 million people in eight countries – up from 10 million across six countries in 2018. While the economic crises persisted in the Sudan and worsened in Zimbabwe over the last year this increase is largely due to the inclusion of Venezuela (Bolivarian Republic of) where 9.3 million people were in Crisis or worse (IPC Phase 3 or above) largely as the result of a man-made economic crisis.

Populations in Stressed (IPC/CH Phase 2)

Countries with large numbers of acutely food-insecure people in need of urgent assistance tend to have even higher numbers of vulnerable people 'on the cusp' of Crisis (IPC/CH Phase 3). Classified in Stressed (IPC/CH Phase 2), these populations have minimal adequate food consumption and have to use food-related coping strategies.

In 2019, around 182.6 million people were classified in Stressed (IPC/CH Phase 2) conditions across 47 countries, with 71 percent of them concentrated in 32 countries in Africa, see figure 11. Around 40 percent of them were in just four countries – the Democratic Republic of the Congo, Nigeria, Venezuela (Bolivarian Republic of) and the Sudan – and another 19 percent were in Ethiopia, Afghanistan, Yemen and Kenya. As figure 10 shows, these eight countries accounted for around 60 percent of the total population in Stressed (IPC/CH Phase 2).

The data shows that the numbers facing Stressed (IPC/CH Phase 2) conditions has changed very little over time. In the 39 countries for which data was available in both 2018 and 2019, the population classified in Stressed (IPC/CH Phase 2) slightly increased from 142.4 million in 2018 to 144.1 million in 2019.

Figure 9

Numbers of acutely food-insecure people in Crisis or worse (IPC/CH Phase 3 or above) by key driver

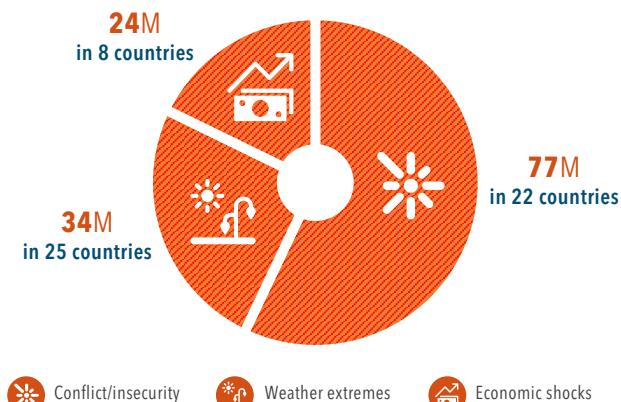
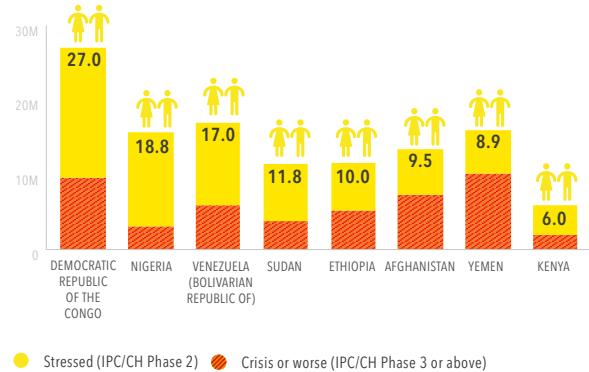


Figure 10

Eight countries accounted for 60 percent of the total population in Stressed (IPC/CH Phase 2) in 2019



183M people

in 47 countries were in Stressed (IPC/CH Phase 2). Numbers have changed very little over the last few years.

Figure 11

Over 70 percent of people in Stressed (IPC/CH Phase 2) were in Africa in 2019



Source: FSIN, GRFC 2020

Table 5

Peak numbers of acutely food-insecure people in countries with food crises, 2019

For the most recent analysis for the numbers of acutely food-insecure people in 2019, see annex 3.

COUNTRIES OR TERRITORIES	TOTAL POPULATION ANALYSED (MILLIONS)	PERCENTAGE OF POPULATION ANALYSED OUT OF TOTAL POPULATION OF REFERENCE	POPULATION IN STRESSED (IPC/CH PHASE 2)		POPULATION IN CRISIS OR WORSE (IPC/CH PHASE 3 OR ABOVE)	
			NUMBER (MILLIONS)	PERCENTAGE OF TOTAL POPULATION ANALYSED	NUMBER (MILLIONS)	PERCENTAGE OF TOTAL POPULATION ANALYSED
Afghanistan ¹	30.7	95%	9.5	31%	11.3	37%
Angola (24 communes in 3 provinces) ¹	0.9	3%	0.2	21%	0.6	62%
Bangladesh (Cox's Bazar and host populations)	3.5	100%	N/A	N/A	1.3	37%
Burkina Faso ¹	21.4	100%	3.6	17%	1.2	6%
Burundi	11.5	100%	N/A	N/A	0.2	2%
Cabo Verde	0.5	86%	0.06	13%	0.01	2%
Cameroon (7 regions) ¹	16.1	64%	3.8	24%	1.4	8%
Central African Republic (excluding Lobaye) ¹	4.4	91%	1.8	41%	1.8	41%
Chad ¹	14.3	91%	2.7	19%	0.6	4%
Colombia (Venezuelan migrants) ¹	1.6	100%	0.7	41%	0.9	55%
Côte d'Ivoire	19.8	77%	2.6	13%	0.06	0%
Democratic Republic of the Congo (109 territories) ¹	59.9	69%	27.0	45%	15.6	26%
Ecuador (Venezuelan migrants) ¹	0.4	100%	0.09	24%	0.3	76%
El Salvador (Eastern region) ¹	1.4	22%	0.5	34%	0.3	22%
Eswatini (rural population) ¹	0.9	67%	0.4	39%	0.2	25%
Ethiopia (selected areas in 6 regions) ¹	28.7	26%	10.0	34%	8.0	27%
Gambia	2.0	89%	0.4	23%	0.2	10%
Guatemala ¹	16.6	95%	4.8	29%	3.1	18%
Guinea	10.1	75%	1.4	14%	0.3	3%
Guinea-Bissau ¹	1.3	63%	0.3	26%	0.1	10%
Haiti ¹	10.5	93%	3.2	31%	3.7	35%
Honduras (13 departments) ¹	5.1	53%	1.8	35%	1.0	18%
Iraq	39.3	100%	N/A	N/A	1.8	5%
Kenya (Arid and Semi-Arid Lands) ¹	13.9	26%	6.0	43%	3.1	22%
Lebanon (Syrian refugees) ¹	0.9	100%	0.6	63%	0.3	29%
Lesotho (rural population) ¹	1.5	63%	0.6	38%	0.4	30%
Liberia	4.3	87%	0.8	19%	0.04	1%
Libya	6.7	100%	N/A	N/A	0.3	5%
Madagascar (southern, south-eastern and eastern areas) ¹	4.6	19%	1.3	29%	1.3	28%
Malawi ¹	15.3	84%	5.0	33%	3.3	22%
Mali ¹	20.5	100%	2.9	14%	0.6	3%
Mauritania ¹	4.1	87%	1.2	28%	0.6	15%
Mozambique (39 districts) ¹	5.0	18%	1.6	32%	1.7	34%
Myanmar	54.0	100%	0.02	0%	0.7	1%
Namibia	2.4	97%	0.8	35%	0.4	18%
Nicaragua	6.0	100%	N/A	N/A	0.08	1%
Niger ¹	21.8	100%	4.5	20%	1.4	7%
Nigeria (16 states and Federal Capital Territory) ¹	103.5	51%	18.8	18%	5.0	5%
Pakistan (Balochistan and Sindh drought-affected areas) ¹	6.0	3%	1.4	23%	3.1	51%
Palestine	5.0	100%	0.8	17%	1.7	33%
Rwanda	12.6	100%	N/A	N/A	0.1	1%
Senegal ¹	13.2	81%	1.8	14%	0.4	3%
Sierra Leone ¹	8.1	100%	2.6	33%	0.3	4%
Somalia ¹	12.3	100%	4.2	34%	2.1	17%
South Sudan ²	11.4	100%	3.2	28%	7.0	61%
Sudan (excluding West Darfur) ¹	41.9	98%	11.8	28%	5.9	14%
Syrian Arab Republic	18.3	100%	2.6	14%	6.6	36%
Turkey (Syrian refugees) ¹	2.7	75%	1.6	58%	0.5	17%
Uganda	40.0	100%	N/A	N/A	1.5	4%
Ukraine (Luhansk and Donetsk oblasts, and IDP)	6.1	15%	N/A	N/A	0.5	9%
United Republic of Tanzania (16 districts) ¹	4.8	8%	1.7	34%	1.0	20%
Venezuela (Bolivarian Republic of) ¹	28.5	100%	17.0	60%	9.3	32%
Yemen ²	29.9	100%	8.9	30%	15.9	53%
Zambia (86 districts) ¹	9.5	53%	3.1	33%	2.3	24%
Zimbabwe (rural population) ¹	9.4	64%	2.7	28%	3.6	38%

1 The estimates for this country contain populations classified in Emergency (IPC/CH Phase 4) or equivalent

2 The estimates for this country contain populations classified in Emergency (IPC/CH Phase 4) and in Catastrophe (IPC/CH Phase 5)

All partners are in agreement with the general magnitude and severity of acute food insecurity indicated for the countries included in this report, except Afghanistan, The Democratic Republic of the Congo, Ethiopia and Haiti, for which FEWS NET analyses of available evidence suggest the population requiring emergency food assistance in 2019 was lower than IPC estimates, because of different interpretation of data released to factors contributing to food insecurity.

Focus

Overview of malnutrition in food crises in 2019

Globally, at least one in three children under 5 years are not receiving adequate nutrition for optimum growth and development. At least 340 million children under 5 years – around one in two children – suffer from 'hidden' hunger due to micronutrient deficiencies (UNICEF, 2019). The 2019 Joint Malnutrition Estimates report indicates that globally 49.5 million children under 5 years of age suffer from wasting, with 16.6 million of them severely wasted, and almost 149 million are stunted (UNICEF, WHO, WB, 2019). Of these children living in the 55 food-crisis countries, 17 million suffer from wasting and 75 million are stunted.

In the 10 worst food crises (by number of people in Crisis or worse (IPC/CH Phase 3 or above) there were 9 million acutely malnourished children under 5 years. In terms of numbers of acutely malnourished children, the situation was particularly concerning in Pakistan, Ethiopia, the Democratic Republic of the Congo, the Sudan, Afghanistan and Yemen, which accounted for nearly 20 million wasted children, or 40 percent of the global total.

Lack of nutritionally diverse diets for children in food crises

In countries affected by food crises, where food availability and access to nutrient-rich food groups are severely restricted, the nutritional status of already vulnerable children is extremely concerning, with one out of two children stunted. In eight of the major food crises profiled in this report more than 40 percent of children were stunted. See figure 12.

In 10 countries among the worst food crises, fewer than 20 percent of 6–23 month-old children received the minimum dietary diversity requirement (see map 1, page 26). In the Niger and Chad fewer than 10 percent of young children received a minimum recommended diverse diet. See figure 13.

Limited access to basic services increases vulnerabilities

During emergencies, shocks that influence food systems, including conflict/insecurity, weather extremes (drought/floods), economic shocks, crop pests and disease, affect availability and access to nutritious foods for children and pregnant and lactating

17M



Source: UNICEF 2020

children under 5 years old were suffering from wasting across the 55 countries/territories with a food crisis

75M

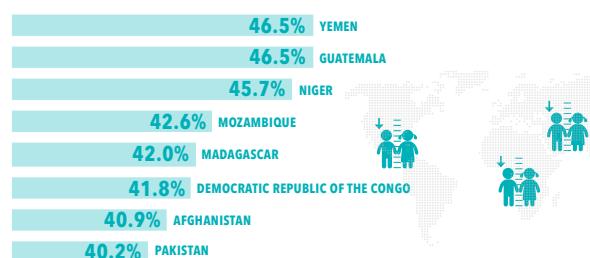


Source: UNICEF 2020

children under 5 years old were stunted across the 55 countries/territories with a food crisis

Figure 12

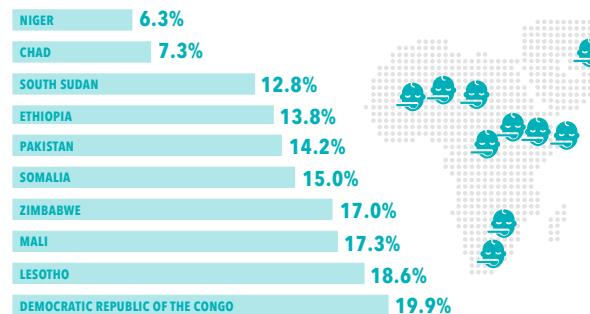
Major food crises where more than 40 percent of children were stunted



Source: FSIN, based on data extracted from national nutrition surveys, 2019.

Figure 13

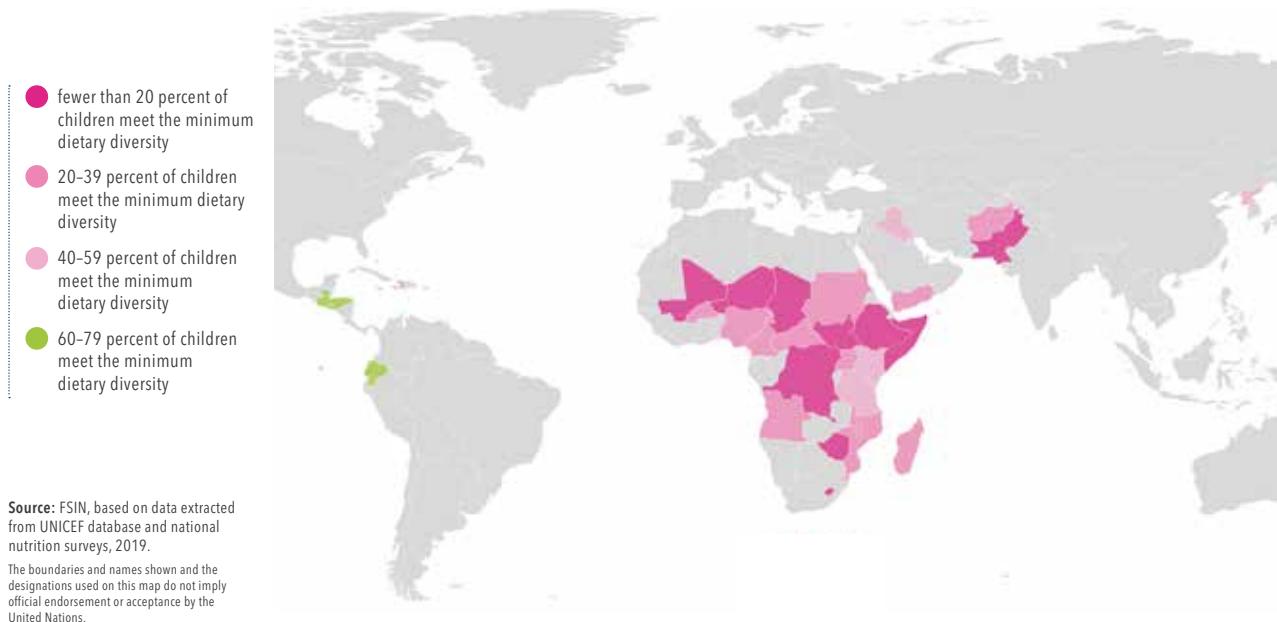
Major food crises where fewer than 20 percent of 6–23 month olds received a minimally diverse diet



Source: FSIN, based on data extracted from national nutrition surveys, 2019.

Map 1

Minimum Dietary Diversity (MDD) among children in countries affected by major food crises



women. Food production, storage, processing, distribution and markets may be disrupted during crises, making it more difficult for these groups to meet their dietary needs.

Access to basic health services is critical to prevent the occurrence of disease outbreaks. High rates of illness compromise the nutritional status of the population, particularly children and pregnant and lactating women.

In food-crisis countries, often a lack of safe water and sanitation increases the likelihood of disease outbreaks. In the Democratic Republic of the Congo, Chad, Ethiopia, Madagascar and South Sudan around 60 percent of households or more did not have access to at least basic drinking water services. See figure 14.

Furthermore, people usually have limited economic access to health services or health systems have collapsed – with lack of infrastructure, medicines, equipment and trained staff.

In Somalia, the 2019 floods, coupled with impaired health systems among IDPs and other populations affected by conflict, have resulted in cholera and measles outbreaks throughout the year, negatively affecting the nutrition status of children. There were also measles outbreaks in Chad and the Democratic Republic of Congo, and cholera outbreaks in Ethiopia, Mali, Yemen and the Democratic Republic of the Congo, which also had the world's second biggest ever Ebola outbreak.

Children in food crises are often not able to access preventive services such as micronutrient supplementation and immunization programmes, increasing the risk of them becoming malnourished.

Figure 14

Major food crises where fewer than half of households had access to at least basic drinking water services

DEMOCRATIC REPUBLIC OF THE CONGO	34%
SOUTH SUDAN	38%
CHAD	39%
ETHIOPIA	41%
MADAGASCAR	41%
CENTRAL AFRICAN REPUBLIC	48%
UGANDA	49%



Source: FSIN, based on data extracted from national nutrition surveys, 2019.



Access to health care and child nutrition and immunization services are often cut off in food crises, increasing the risk of children becoming malnourished.

Source: UNICEF 2020



Disease increases the risk of malnutrition. Floods, displacement and collapsing health systems contributed to high levels of disease outbreaks in many food-crisis countries in 2019

Source: UNICEF 2020

Focus

Population displacement and food insecurity¹

Global trends in displacement

Conflict, persecution, generalized violence and violations of human rights led to continued high levels of forced displacement in the first half of 2019. At 30 June 2019, UNHCR reported a total population of concern of 79.4 million people. This included 20.2 million refugees under UNHCR's mandate, 3.7 million asylum-seekers, 531 000 returned refugees, 44.9 million IDPs, 2.3 million returned IDPs and 3.9 million stateless people (UNHCR, February 2020). See figure 15.

The total number of Venezuelan refugees and migrants increased from under 3.1 million at the beginning of 2019 to over 4.1 million by the middle of the year. Conflicts in sub-Saharan Africa, including in Burkina Faso, Cameroon, the Central African Republic, Ethiopia, Mali, Nigeria, Somalia, South Sudan, the Democratic Republic of the Congo and the Sudan, fueled new displacements in all these cases in 2019.

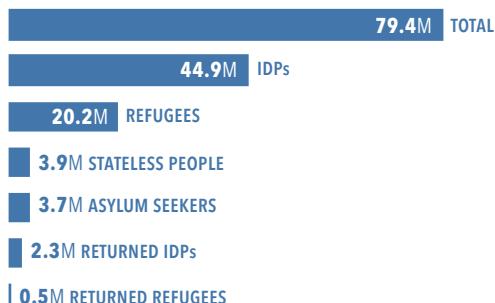
More than half of all refugees under UNHCR's mandate are hosted in eight countries that have very high numbers of people in Crisis or worse (IPC/CH Phase 3 or above) – sometimes because of the presence of the refugees. Some 6.2 million of the world's refugees are hosted in sub-Saharan Africa – the majority of them in East and the Horn of Africa (4.2 million), with Uganda and the Sudan hosting the largest numbers in the region. See figures 16 and 17 on pages 27 and 28.

Displacement fuels food insecurity

Displacement often results in a loss of livelihoods and productive assets as well as reduction in income and economic opportunities. There are often financial and physical costs associated with displacement. Refugee populations in particular often find it difficult to access food due to legal restrictions on their rights to work, access to land to cultivate food and freedom of movement. Refugee and internally displaced persons are often not successfully included in national services and systems, exposing them to greater risks of poverty and malnutrition.

Refugees who settle in host countries with restrictive legal frameworks that impede their access to land, employment, freedom of movement and other basic human rights usually face

Figure 15
UNHCR persons of concern in mid-2019



Source: UNHCR mid-year trends 2019

5.6M ↗ Palestine refugees are covered by UN Relief and Works Agency's (UNRWA) protection mandate

Source: UNRWA 2020



of the world's refugees are hosted in 8 countries: Turkey, Pakistan, Uganda, the Sudan, Lebanon, Bangladesh, Jordan and Ethiopia

Figure 16
Numbers of refugees hosted by region in mid-2019



Source: UNHCR mid-year trends 2019

¹ Please note that the figures contained in this section are taken from UNHCR's mid-year trends. There may be a slight discrepancy between them and those included in chapter 3 of this report, which provides the latest estimates from the online data portal

a heightened dependency on humanitarian support to meet their food and other basic needs. They often face abuse and/or stigma in the informal labour market.

Food insecurity can trigger displacement

As well as being a possible outcome of displacement, food insecurity can trigger it, often exacerbated by and entwined with conflict to form a vicious cycle. Limited or deteriorating access to productive assets such as land, water, livestock, agricultural inputs, as well as low agricultural productivity and/or price spikes reduce household food security and can be among the many push factors leading to migration and displacement. By its definition, this is not forced displacement, but can be seen as a similar phenomenon that some have called 'survival migration' (FAO et al, 2018). In conjunction with poverty, food insecurity may increase the likelihood and intensity of armed conflict (Holleman et al, 2017).

Migrants from Bangladesh and East and West Africa report food insecurity and economic vulnerability as key drivers for outward migration, while Syrians and Afghans claim that lack of safety and security as well as sustained conflict that destroyed employment opportunities and markets, triggered their migration (WFP, May 2017). Food shortages and high food prices were the leading causes of displacement reported by Venezuelans who fled to Colombia, Peru and Ecuador (WFP, 2019).

Acute food insecurity and nutrition

In many host countries refugees' ability to obtain food in sufficient quantity and quality depends mostly on their access to humanitarian food assistance. Refugees in 35 countries receive humanitarian food assistance to help promote food security and support livelihoods, but in some cases the size of rations and other basic assistance have been cut as a result of funding constraints (see box on refugees in Malawi on the following page). This has resulted not only in increased food insecurity and malnutrition, but greater protection risks as refugees engage in negative coping strategies to meet their essential needs (WFP, December 2019).

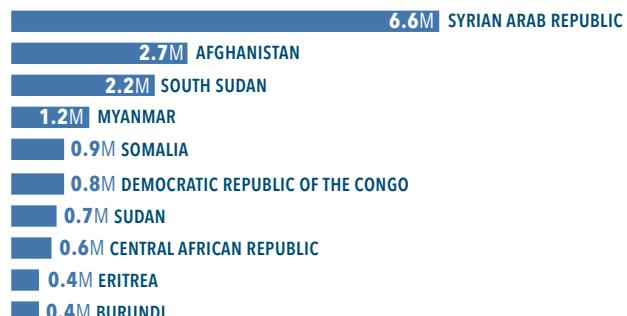
While acute malnutrition among refugees is improving in many areas, it remains of major concern in Bangladesh, eastern Chad, Gambella (Ethiopia), South Sudan and the Sudan. Chronic malnutrition in refugee populations is extremely concerning with almost half of refugee sites above the 'very high' threshold (≥ 30 percent) for stunting. Two thirds of sites have very high anaemia prevalence which is greater than the threshold for public health concern (UNHCR, January 2020).

Figure 17
Top 10 refugee-hosting countries



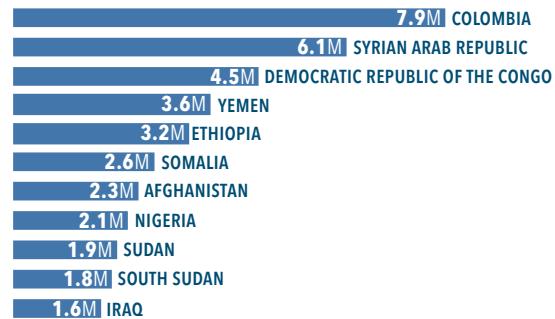
Source: UNHCR mid-year trends 2019

Figure 18
The main origin countries of refugees



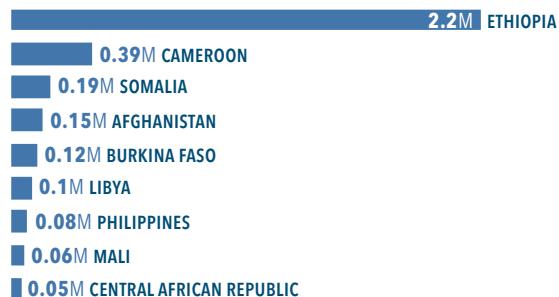
Source: UNHCR mid-year trends 2019

Figure 19
Countries with the largest number of IDPs



Source: UNHCR mid-year trends 2019

Figure 20
Countries with the highest number of new internal displacements in the first six months of 2019



Source: UNHCR mid-year trends 2019



© UNHCR/NATHALIE LEBRUN

Mujinikile Kabika Marie, age 52, from the Democratic Republic of the Congo sells potatoes at the weekly Dzaleka market to help support her five children.

Consequences of cuts to food assistance on refugees in Malawi

Malawi hosts over 45 000 refugees or asylum seekers in Dzaleka refugee camp in Dowa district. The majority (62 percent) originate from the Democratic Republic of the Congo, followed by Burundi, Rwanda, Ethiopia and Somalia (UNHCR Feb 2020). Many have been displaced for decades, but there is still a steady stream of new arrivals, with approximately 470 arriving in the camp each month (UNHCR, December 2019).

More than half reportedly want to develop businesses, engage in agriculture and/or find employment to be able to meet their own needs. However, they are unable to do so because of a legal framework that denies them the rights to work, access to land, and freedom of movement (WFP, November 2018). Only 14 percent of the refugee households cultivate crops and 12 percent own livestock, mainly poultry (WFP, December 2019). As a result, they are highly dependent on food assistance.

Some 83 percent live below the national poverty line and 70 percent of them live below the ultra-poverty line, according to a 2017 analysis (UNHCR/WFP, December 2018). A large number of women and young girls in the camp reported regularly engaging in transactional sex (several times a day) to meet their basic needs (UNHCR/WFP, December 2018 and UNHCR, April 2018).

WFP has provided in-kind food assistance for years. For around half of the refugee households it is the main source of income (WFP, December 2019). But the ration was reduced to 50 percent from May 2019 due to funding shortfalls (WFP, August 2019).

According to WFP's December 2019 data, the proportion of household expenditure allocated to food has increased drastically since food assistance was cut, with 80 percent of refugee families spending more than half on food compared to around 50 percent before the cuts. The proportion of households spending 65 percent or more on food increased from around 26 percent in 2018 to 54 percent in 2019 (WFP, December 2019). This indicates that the majority of the little income they have is used to purchase food.

The proportion of refugee families with inadequate food consumption (i.e. poor or borderline diets) increased slightly from 36 percent in 2018 to 42 percent in 2019 – due mainly to an increase in those with 'borderline' diets. The consumption-based coping strategies index reached its highest level, meaning that households were turning to negative coping strategies to maintain food consumption (transactional sex, begging, selling assets, theft etc). Vulnerable populations – women, girls, children, the ill, disabled and elderly – who have few other avenues for obtaining food were particularly likely to resort to coping strategies that are harmful to their wellbeing (UNHCR and WFP, December 2018).

Recently, there have been pockets of protests by refugees in the camp over food cuts and insecurity, which have the potential to escalate. At the same time, Malawi is struggling with high national poverty rates so host communities lack the economic resilience to cope with and recover from shocks and stressors (UNHCR, March 2020).

Regional overview

East Africa

Ethiopia Kenya Somalia South Sudan Sudan Uganda

In 2019, over 27 million people in six IGAD member states (Ethiopia, Kenya, Somalia, South Sudan, the Sudan and Uganda), were classified in Crisis or worse (IPC Phase 3 or above). This figure represents around 20 percent of the global total number of acutely food-insecure people in need of urgent humanitarian food and livelihood assistance.

The trend of rising numbers of acutely food-insecure people in the region – observed each year since 2016 – continued into 2019. The number of people in need of urgent food assistance (IPC Phase 3 or above) increased by 600 000 compared to 2018,¹ mainly driven by rising acute food insecurity in South Sudan, Kenya, Uganda and the Sudan.² Acute food insecurity persisted at similar levels in Ethiopia and improved in Somalia. See figure 22.

The six countries faced all three main drivers of acute food insecurity – weather extremes, conflict/insecurity and economic shocks – with negative impacts reinforcing each other, adding to the complexity of the food security situation. See figure 21.

Weather extremes

In the first half of 2019 many agricultural and pastoral areas of the Horn of Africa experienced a second consecutive poor rainy season, following that of late 2018. By late April, cumulative rainfall totals were up to 80 percent below normal across much of the region (FAO-GIEWS, 2019).

The unfavourable weather conditions, among the driest on record in several areas, were largely caused by Tropical Cyclone Idai, which formed in early March in the Mozambique Channel and redirected precipitations away from East Africa (FSNWG, April–May 2019). The severe dryness resulted in germination failure and crop wilting, with a negative impact on the planted area and yields. Above-average precipitation in late April and May reduced moisture deficits and marginally improved vegetation conditions, but damage to crops was irreversible in several cropping areas as precipitation occurred too late during the growing season (FAO-GIEWS, July 2019).

In southern Somalia, for example, the output of the main Gu harvest was estimated at 60 percent below average, the lowest

 **27 M** people
2019 in 6 IGAD member states were in Crisis or worse (IPC Phase 3 or above)

 **20%** of the global number of people in Crisis or worse (IPC Phase 3 or above) were in this region

75% of people in Crisis or worse (IPC Phase 3 or above) across the region were in three countries



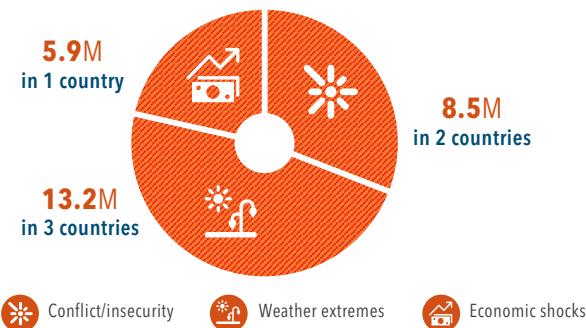
 **35 M** people

2019 in 5 countries in the IGAD member states were in Stressed (IPC Phase 2).

Note: No estimates for Uganda.

Figure 21

Numbers of acutely food-insecure people in Crisis or worse (IPC/CH Phase 3 or above) by key driver



¹ Unlike in 2018, 2019 regional estimates do not include Djibouti due to a lack of data. In 2018, there were 157 000 food-insecure people in rural areas of Djibouti.

² Based on analyses that were comparable for 2018 and 2019 peaks (excluding West Darfur).

Source: FSIN, GRFC 2020

since 1995. Below-average harvests were also gathered in Ethiopia's Belg/Gu/Genna receiving areas, Kenya's south-eastern and coastal marginal agricultural zones and Uganda. An early depletion of household food stocks, coupled with rising market prices due to limited market supplies, restricted food access for many vulnerable households.

The drought was particularly harsh for pastoralists, who were still recovering from the severe livelihood asset losses (e.g. animal herds) incurred during the 2017 drought. Below-average rangeland conditions resulted in poor livestock body conditions, atypical livestock movements and related resource-based conflicts, and limited milk availability for pastoral households.

In October 2019, widespread flooding affected nearly 3.4 million people throughout the region (OCHA, January 2020), aggravating the effects of the recurrent drought and instability in the region by causing population displacements, livelihood disruption, and increased humanitarian needs. South Sudan, Somalia and Ethiopia were the most affected, while Kenya and Uganda experienced landslides as well as flooding.

Conflict/insecurity

Armed conflicts, violent extremism, intercommunal violence and other localized tensions continued to affect peace and security across the whole region. It constituted the primary driver of acute food insecurity for 8.5 million people in two countries: South Sudan and among refugee populations in Uganda who have fled from conflict-affected neighbouring countries.

Efforts have been made to promote peace and security in the region and the United Nations Secretary General approved a Comprehensive Regional Prevention Strategy for the Horn of Africa in May 2019 (Office of the Special Envoy for the Horn of Africa, July 2019). The implementation of the peace agreement between Ethiopia and Eritrea has taken a positive trend and ushered in a new era of peace and cooperation between the two countries.

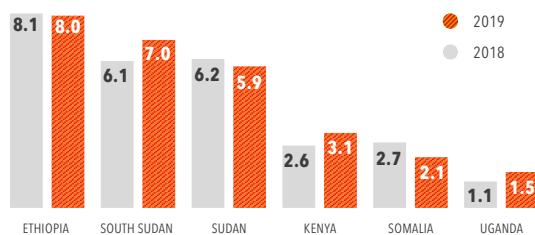
However, progress towards implementation of the South Sudan peace agreement remained slow and the situation was still volatile, with frequent episodes of intercommunal violence.

Al-Shabaab still posed a threat to peace and stability in Somalia and the wider region. Cross-border conflicts continued to manifest in Mandera, where Kenya, Ethiopia and Somalia meet (UNDP, July 2019), and Karamoja (Ethiopia, Kenya, South Sudan and Uganda), mainly driven by cattle rustling and disputes over access to water and pasture. According to ACLED data, the number of battles across the IGAD region fell from 3 500 with 7 700 fatalities in 2018, to 1 500 with 3 600 fatalities in 2019. The number of civilian fatalities remained the same at 2 200 (ACLED, accessed April, 2020).

Conflicts have reduced communities' resilience capacities, disrupted food value chains, led to loss of human and animal

Figure 22

Total number of people (millions) in Crisis or worse (IPC Phase 3 or above), 2018 vs 2019



2018–2019

There was a slight increase in acute food insecurity levels, mainly due to weather-related shocks in Kenya and a confluence of weather and conflict shocks in South Sudan

Source: FSIN, GRFC 2020

lives, increased dependency on aid, and forced many people to move to safer locations, abandoning their livelihoods and social ties.

Economic shocks

Economic shocks were the primary driver of acute food insecurity for 5.9 million people in the Sudan, where the economic crisis worsened in 2019. Strong inflationary pressures, the sharp currency depreciation that damped private consumption and deterred investment (Economist Intelligence Unit, January 2020) and contraction of GDP, coupled with sanctions and shortages, pushed up fuel prices to exceptionally high levels. Prices of cereals, which started to surge in October 2017, were at record highs by the end of 2019. (FAO-GIEWS, December 2019). Some 58 percent of households were estimated to be unable to afford the local food basket (WFP, 2019). Notably, in Khartoum state, the number of people in Crisis or worse (IPC Phase 3 or above) almost doubled between 2018 and 2019, indicating increasingly severe food access constraints for market-dependent urban households.

Ethiopia and South Sudan also faced severe macroeconomic challenges that resulted in extremely high food prices.

Displacement

At the end of 2019, there were over 4 million refugees and asylum seekers in the IGAD region. Some 300 000 of the region's refugees were newly arrived, seeking protection during the 2019 year. Around half of the refugees and asylum seekers originated from South Sudan, followed by Somalia, the Democratic Republic of Congo, the Sudan and Eritrea. An even higher number (7.6 million) were internally displaced with the highest number in Somalia.

According to UNHCR's mid-year trends East and Horn of Africa hosted 21 percent of the world's refugees.

Uganda hosts the third largest number of refugees globally, and the highest number in the Greater Horn of Africa region (UNHCR, accessed January 2020). In 2019, persistent armed conflict, inter-ethnic violence and limited access to basic social services drove over 190 000 additional refugees and asylum seekers to seek refuge in the country, mainly from South Sudan and the Democratic Republic of the Congo, increasing the overall refugee population to almost 1.4 million by the end of December 2019 (UNHCR, accessed January 2020). The Sudan hosted the fifth largest number of refugees in the world with around 1.1 million, mainly from South Sudan. See figure 23.

Across the region, around 81 percent of refugees were women and children below 18 years of age, considered the most vulnerable to protection-related risks. Some countries – particularly Ethiopia and the Sudan – have high numbers of IDPs, but are also hosting refugees or asylum seekers.

The refugee population remains heavily dependent on humanitarian food assistance to meet its minimum food and nutrition needs, but funding shortfalls have forced ration cuts in food and non-food assistance in Djibouti, Ethiopia, Kenya and the Sudan. Rations do not always cover the recommended 2 100 kcal per person per day, and from time to time are missing food commodities such as sugar, salt and fortified foods. In addition, as a result of funding shortfalls, UNHCR was unable to provide adequate supplies of non-food assistance, which resulted in shortfalls in the supply of firewood for cooking, water containers, soap, latrine access and adequate shelters in some of the refugee sites in the region.

Nutrition

Approximately 13.5 million children under 5 years of age (almost 1 in 3 children) were stunted across the region, with 'very high' numbers in Ethiopia, the Sudan and Uganda. These children would likely not reach their full growth and developmental potential because of irreversible physical and cognitive damage caused by persistent nutritional deprivations at an early age.

The levels of acute malnutrition remained high across the region, with an estimated 9.5 million children suffering from acute malnutrition in six countries in 2019, including around 2 million with life-threatening severe acute malnutrition. The highest numbers were in Ethiopia and the Sudan. See figure 24.

Some areas in these countries frequently recorded very high (>15 percent) levels of GAM. Lean season increases in life-threatening severe acute malnutrition (SAM) in children under 5 years persisted in areas of all six countries.

The key contributing factors to the high rates of malnutrition in the IGAD countries in 2019 include poor IYCF practices – in particular the low proportion of children who receive a diverse diet between the ages of 6–24 months, see figure 25; lack of sufficient quantity of food; lack of access to adequate safe

Figure 23
Displacement overview of IGAD member states

	IDPs	HOSTING COUNTRY	COUNTRY OF ORIGIN
ETHIOPIA	↗ 3.2M	↗ 0.6M	↗ 0.2M
KENYA	↗ 0.5M	↗ 0.15M	
SOMALIA	↗ 2.7M	↗ 0.03M	↗ 0.9M
SOUTH SUDAN	↗ 1.8M	↗ 0.3M	↗ 2.2M
SUDAN	↗ 1.9M	↗ 1.1M	↗ 0.8M
UGANDA		↗ 1.3M	↗ 0.02M

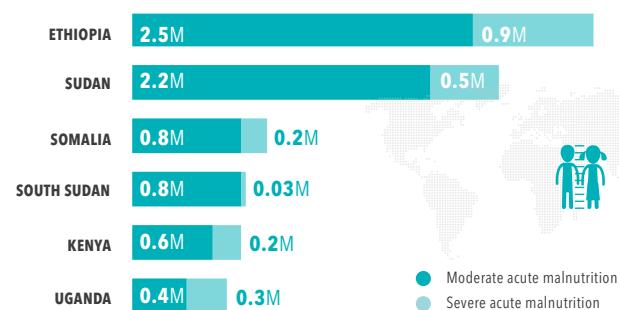
↗ Number of internally displaced people in the country (millions)

↗ Number of refugees and asylum seekers hosted in the country (millions)

↗ Number of refugees and asylum seekers originating from the country (millions)

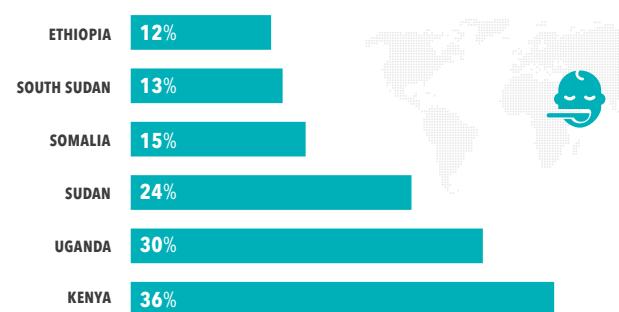
Source: UNHCR mid-year trends 2019

Figure 24
Numbers of children (millions) under 5 years who are acutely malnourished



Source: FSIN, based on data extracted from national nutrition surveys, DHS, HNO, HRP, 2019.

Figure 25
Percentage of children under 5 years who consume a minimally diverse diet for growth and development



Source: FSIN, based on data extracted from national nutrition surveys and DHS, 2019.

water and sanitation facilities; and diseases outbreaks. Acute malnutrition rates among refugees in the region were concerning in the overwhelming majority of surveyed camps in Ethiopia, the Sudan and South Sudan (SENS). Child nutrition had improved in camps in Uganda following resumption of full rations since 2018.



The Greater Karamoja cross-border region has particularly low social development indicators and poor access to services when compared with national averages for Ethiopia, Kenya, South Sudan and Uganda.

Fragility in cross-border areas in Greater Karamoja

The Greater Karamoja Cluster encompasses the south-western parts of Ethiopia, north-western Kenya, the south-eastern parts of South Sudan and north-eastern Uganda. Pastoralism is the principal source of livelihood. Livestock transhumance is the key strategy employed by pastoralists and agropastoralist communities to cope with shocks and seasonal events.

Despite the ongoing efforts by IGAD and national governments, the cluster remains among the poorest and most acutely food insecure of the region. This cross-border region has the lowest social development indicators and the worst access to services when compared with national averages for each country. Although livestock represents the most important source of income and food for communities,

the area is poorly integrated into national livestock health monitoring systems and market routes. In addition, frequent and persistent droughts are a recurrent feature of the area and their impact is exacerbated by advancing desertification and environmental degradation of rangelands.

Changing borders within states have contributed to tensions and restricted the mobility of pastoral communities. In addition, extreme climatic events have worsened intercommunal conflicts, increasing disputes over already scarce natural resources, straining pastoralists' ability to move their herds beyond their communities' own lands. For these reasons, pastoralists have become heavily armed to protect their herds as well as their communities.

East Africa's regional organization - IGAD

The Intergovernmental Authority on Development (IGAD) in Eastern Africa is a Regional Economic Community of eight countries: Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, the Sudan and Uganda.

It was created in 1996 to supersede the Intergovernmental Authority on Drought and Development (IGADD), which was founded in 1986 to mitigate the effects of the recurring severe droughts and other natural disasters that resulted in widespread famine, ecological degradation and economic hardship

in the region, such as during the Great African Famine of 1982-84.

The founding leaders of IGAD were motivated by a vision where the people of the region would develop a regional identity, live in peace and enjoy a safe environment, alleviating poverty through appropriate and effective sustainable development programmes. The IGAD Secretariat as the executive body of the Authority was given the mandate to achieve this goal.

Source: IGAD Regional Strategy – the Framework, vol. 1, January 2016

Regional overview

Southern Africa

**Angola Democratic Republic of the Congo Eswatini Lesotho Madagascar Malawi
Mozambique Namibia United Republic of Tanzania Zambia Zimbabwe**

In 2019 over 30 million people in 11 countries of Southern Africa – Angola, the Democratic Republic of the Congo, Eswatini, Lesotho, Madagascar, Malawi, Mozambique, Namibia, the United Republic of Tanzania, Zambia and Zimbabwe – faced Crisis or worse (IPC Phase 3 or above) levels of acute food insecurity. See figure 26.

The Democratic Republic of the Congo was one of the world's worst food crises in 2019. It has experienced decades of armed conflict and displacement coupled with very high levels of poverty, weak political and economic governance, bad roads, lack of electricity, poor health, water and sanitation services, low agriculture productivity and limited access to cultivable land.

The total figure for the region is not comparable with that of 2018 (23.3 million) which did not include data for Angola, Namibia or the United Republic of Tanzania, which in 2019 accounted for 2 million acutely food-insecure people. However, the analyses do show a grave deterioration in the acute food insecurity situation in the Democratic Republic of the Congo, Zimbabwe and Zambia.

Weather extremes

Southern Africa is experiencing the brunt of the climate crisis, see figure 27: it is warming at about twice the global rate and many countries were buffeted by multiple weather shocks in 2019 (OCHA, November 2019). The region has had only two favourable agricultural seasons since 2012 and many areas have yet to fully recover from the devastating impact of the 2015–2016 El Niño (WFP, UNICEF and FAO, 2019). In 2019 Angola, Botswana, Namibia and Zimbabwe declared states of emergency due to drought.

At the start of the year dry conditions affected staple food production across Angola, Lesotho, southern Mozambique, northern Namibia, central South Africa, Zambia and Zimbabwe. Meanwhile in Malawi, flooding in Chikwawa led to loss of crops. Two tropical cyclones in Madagascar and Tropical Storm Desmond in Mozambique caused flooding and displacement (OCHA, February 2019). Then in March and April 2019, the region was hit by two consecutive tropical cyclones, Idai and Kenneth, that left a trail of death, damage and destruction in Malawi, Mozambique and Zimbabwe. This was the first time in recorded history that two cyclones struck the coast of Mozambique in such close succession, and the furthest north that a cyclone had ever made landfall in the country. Overall, the cyclones and floods affected

 **30M** people
2019 in 11 countries in Southern Africa were in Crisis or worse (IPC Phase 3 or above)

2018-2019

The number of people in Crisis or worse (IPC Phase 3 or above) increased by 7 million due to the addition of 3 countries and a worsening situation in others



of the global number of people facing Crisis or worse (IPC Phase 3 or above) were in Southern Africa

80% of the people in Crisis or worse (IPC Phase 3 or above) across Southern Africa were in four countries



 **44.4M** people
2019 in 11 countries in the Southern Africa were in Stressed (IPC Phase 2)

Source: FSIN, GRFC 2020

an estimated 3.8 million people. They occurred during the main harvest, destroying hundreds of thousands of acres of crops (OCHA, July 2019).

Southern parts of Zambia experienced the poorest rainfall season since 1981, which sharply reduced cereal crop production, leading to an increase in food import requirements (FAO-GIEWS, September 2019).

Poor livestock body conditions and adverse weather triggered an increase in disease outbreaks among animals, leading to movement restrictions, which further curbed food availability, and lowered potential earnings for agricultural households (IAPRI, 2019).

In the Democratic Republic of the Congo flooding, crop pests and below-average rains all disrupted the main season food crop production, which was forecast below the previous five years, limiting market supplies and prompting an early start to the lean season in northern, central-eastern and south-eastern provinces (FAO and GIEWS, September 2019).

Economic shocks and weather extremes

In 2019, Zimbabwe experienced its worst hunger crisis in a decade. The country has only experienced normal rainfall in one of the last five growing seasons. At the same time it faced an economic crisis characterized by acute foreign exchange shortages, hyperinflation, lack of fuel and prolonged power outages that crippled industry and work opportunities (WFP, December 2019). Extreme poverty was estimated to have risen from 29 percent in 2018 to 34 percent in 2019, which equates to 5.7 million people (WB, October 2019).

After flooding and landslides associated with Cyclone Idai caused severe damages to crop and agriculture infrastructure in March (OCHA, August 2019), the country then experienced its worst drought in decades, with temperatures hitting 50 degrees Celsius in some areas (WFP, January 2020).

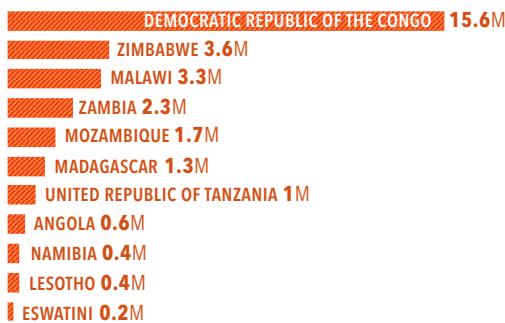
The 2018/19 national maize production was over 40 percent below the five-year average (FAO-GIEWS, October 2019), severely depleting the country's strategic grain reserve. Data from the Reserve Bank of Zimbabwe indicated that food prices increased by 640 percent from February–December 2019. In Zambia, steep food price hikes, combined with lower incomes, sharply reduced households' financial access to food.

Conflict/insecurity

Although armed conflict diminished in some areas of the Democratic Republic of the Congo in 2019, it intensified in others, especially in the eastern areas of North Kivu, South Kivu and Ituri (ACLED, December 2019). Violence – around half of it against civilians – included inter-ethnic and intercommunal conflicts, and clashes between multiple armed groups that attacked and obliterated villages, destroying fields and harvests

Figure 26

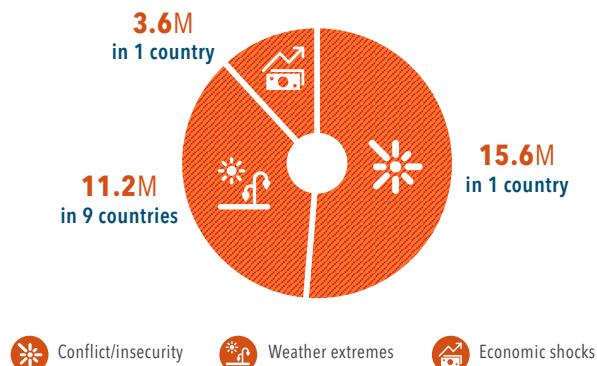
The number of people in Crisis or worse (IPC Phase 3 or above) across 11 SADC countries



Source: FFIN, GRFC 2020

Figure 27

Numbers of acutely food-insecure people in Crisis or worse (IPC/CH Phase 3 or above) by key driver



Source: FFIN, GRFC 2020

Figure 28

Displacement overview of six SADC countries

	IDPs	HOSTING COUNTRY	COUNTRY OF ORIGIN
ANGOLA	0.07M	0.02M	
DEMOCRATIC REPUBLIC OF THE CONGO	4.5M	0.5M	0.9M
MOZAMBIQUE	0.03M	0.01M	
UNITED REPUBLIC OF TANZANIA	0.3M	0.003M	
ZAMBIA	0.06M	0.005M	
ZIMBABWE	0.02M	0.03M	

↗ Number of internally displaced people in the country (millions)

↗ Number of refugees and asylum seekers hosted in the country (millions)

↗ Number of refugees and asylum seekers originating from the country (millions)

Source: UNHCR mid-year trends 2019

and stealing herds (FEWS NET, December 2019).

Conflict severely hindered the response to the Ebola outbreak and the number of cases increased dramatically from March 2019, making it the world's second largest Ebola epidemic on record. The outbreak disrupted agricultural activities and limited people's access to their livelihoods (FEWS NET, April 2019).

The Democratic Republic of the Congo's vast IDP population (at 4.5 million, including almost a million forced to abandon their homes and livelihoods in 2019, it is the largest in Africa) as well as over 527 000 refugees from Burundi, the Central African Republic, Rwanda and South Sudan (UNHCR, January 2020) were among the most acutely food insecure. Other vulnerable people include 2.1 million returnees, people living in conflict-active zones or in areas hosting large numbers of displaced people. See figure 28.

Armed violence in Mozambique's northern-most province of Cabo Delgado continued to force people to abandon their homes, crops, livelihoods and assets and prevent humanitarian organizations from reaching those in need and local populations from accessing basic services (ICRC, December 2019).

Nutrition

Across the region, drought and floods increased the rates of communicable disease outbreaks, a main driver of malnutrition. In 2019, there were cholera outbreaks in Angola, the Democratic Republic of the Congo, Mozambique, the United Republic of Tanzania, Zambia and Zimbabwe and measles outbreaks in Angola, the Democratic Republic of the Congo, Madagascar and Lesotho.

In the Democratic Republic of the Congo, some 3.4 million children under 5 years were acutely malnourished, of whom 1.1 million are affected by SAM.

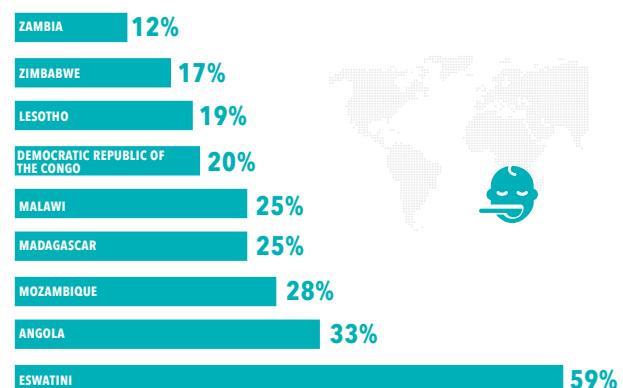
As figure 29 shows, across the region children under 5 years tended to have diets that lacked essential nutrients – particularly in Zambia and Zimbabwe. Chronic malnutrition rates were particularly high in the United Republic of Tanzania, Mozambique, Madagascar and the Democratic Republic of the Congo, see figure 30.

SADC – The South African Development Community

The Southern African Development Community (SADC) is an inter-governmental organization comprising 16 Southern Africa countries, namely Angola, Botswana, Comoros, the Democratic Republic of the Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, the United Republic of Tanzania, Zambia and Zimbabwe.

Figure 29

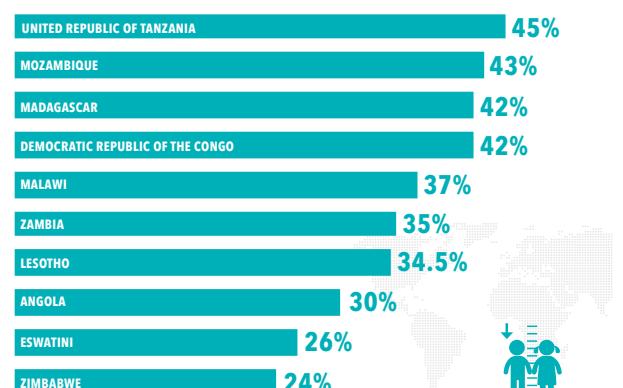
Percentage of children under 5 years who consume a minimally diverse diet for growth and development



Source: FSIN, based on data extracted from national nutrition surveys, DHS and MICS.

Figure 30

Percentage of children under 5 years who are chronically malnourished (stunted)



Source: FSIN, based on data extracted from DHS, MICS and VAC.

Its objectives are to achieve economic development, growth, peace and security, alleviate poverty, enhance the standard and quality of life of the peoples of Southern Africa, and support an increased regional integration between member countries.

For more information on SADC:

<https://www.sadc.int/>

Regional overview

West Africa and the Sahel, and Cameroon

Burkina Faso Cabo Verde Cameroon Chad Côte d'Ivoire Gambia Guinea Guinea-Bissau Liberia Mali Mauritania Niger Nigeria Senegal Sierra Leone

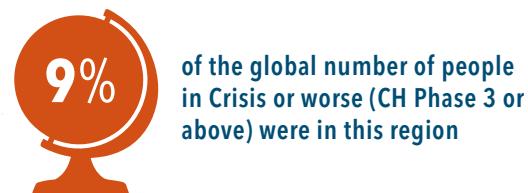
More than 12.3 million people in 15 countries analysed were estimated to be in Crisis or worse (CH Phase 3 or above) in West Africa and the Sahel, and Cameroon during the 2019 peak. The highest numbers were in northern Nigeria (5.0 million), Cameroon (1.4 million), the Niger (1.4 million) and Burkina Faso (1.2 million). Around 48 million were classified in Stressed (CH Phase 2) with minimally adequate food consumption and unable to afford some essential non-food items without resorting to harmful coping strategies. They were likely to slip into a higher phase of acute food insecurity if they faced an additional shock or stressor.

The overall number of people facing Crisis or worse (CH Phase 3 or above) throughout the region increased by 10 percent from 11.2 million people requiring food assistance in 2018. In Burkina Faso, Cameroon and the Niger, acute food insecurity worsened primarily because of increasing violence and insecurity. Cameroon, in particular, faced almost a trebling of the number of people in Crisis or worse (CH Phase 3 or above), from 0.5 to 1.4 million people. The crisis in Burkina Faso escalated rapidly in 2019. Although acute food insecurity was considerable in March–May 2019 with 420 000 people in Crisis or worse (CH Phase 3 or above), it increased to almost 688 000 during the pre-harvest period from June–August 2019 (RPCA, October 2019) and to 1.2 million at the end of the year. The figure represents a fourfold increase in the number of people in Crisis or worse (CH Phase 3 or above) since October–December 2018 (CILSS-CH, November 2018).

Around 29 percent of the total number of people in Crisis or worse (CH Phase 3 or above) in the region were in the three states of north-eastern Nigeria (Borno, Yobe and Adamawa). Inaccessible areas in north-eastern Nigeria were also likely experiencing high levels of acute food insecurity (REACH, June 2019, ECHO, November 2019) but could not be classified within the CH protocols because they were not accessible for enumerators to gather data.

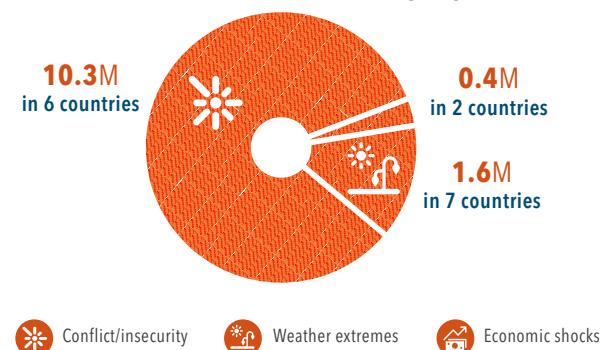
In the Sahel region, around 5.2 million people were in Crisis or worse (CH Phase 3 or above) across nine countries – Burkina Faso, Cabo Verde, Chad, the Gambia, Guinea-Bissau, Mali, Mauritania,

 **12M** people
2019 in 15 countries analysed in the region were in Crisis or worse (CH Phase 3 or above)



 **48M** people
2019 in 15 countries analysed in the region were in Stressed (CH Phase 2)

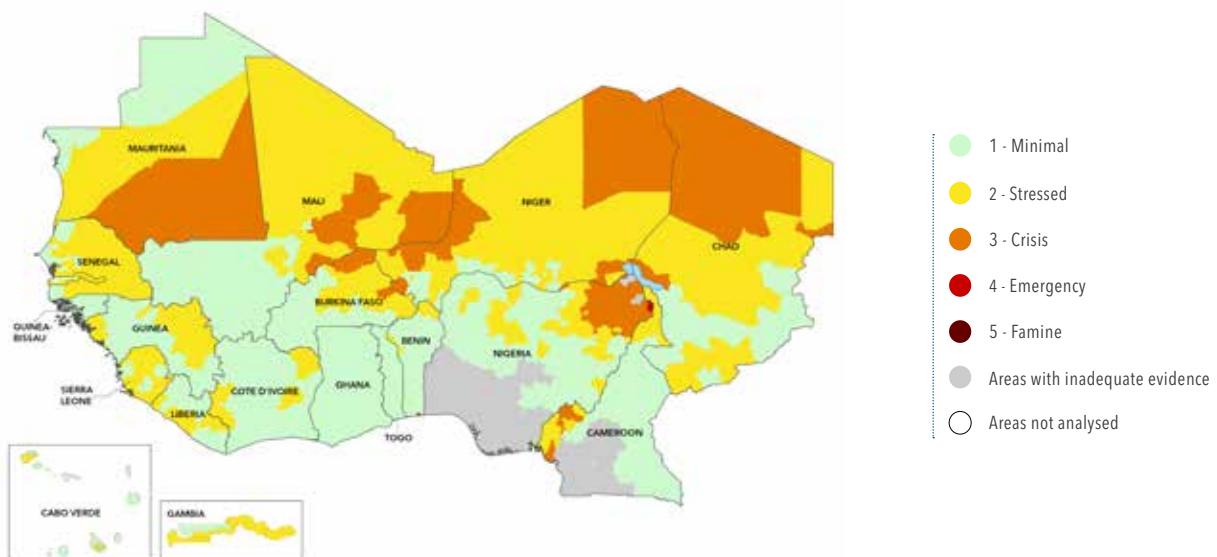
Figure 31
Numbers of acutely food-insecure people in Crisis or worse (IPC/CH Phase 3 or above) by key driver



Source: FSIN, GRFC 2020

Map 2

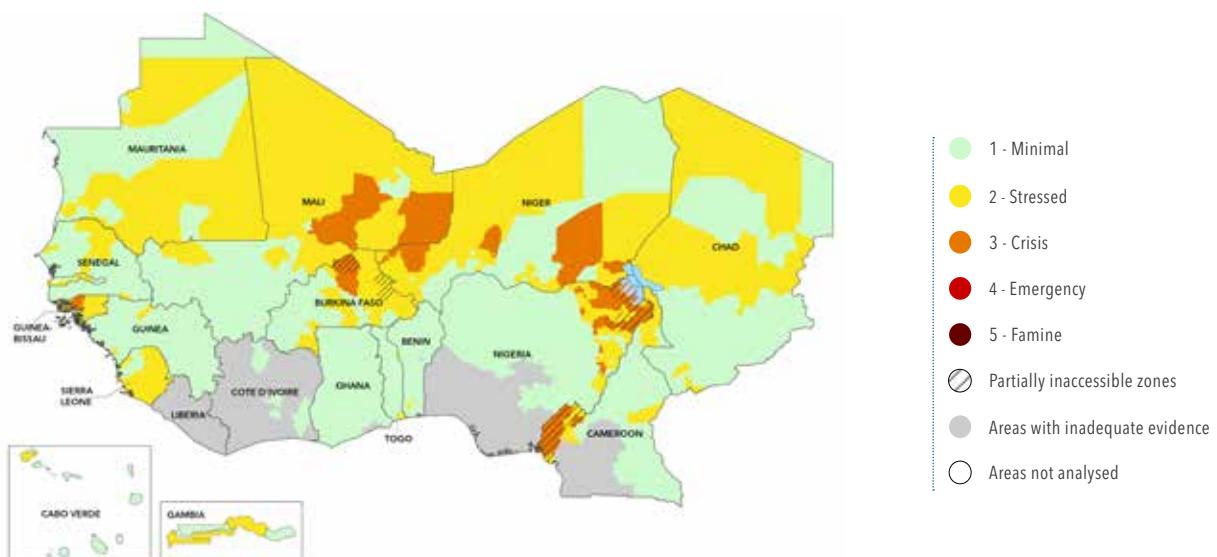
West Africa and the Sahel, and Cameroon, food and nutrition situation, June-August, 2019



Source: CILSS-Cadre Harmonisé analyses, regional concertation meeting, Niamey, the Niger, March 2019.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Map 3

West Africa and the Sahel, and Cameroon, food and nutrition situation, October-December, 2019



Source: CILSS-Cadre Harmonisé analyses, regional concertation meeting, Niamey, the Niger, November 2019.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

the Niger and Senegal. The level of acute food insecurity in the Sahel was 3 percent higher than in 2018 when pastoralist areas were affected by prolonged dry spells compounded by conflict and insecurity.

Conflict/insecurity

Conflict/insecurity was the primary driver of acute food insecurity for 10.3 million people in six countries across the region (Burkina Faso, Cameroon, Chad, Mali, the Niger and northern Nigeria). See figure 31 on page 37. Insecurity led to massive displacement of populations, destruction or closure of basic social services, disruption of productive activities, markets and trade flows. In particular, continuous insecurity in conflict-affected areas, associated with renewed attacks, looting, banditry and border closure measures, affected market functioning and hindered access to fields and to pastoral transhumance routes, incurring severe consequences for food security.

There were two major hotspots: The Lake Chad Basin (see figure 32) – made of sub-national areas in Nigeria, Cameroon, Chad and the Niger – and the Central Sahel crisis, which affected Burkina Faso, Mali and the Niger. In 2019, Burkina Faso was one of the world's fastest growing crises with the daily lives and livelihoods of hundreds of thousands of civilians disrupted by insecurity and violence in central and northern regions. In December 2018, a state of emergency was declared in several provinces of Burkina Faso (WB, October 2019).

In 2019, the West Africa and Sahel region hosted around 1.2 million refugees and 4.4 million people were internally displaced. Between late 2018 and the end of 2019, the number of IDPs in the Central Sahel countries increased dramatically because of insecurity – by 300 percent in the Niger's regions of Tahoua and Tillabéry, by 66 percent in Mali and by 1 270 percent in Burkina Faso.

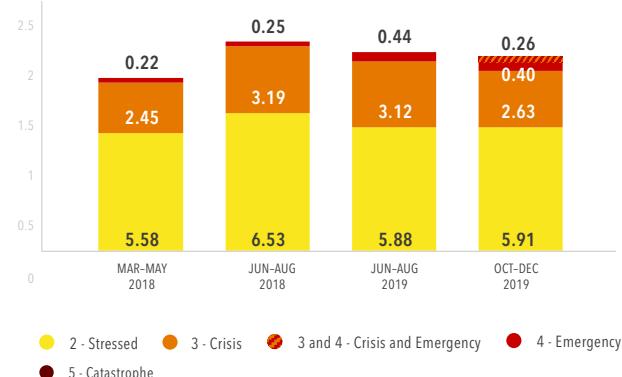
Despite humanitarian assistance, the food and nutrition situation of IDPs and refugees remained a major concern due to limited resources, continued displacement and limited humanitarian access. More than a third, or 262 000 people living in IDP camps in nine local government areas (LGAs) in Borno state, Nigeria, were in Crisis or worse (CH Phase 3 or above); similarly, 17 000 of the 70 000 Malian refugees in five official camps in the Niger were in need of increased urgent assistance (RPCA-CILSS, 2019).

Weather extremes

Weather extremes also played a critical role in shaping the food security situation in the region, mostly in tandem with the effects of conflict and insecurity. They were the principal drivers of acute food insecurity in Cabo Verde, Côte d'Ivoire, the Gambia, Guinea, Guinea-Bissau, Mauritania and Senegal, where a total of 1.6 million people were in Crisis or worse (CH Phase 3 or above). See figure 31 on page 37.

Figure 32

Number of people (millions) in CH Phase 2 or above in 2018-2019, Lake Chad Basin



Source: CILSS-Cadre Harmonisé

Figure 33

Displacement overview of West African countries

	IDPs	HOSTING COUNTRY	COUNTRY OF ORIGIN
BURKINA FASO	↗ 0.2M	↗ 0.03M	↗ 0.02M
CAMEROON	↗ 0.8M	↗ 0.4M	↗ 0.07M
CHAD	↗ 0.1M	↗ 0.5M	↗ 0.02M
MALI	↗ 0.1M	↗ 0.03M	↗ 0.2M
NIGER	↗ 0.2M	↗ 0.2M	↗ 0.005M
NIGERIA	↗ 2.1M	↗ 0.04M	↗ 0.4M

↗ Number of internally displaced people in the country (millions)

↗ Number of refugees and asylum seekers hosted in the country (millions)

↗ Number of refugees and asylum seekers originating from the country (millions)

Source: UNHCR mid-year trends 2019

Recurrent shocks, such as localized deficits in cereal and forage production due to drought or floods, have eroded people's coping capacities.

In 2019, floods and heavy rains damaged crops in several areas in Burkina Faso, Cameroon, Côte d'Ivoire, Mali, Mauritania, the Niger, Nigeria, Senegal and Sierra Leone. Dry spells led to cereal production deficits in Cabo Verde and to fodder deficits in Mauritania and Senegal, as well as in Burkina Faso, Chad, Mali and the Niger, which disrupted the transhumance patterns of pastoralists and led to a concentration of livestock in some non conflict-affected areas of the four countries, increasing the risk of intercommunal tensions (RPCA, November 2019).

Significant production shortfalls were expected in Cabo Verde, the Gambia, the Niger and Sierra Leone. In Guinea and Guinea-Bissau, a combination of dry spells and floods affected food security.

Economic shocks

Economic shocks were the main drivers of acute food insecurity in Liberia and Sierra Leone, where the national currencies depreciated by 22 percent and 10 percent respectively compared to 2018 levels (CILSS, November 2019). Weather extremes, insecurity and below-average crop production also contributed to economic decline in other countries. Year-on-year inflation rates in 2019 were above 10 percent in Liberia (30.9 percent) Sierra Leone (15.2 percent) and Nigeria (11.6 percent), and close to 10 percent in Guinea (9.4 percent) and the Gambia (7.6 percent). Cereal prices were generally lower than 2018 and the five-year average as supply was greater than demand across most of the sub-region. However, insecurity and market disruption in conflict-affected areas, such as the Lake Chad Basin and Liptako-Gourma pushed up food prices (FAO-GIEWS, December 2019).

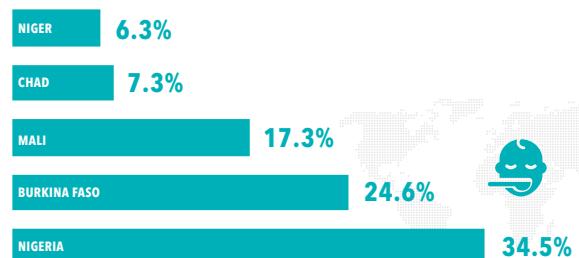
Nutrition

The nutrition situation remained alarming throughout many areas in the region as insecurity exacerbated pre-existing drivers of malnutrition by, for instance, forcing the closure of health centres. Lack of dietary diversity for children under 5 years old was extremely concerning in some countries of the region, particularly in the Niger and Chad. See figure 34.

While there was a slight decrease in the prevalence of acute malnutrition in some areas of the Niger and north-eastern Nigeria, the GAM rate exceeded the 'very high' threshold (>15 percent) in some areas of Burkina Faso, Chad, Mali and Mauritania. In Burkina Faso, nearly 466 000 children under 5 years were acutely malnourished, 133 000 severely so. In Mali, 660 000 were acutely malnourished, 160 000 severely so. Chronic malnutrition rates were 'high' in Burkina Faso, Mali and Cameroon and 'very high' in Chad, Nigeria and the Niger, where they reached 46 percent. See figure 35.

Figure 34

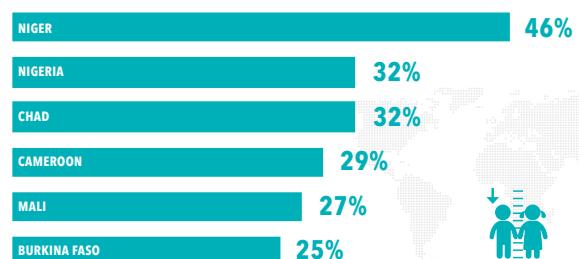
Percentage of children under 5 years who consume a minimally diverse diet for growth and development



Source: FSIN, based on SMART surveys, DHS and NNHS.

Figure 35

Percentage of children under 5 years who are chronically malnourished (stunted)



Source: FSIN, based on SMART surveys, DHS, HNO, HRP and NNHS.

Fragility in border areas in West Africa and the Sahel

In recent years, acute food insecurity has increased significantly in cross-border areas. Although cross-border dynamics in food crises are largely context-specific, there are some common vulnerabilities.

Poverty and acute food insecurity levels are higher in the Central Sahel (e.g. in areas covered by l'Autorité de Développement Intégré du Liptako-Gourma [ALG]) and the Lake Chad Basin border areas than they are in other parts of those countries. Local populations are largely engaged in agriculture and pastoralism, and in the case of the Lake Chad Basin, fishing, and are therefore highly dependent on dwindling natural resources. The increased intensity and frequency of climatic shocks – such as recurring droughts in the Central Sahel – are further degrading natural assets (e.g. cropland, water resources, pastures) and generating increased competition over those resources, thereby increasing the risk of intercommunal violence, for example between pastoralist groups and farmers.

The Central Sahel and the Lake Chad Basin are also characterized by a lack of presence of State systems, including limited access to basic services, the absence of security forces and administrative authorities, and limited border control. These limitations are particularly applicable to pastoralist communities, who are under-represented in local public institutions (FAO, forthcoming).

The combination of these factors makes pastoral communities particularly vulnerable. On the one hand, this is due to the mobile nature of their livelihoods, which constrains access

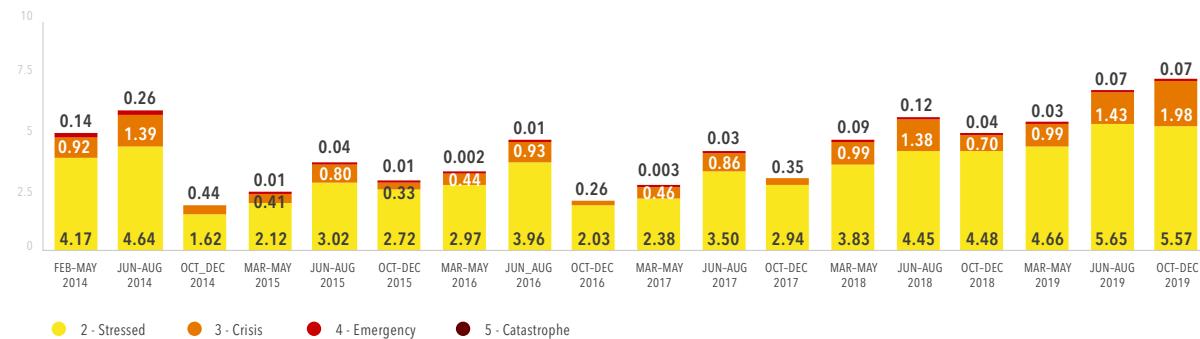
to basic services; on the other, the degradation of natural resources not only disrupts their normal transhumance routes, but it also impoverishes their livelihoods.

Armed groups and transnational organized criminal gangs have also profited from the absence of State control, limited border control and marginalized local populations, enabling them to operate in multiple countries, disrupt regional trade, or impose their rule on communities. Since 2017, insecurity and armed groups have spread from the north and centre of Mali across the borders of the Liptako-Gourma areas into the Niger and Burkina Faso, with civilians often the victims of violence and displacement widespread, particularly in Burkina Faso. Insecurity has also severely disrupted regional trade, notably in the Sahel regions of Burkina Faso, Mopti in Mali, and Tillabéri in the Niger (RPCA, 2019).

The limited presence of the State in the Lake Chad Basin has facilitated the rise of violent activity by Boko Haram or Boko Haram-affiliated armed groups since 2014. Armed groups benefit from fluid borders to engage in criminality, banditry and attacks against communities across state lines, leading to a growing tide of refugee and internally displaced populations and placing additional pressure on the food security status of both host and displaced communities. The persistent insecurity in the Lake Chad Basin, in addition to border closures in Nigeria, have also affected trade in the region, contributing to higher food prices and limited access to markets in certain regions (RPCA, 2019). Violence has inhibited humanitarian access to vulnerable populations in both the Central Sahel and the Lake Chad Basin, (FAO-GIEWS, 2019).

Figure 36

Number of people (millions) in CH Phase 2 or above in 2014–2019, sub-national areas covered by ALG in Burkina Faso, Mali and the Niger



Source: CILSS-Cadre Harmonisé

West African regional organizations

The Permanent Interstate Committee for Drought Control (CILSS) is a regional organization, consisting of 13 countries in the Sahel region. Its objectives are to invest in research for food security and the fight against the effects of drought and desertification in the Sahel. The 13 countries are Benin, Burkina Faso, Cabo Verde, Chad, the Gambia, Guinea, Guinea-Bissau, Côte d'Ivoire, Mali, Mauritania, the Niger, Senegal and Togo. It facilitates the consistent use of the Cadre Harmonisé (CH) by 18 countries in West Africa and the Sahel (its member states, members of the regional Food Crisis Prevention Network (RPCA) and Cameroon) to prevent food crises by quickly identifying affected populations and proffering appropriate measures to improve their food and nutrition security.

The Réseau de Prévention des Crises Alimentaires (RPCA) is an international consultation and co-ordination platform co-ordinated by the CILSS drawing on the political leadership of the Communauté Economique Des Etats de l'Afrique de l'Ouest (CEDEAO or ECOWAS) and Union Economique et Monétaire Ouest Africaine (UEMOA) Commissions, and includes all CILSS countries, plus Ghana, Liberia, Nigeria and Sierra Leone. As an open forum for discussion and information-sharing, the network analyses the food and nutritional situation of the region, and promotes consistent and concerted action.

CEDEAO itself is made up of 15 member countries that have both cultural and geopolitical ties and shared common economic interest. The countries are: Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, the Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, the Niger, Nigeria, Senegal, Sierra Leone and Togo.

UEMOA consists of countries that have the CFA Franc in common. Its member states are Benin, Burkina Faso, Côte d'Ivoire, Mali, the Niger, Senegal and Togo.

The G5 Sahel is a joint regional force, bringing together Burkina Faso, Mali, Mauritania, the Niger and Chad, and supported by the African Union and the United Nations.

Created in February 2014, this regional force aims at improving the coordination of the countries at a regional level for development policies and security and defence activities. It aims especially at fighting the terrorist threat, starting with the securitization of borders area.

The Autorité de Développement Intégré de la Région du Liptako Gourma (ALG) or Liptako-Gourma Authority is a regional organization seeking to develop the contiguous areas of Mali, Burkina Faso and the Niger.

Number of people in Crisis or worse (CH Phase 3 or above) in 2019 by regional organizations

9.7M in 15 member countries of CEDEAO

5.6M in 13 member countries of CILSS

4.6M in 5 countries of the G5 Sahel

4.0M in 7 member countries of UEMOA

2.0M in sub-national areas covered by the ALG in 3 member countries

Regional overview

Asia and the Middle East

**Afghanistan Bangladesh (Cox's Bazar) Iraq Lebanon (Syrian refugees) Myanmar Palestine
Pakistan (Balochistan and Sindh) Syrian Arab Republic Turkey (Syrian refugees) Yemen**

About 43 million people were estimated to be acutely food insecure and in need of urgent assistance across 10 countries in the Middle East and South/South East Asia in 2019.

Yemen remained the world's gravest food crisis in 2019. High acute food insecurity levels persisted in Bangladesh's Cox's Bazar, Palestine, the Syrian Arab Republic, Yemen and among Syrian refugees in Turkey in 2019, with slight improvements in the situation in Iraq and Lebanon. While the numbers of acutely food-insecure people increased in Afghanistan and Pakistan's Sindh and Balochistan provinces, this was mainly linked with the higher analysis coverage in 2019. See figure 38.

Conflict/insecurity

Protracted armed conflict and violence, frequently fuelled by political, social and economic grievances or geopolitical tensions remained the main drivers of acute food insecurity across the region (OCHA, December 2019). See figure 37.

In Yemen, although violence abated in the critical port city of Hodeida following the 2018 Stockholm Agreement, conflict increased in other areas and fighting continued across 10 out of 22 governorates. The protracted conflict continued to severely disrupt economic activity, damage infrastructure, destroy basic public services (WB, October 2019) and to restrict access to markets and services (ACAPS, October 2019).

Nine years into the crisis in the Syrian Arab Republic the scale and complexity of humanitarian needs and protection concerns remained high. In the north-east, increased conflict since the onset of the Turkish-led military offensive in October 2019 resulted in civilian deaths and significant displacement (OCHA, December 2019).

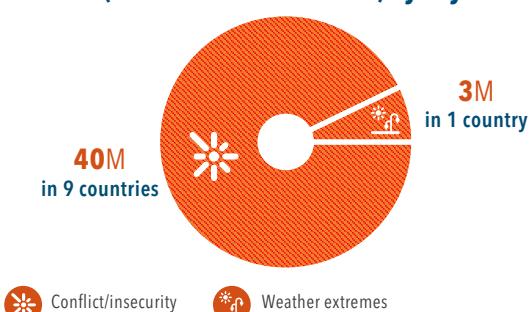
Fighting in Afghanistan continued, prompting the displacement of over 400 000 people in the first 10 months (OCHA, December 2019). From July–September the number of civilian casualties was the highest since 2009 (UNAMA, October 2019).

In Iraq, the formal conclusion of major military operations against the Islamic State of Iraq and the Levant (ISIL) in late 2017 paved the way for millions of displaced Iraqis to return home. But intercommunal and societal tensions persisted on multiple fronts and the spectre of armed conflict and renewed displacement lingered (OCHA, December 2019).



Note: No estimates for Iraq or Bangladesh

Figure 37
Numbers of acutely food-insecure people in Crisis or worse (IPC/CH Phase 3 or above) by key driver



Source: FGIN, GRFC 2020

In Gaza, the ongoing blockade, combined with regular flare-ups of hostilities, affected all aspects of civilian life and threatened to ignite a wider confrontation (OCHA, December 2019).

Humanitarian organizations in the region faced multiple challenges that obstructed their access to populations in need of assistance. The operating environment in Yemen has become one of the most non-permissive in the world. At least 5.1 million people in 75 hard-to-reach districts have been cut off from humanitarian assistance by restrictions imposed by authorities (OCHA, December 2019).

In Iraq, widespread protests and insecurity had significant impacts on humanitarian operations. Intermittent curfews were imposed in Baghdad and the southern governorates, resulting in missions being delayed or cancelled. In Ninewa, United Nations agencies and NGOs were unable to carry out relief activities in camps because of delays in getting approvals and access letters (OCHA, November 2019).

Violations of international humanitarian law, including attacks on health and education facilities, continued to make Afghanistan one of the most dangerous countries in the world for aid agencies to operate (OCHA, December 2019).

Economic decline

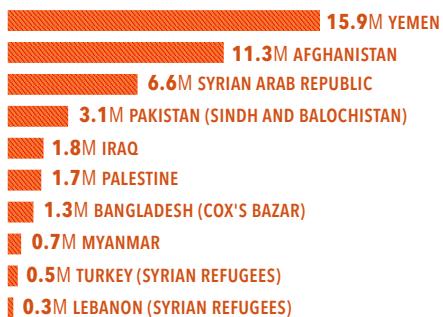
The economic decline and lack of sustainable livelihoods that accompany protracted conflict have exhausted individual and community coping mechanisms. In Yemen, acute shortages of foreign exchange and collapse in government revenues have interrupted the purchase of essential imports and payment of public sector salaries and pensions (WB, October 2019). Around two in five Yemeni households have lost their primary source of income and find it difficult to buy even the minimum amount of food (WB, October 2019).

The depreciation of the Syrian Pound against the USD, high unemployment, low salaries, high competition for labour opportunities and escalating food prices curtailed Syrians' purchasing power (WFP, 2020).

In Afghanistan, poverty increased, with more than 80 percent of people living on less than USD 1.90 per day (OCHA, December 2019). In Gaza, unemployment increased in the second quarter of 2019, with youth unemployment at 64 percent, the highest in the world. Nearly half the population was living below the poverty line (WB, September 2019). In the Syrian Arab Republic households' purchasing power was limited by high unemployment, low salaries, high competition for labour opportunities and rising food prices (CFSAM, September 2019).

Figure 38

The number of acutely food-insecure people (IPC Phase 3 or above or equivalent)



Source: FSN, GRFC 2020

In Cox's Bazar in Bangladesh, more Rohingya refugee and host community families were running up debts (REVA, 2019) with about 80 percent of refugee households in debt (UNHCR/WFP, October 2019). Many in the host community have lost access to farmed lands and work opportunities and were facing a sharp drop in daily wages due to the increased supply of unskilled labour (JRP, March 2020).

Weather extremes

Some countries in the region also experienced extreme climate events in 2019. In Sindh province of Pakistan, the 2018 monsoon season rains were almost 70 percent below average and in Balochistan they were 45 percent below average, resulting in acute shortages of water, food and fodder into 2019.

In Afghanistan, some households had still not fully recovered their lost livelihood assets following the 2018 drought (FEWS NET, October 2019), while hundreds of thousands were affected by seasonal floods across almost all provinces (OCHA, December 2019). In September, Cox's Bazar experienced heavy monsoon rains that triggered serious landslides and flooding.

In Iraq, heavy March/April rains caused flooding in central and southern governorates that caused temporary displacement and disrupted clean water supplies in some areas (OCHA, May 2019).

In the Syrian Arab Republic, Hasakah Governorate faced the worst flooding in a decade (IFRC, April 2019) following heavy rains in late March, affecting vulnerable IDPs and causing damage to homes and agricultural land (IFRC, April 2019). High temperatures and strong winds caused fires on standing crops before harvesting time (CFSAM, September 2019).

Displacement

The scale of displacement across the region is staggering. Around 30 million have been displaced (UNHCR, UNRWA, IOM), many of them multiple times, either internally or as refugees to neighbouring countries. See figure 39.

In the Syrian Arab Republic alone, an estimated 6.1 million people were internally displaced with around 1 million of them living in last-resort IDP sites, many of which are over-crowded and lack adequate essential services, including water and sanitation. At least 6.8 million have sought safety abroad as registered refugees in Turkey, Lebanon, Jordan, Iraq and Egypt (UNHCR mid-year trends 2019). Turkey alone hosted 18 percent of the world's refugees and the refugee population increased by 5.8 percent in 2018 (OCHA, December 2019).

In Yemen, around 4 million civilians have been displaced, including 375 000 during 2019 alone (UNHCR). Even countries with large numbers of internally displaced people, such as Yemen, the Syrian Arab Republic and Iraq, are also hosting hundreds of thousands of refugees and asylum seekers from countries in the region.

Refugees and IDPs – as well as returns of both – often settle in urban centres, straining basic services, increasing competition for scarce labour opportunities and reducing daily wages for the hosts by providing cheaper competition. This is a concern in Afghanistan, Iraq, the countries hosting Syrian refugees and Bangladesh's Cox's Bazar district.

Nutrition

Millions of children under the age of 5 across the Middle East and South Asia are acutely malnourished and in need of urgent nutrition assistance. For instance, in Yemen 2 million children aged 6–59 months were acutely malnourished, 400 000 of them severely so. In Afghanistan, the number of acutely malnourished children under 5 years of age increased by 25 percent from 2018 to an estimated 2.5 million children in 2019. Of them, 690 000 were severely malnourished and in need of life-saving treatment.

Chronic malnutrition rates among children were also above the 'very high' threshold in Yemen, Pakistan, Afghanistan and Bangladesh. See figure 41.

Conflict has contributed to pre-existing child malnutrition by lowering access to nutritious food (see figure 40), forcing displaced people to live in over-crowded conditions, destroying health services and increasing disease outbreaks.

Figure 39

Displacement overview of 10 countries/territories in Asia and the Middle East

	IDPs	HOSTING COUNTRY	COUNTRY OF ORIGIN
AFGHANISTAN	➡ 2.3M	➡ 0.07M	➡ 2.9M
BANGLADESH		➡ 0.9M	➡ 0.01M
IRAQ	➡ 1.6M	➡ 0.3M	➡ 0.7M
LEBANON		➡ 0.9M*	➡ 0.01M
MYANMAR	➡ 0.4M		➡ 0.6M**
PALESTINE			➡ 0.1M*
PAKISTAN	➡ 0.1M	➡ 1.4M	➡ 0.2M
SYRIAN ARAB REPUBLIC	➡ 6.1M	➡ 0.03M*	➡ 6.8M
TURKEY		➡ 3.9M	➡ 0.2M
YEMEN	➡ 3.6M	➡ 0.3M	➡ 0.07M

➡ Number of internally displaced people in the country (millions)

➡ Number of refugees and asylum seekers hosted in the country (millions)

➡ Number of refugees and asylum seekers originating from the country (millions)

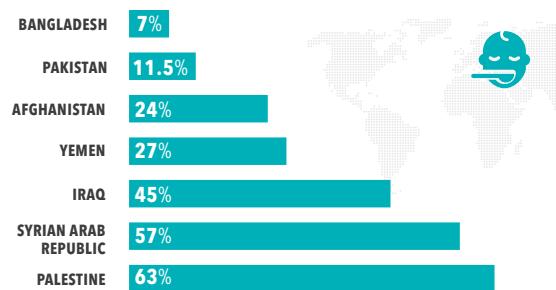
* This figure excludes Palestinian refugees under UNRWA mandate.

** Under UNHCR statelessness mandate

Source: UNHCR mid-year trends 2019.

Figure 40

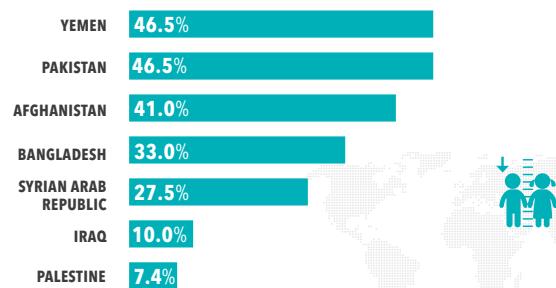
Percentage of children under 5 years who consume a minimally diverse diet for growth and development



Source: FSIN, based on SMART surveys, DHS, HNO, HRP and NNHS.

Figure 41

Percentage of children under 5 years who are chronically malnourished (stunted)



Source: FSIN, based on SMART surveys, DHS, HNO, HRP and NNHS.



© WFP/JAMES BELGRAVE

Farmers busy preparing land before planting the maize crop in Sinchon County, South Hwanghae province. Dry spells, high temperatures and floods severely hampered production in a country with high reliance on manual labour and little irrigation.

The Democratic People's Republic of Korea

In May 2019, an estimated 10.1 million people (40 percent of the population) were in need of food assistance. Only 7 percent of surveyed households had an acceptable diet that included a more frequent intake of high-protein foods and fruits. The other 93 percent with poor and borderline food consumption had a daily diet that was insufficient in diversity and nutrients.

The situation was expected to further deteriorate during the lean season from May to September 2019 unless urgent humanitarian action was taken (FAO/WFP, May 2019).

The main drivers were prolonged dry spells, abnormally high temperatures and floods that severely reduced the 2018 main season cereal production (mostly rice and maize). The early season wheat, potato and barley crops, harvested in June and important to fill food gaps during the lean season, were affected by low snow cover, which exposed crops to freezing temperatures, limited water availability and poor rains.

Sanctions-related shortages of fuel, electricity and lack of spare parts for agricultural equipment also contributed to pushing the aggregate 2018/19 cereal production to well below the previous five-year average. Post-harvest losses were higher than usual due to fuel and electricity shortages that hampered the timely transport and processing of crops as well as the ventilation of stocks. For the 2018/19 marketing year, the uncovered cereal deficit was estimated at about 1.36 million tonnes (FAO/WFP, May 2019).

Limited arable land (only 15 percent of the largely mountainous country is suitable for cultivation) and lack of irrigation also curtail domestic production (WFP, November 2019). The Government continues to rely on international humanitarian assistance, which is challenged by lack of funding as well as by lack of banking channels for in-country operational costs (UNRC, March 2019).

The population relies on the Public Distribution System (PDS) and any reduction in the entitlements affects food security nationwide (UNRC, March 2019). From January 2019, rations reduced to 300 grammes per person per day, a 21 percent fall compared to the same period in 2018 and was far from the 2019 target of 550 grammes. Further reductions were expected until September when the main crops would be available (FAO/WFP, May 2019).

PDS households had to rely on markets and kinship support to fill the food gap. WFP's regular market monitoring surveys found a general trend of increasing market prices in early 2019 compared to 2018, which was likely to cause further stress on people's access to food and worsen overall food consumption (FAO/WFP, May 2019).

Food insecurity and malnutrition are strongly interrelated. Diet diversity is inadequate and particularly young children and pregnant and lactating women suffer from chronic malnutrition because their diets lack vitamins, minerals, proteins and fats (UNRC, March 2019).

Disclaimer: The GRFC team acknowledges that there are notable limitations to the use of the Rapid Food Security Assessment to estimate the population in need according to IPC Phases. The estimate relies on one indicator, specifically the Food Consumption Score, and the population in need was determined to be equivalent to the population reporting a Poor Food Consumption Score. The data was purposively sampled and consisted of 179 households, 125 of whom were surveyed in November 2018 and 54 of whom were surveyed in early 2019. For this reason this figure has not been included in the total figure (135 million) or in the chapter 2 table.

Regional overview

Latin America and the Caribbean

Colombia Ecuador El Salvador Guatemala Haiti Honduras Nicaragua Venezuela (Bolivarian Republic of)

The major food crises in Latin America and the Caribbean are the four countries of the Central America Dry Corridor (El Salvador, Guatemala, Honduras and Nicaragua), Haiti, the Bolivarian Republic of Venezuela, and Venezuelan migrant populations living in Colombia and Ecuador. In 2019, 18.5 million people in these countries were in Crisis or worse (IPC Phase 3 or above), representing 14 percent of the global population living in Crisis or worse (IPC Phase 3 or above).

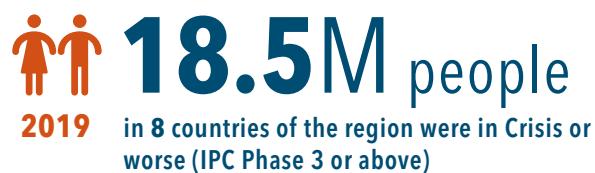
Half of these people were in Venezuela (Bolivarian Republic of). Around 9.3 million Venezuelans were acutely food insecure and in need of assistance according to WFP's Emergency Food Security Assessment carried out in July–September 2019. Of these, 2.4 million, were considered severely food insecure and 7 million moderately food insecure (WFP, February 2020). Another 1.2 million Venezuelan migrants were acutely food-insecure in Colombia and Ecuador.

When considering the areas analysed in both 2018 and 2019 rounds in Guatemala, Honduras and El Salvador, the number of food-insecure people in Crisis (IPC Phase 3) or Emergency (IPC Phase 4) increased from 2.7 million (15 percent of the population analysed) in 2018 to 3.2 million (18 percent) in 2019. The number of areas classified in Crisis (IPC Phase 3) increased from 4 to 13 in 2019, with Guatemala and Honduras seeing the most significant deterioration since 2018.

Haiti has seen an increase of almost 600 000 acutely food-insecure people in need of urgent assistance in rural areas since the same period a year earlier, including an increase of more than 100 000 in Emergency (IPC Phase 4). Around 3.7 million people were in Crisis or worse (IPC Phase 3 or above) – 35 percent of the population analysed – from October 2019–February 2020.

Economic shocks

Economic shocks formed the main driver of acute food insecurity for 14.1 million people in Crisis or worse (IPC Phase 3 or above) in four countries. See figure 42. Although Venezuela (Bolivarian Republic of) possesses the world's largest oil reserves, 2019 marked the fifth consecutive year of deep recession for its economy. See figure 43. Food prices soared by more than 8 000 percent in 2019, wiping out Venezuelans' purchasing power (Banco Central de Venezuela, 2019). The high cost of agricultural inputs and general lack of them – reflecting the depreciation of



Over 50%

of people in Crisis or worse (IPC Phase 3 or above) across the region were in Venezuela (Bolivarian Republic of)

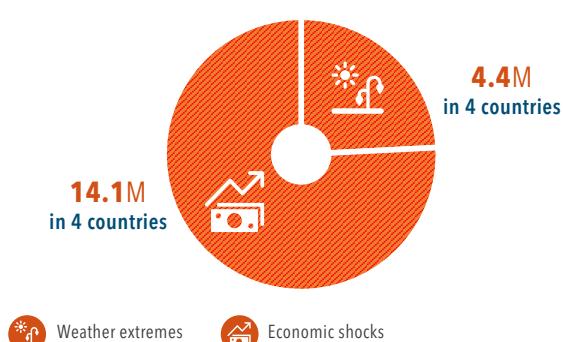


28M people
in 7 countries in the region were in Stressed (IPC Phase 2)

2019 **14.1M** in 4 countries

Figure 42

Numbers of acutely food-insecure people in Crisis or worse (IPC Phase 3 or above) by key driver



Source: FSN, GRFC 2020

the currency and import difficulties – led to a reduction in the planted area and expected below-average maize harvest (OCHA, November 2019). Consequently, reliance on imported food increased, but with dwindling foreign exchange earnings, food shortages became increasingly pressing.

In Haiti, the political and socioeconomic crisis was the primary driver of worsening acute food insecurity in 2019. The resignation of the former Government in March led to a slowdown or halt of public services and suspension of bilateral investment and support, while the depreciation of the Haitian Gourde triggered high inflation and record or near record high food prices. Urban unemployment soared and the most vulnerable households in rural areas lacked agricultural work opportunities.

Vulnerable households and smallholders in the Dry Corridor area were also affected by poor economic conditions and reduced purchasing power. Low international coffee prices as well as increases in input costs severely affected production and the incomes of the 1.3 million producers and pickers who rely on the sector for their livelihoods across the region. High beans and maize prices had a dire impact on poor households that spend a high proportion of their total expenditure on food. In April, WFP found that among its beneficiaries in the Central American Dry Corridor (CADC) 25 percent of households had insufficient cash to purchase the minimum food basket (WFP, 2019).

Weather extremes

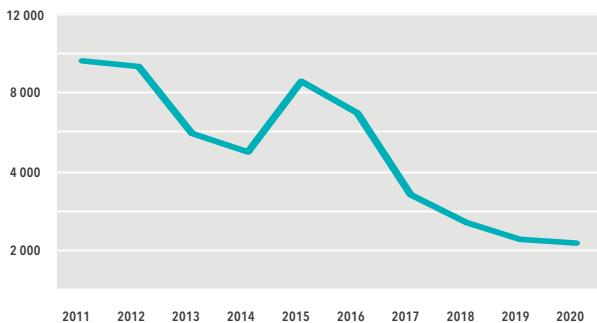
The world's second-most disaster-prone region, Latin America and the Caribbean is feeling the impact of climate change, with stronger seasonal hurricanes in the Atlantic and recurring climate shocks in Central America compounding socioeconomic vulnerabilities and economic inequity (OCHA, December 2019).

In 2019, acute food insecurity in the Dry Corridor was primarily driven by drought, which adversely affected subsistence maize and beans farmers, small coffee farmers and agricultural labourers who had not yet fully recovered from the severe 2018 drought and five years of erratic seasonal weather patterns. The drought was severe in eastern El Salvador, most of Guatemala, central, eastern and southern Honduras, and central and northern Nicaragua. Aggregate maize crop production was forecast at 1.7 million tonnes below average in Guatemala, 0.47 million below in Honduras and 0.36 million below in Nicaragua (FAO-GIEWS, October–December 2019).

The Caribbean region comprises many small island developing states (SIDS) that are especially susceptible to a wide range of natural hazards – including droughts, earthquakes, floods, hurricanes and landslides – which cause an estimated USD 3 billion in annual losses. With climate change expected to increase the intensity of extreme weather events, Caribbean countries are faced with formidable challenges in protecting people, livelihoods and infrastructure and in maintaining their economic, social and environmental gains (WFP, 2019).

Figure 43

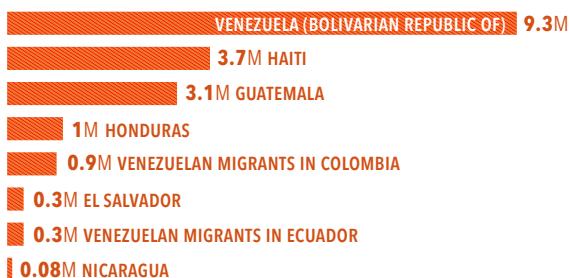
GDP per capita (USD) for Venezuela (Bolivarian Republic of), 2011–2020



Source: IMF World Economic Outlook, database January 2020 (estimate for 2020 is an IMF projection)

Figure 44

The number of acutely food-insecure people (IPC Phase 3 or above or equivalent)



24% of people

4.4M

in Crisis or worse (IPC Phase 3 or above) across the region were in the Central American Dry Corridor (El Salvador, Guatemala, Honduras and Nicaragua)

Source: FSN, GRFC 2020

Regional organization – Sistema de la Integración Centroamericana (SICA)

SICA is the institutional framework of regional integration in Central America, consisting of Belize, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua and Panama. The Program of Information Systems for Resilience in Food and Nutrition Security of the SICA region (PROGRESAN-SICA) aims to increase the sustainability of livelihoods and increase countries' adaptation capacities to climate change. It seeks to generate relevant, timely, valid and reliable information as a basis for the development of effective public strategies and policies. It focuses on building people's resilience to shocks with the ultimate aim of defeating poverty, hunger and malnutrition.

Map 4

Central American Dry Corridor, IPC Acute food insecurity situation (based on 2019 peak data by country)

- 1 - Minimal
- 2 - Stressed
- 3 - Crisis
- 4 - Emergency
- 5 - Famine
- Inadequate evidence
- Not analysed

Source: IPC Technical Working Groups:
El Salvador (April–July 2019), Guatemala (March–June 2019),
Honduras (November 2019–February 2020)

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.



Haiti stands out as the country where the impact of weather events and natural disasters have had the strongest impact on food security in the three previous years. El-Niño induced rainfall deficits contributed to a 12 percent fall in 2019/2020 aggregate cereal production since the previous year (IPC, October 2019).

Displacement

Since the start of the crisis in 2015, in Venezuela (Bolivarian Republic of) some 4.8 million Venezuelans (15 percent of the total population) have fled the country as refugees and migrants, making it the second largest displacement crisis in the world after the Syrian Arab Republic. By the end of 2019, 3.9 million were in Latin America and the Caribbean, including 1.6 million in Colombia, 862 000 in Peru and 385 000 in Ecuador (IOM, December 2019; UNHCR, December 2019).

The majority of Venezuelan migrants and refugees have poor or limited access to food, forcing them to adopt coping strategies to deal with a lack of food. Additional visa restrictions have also adversely affected migrants' revenue-generating capacities.

A combination of sociopolitical unrest, food insecurity, increasing poverty, a lack of economic opportunities and widespread human rights violations perpetrated by criminal gangs spurred the number of refugees and asylum-seekers from El Salvador, Guatemala and Honduras to reach around 387 000 in 2019. Many have been displaced more than once within their own countries or have been deported back home, often into dangerous situations.

Figure 45

Displacement overview of eight countries in the region

	IDPs	HOSTING COUNTRY	COUNTRY OF ORIGIN
COLOMBIA	7.9M	1.4M*	0.2M
ECUADOR		0.4M*	0.02M
EL SALVADOR	0.07M	<0.001M	0.2M
GUATEMALA		<0.001M	0.1M
HAITI		<0.001M	0.07M
HONDURAS	0.2M	<0.001M	0.1M
NICARAGUA		<0.001M	0.05M
VENEZUELA (BOLIVARIAN REPUBLIC OF)		0.7M	0.7M** 3.0M***

Number of internally displaced people in the country (millions)

Number of refugees and asylum seekers hosted in the country (millions)

Number of refugees and asylum seekers originating from the country (millions)

* These numbers include refugees, asylum seekers and Venezuelans displaced outside the country.

** Venezuelan refugees/asylum seekers.

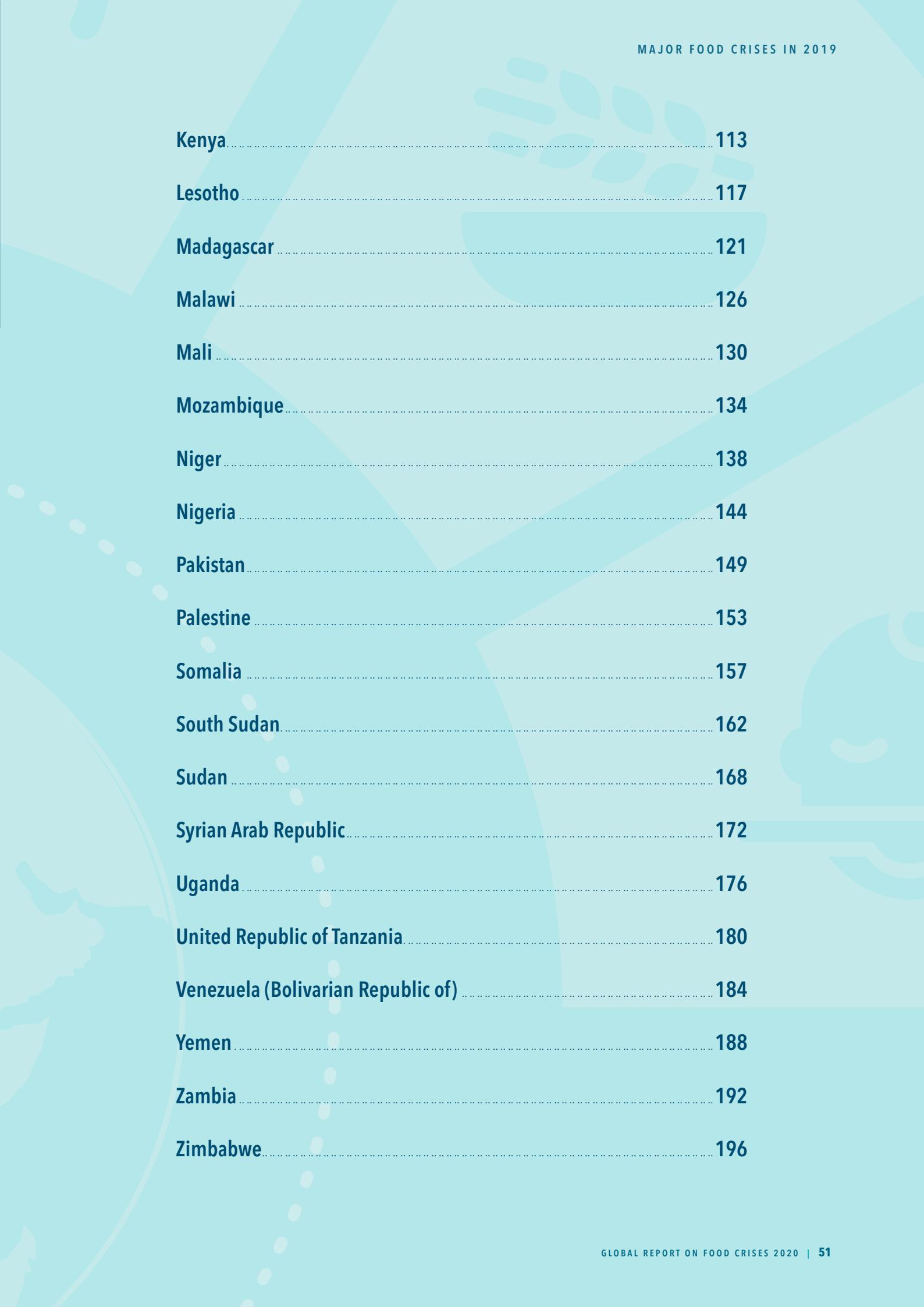
*** Venezuelan displaced abroad.

Source: UNHCR mid-year trends 2019

Political turmoil in Nicaragua since April 2018 also compelled thousands of people to flee violence and human rights violations in 2019, the majority into neighbouring Costa Rica (UNHCR, accessed 17 February 2020).

Major food crises in 2019

Afghanistan	52
Angola	56
Bangladesh (Cox's Bazar)	60
Burkina Faso	64
Cameroon	68
Central African Republic	72
Chad	76
Democratic Republic of the Congo	81
El Salvador	85
Eswatini	89
Ethiopia	93
Guatemala	97
Haiti	101
Honduras	105
Iraq	109



Kenya	113
Lesotho	117
Madagascar	121
Malawi	126
Mali	130
Mozambique	134
Niger	138
Nigeria	144
Pakistan	149
Palestine	153
Somalia	157
South Sudan	162
Sudan	168
Syrian Arab Republic	172
Uganda	176
United Republic of Tanzania	180
Venezuela (Bolivarian Republic of)	184
Yemen	188
Zambia	192
Zimbabwe	196

Country profile

Afghanistan



ACUTE FOOD INSECURITY

2019

Total population of country **32.2M**Population analysed **30.7M** (95% of total population, including displaced populations)

11.3M IPC Phase 3 or above in November 2019–March 2020



9.5M IPC Phase 2 Stressed

NSIA
WFP 2018

AFGHANISTAN IPC TECHNICAL WORKING GROUP SEPTEMBER 2019

2018-19 Change



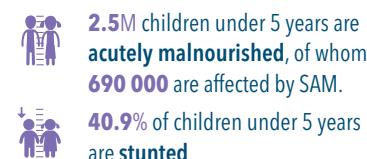
The number of people in Crisis or worse (IPC Phase 3 or above) increased due to the inclusion of the urban population in the 2019 analysis. Among the rural population, acute food insecurity decreased compared to 2018.

2020 Forecast



The situation is expected to persist at similar levels as a result of the cumulative impacts of decades of conflict, climate shocks, and economic stressors.

NUTRITION INDICATORS

HNIS 2020
NIRS 2013

DHS 2015

WHO 2016
JMP 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Conflict/insecurity Economic shocks Weather extremes

- The number of civilian casualties reached record highs, 42% higher in July–September 2019 than in the same period in 2018.
- Intensified conflict continued to displace people and to prevent humanitarian workers from reaching people in need.
- Unemployment levels soared, incomes fell and food prices climbed.
- Residents and returnees competed for scarce work, particularly in urban areas.

- Seasonal flooding affected more Afghans than normal, but the impact of flooding on the harvest was likely to be minimal.
- Households were still struggling to recover their livelihoods after the devastating 2017–2018 drought.
- The crisis is worsening access to health services, water and sanitation, and severely limiting children's diets.

DISPLACEMENT

There were **4.2M** Afghan IDPs.

IOM MAR 2019

There were **72 065** refugees in Khost and Paktika provinces.

UNHCR DEC 2019

There were **3.3M** Afghan returnees and **4.6M** Afghan IDP returnees.

IOM 2019

AFGHANISTAN



After living as a refugee in Pakistan for 40 years, 90-year-old Haji Sakhi Ralman (left) is trying to rebuild his life in Tarakhail Daag, a barren suburb of east Kabul with limited access to public services, including healthcare and water.

BACKGROUND

In 2020, Afghanistan enters its 40th year of a conflict that 'shapes all aspects of everyday life' (OCHA, December 2019). In 2019 civilian casualties reached a record high (UNAMA, October 2019). The conflict has had a devastating impact on the country's development. A quarter of the labour force is unemployed and over half (54.5 percent) live below the national poverty line (WB, October 2019). Political uncertainty, poverty, escalating personal debt and repeated exposure to natural disasters have eroded coping capacities, pushing vulnerable people into dire humanitarian need (OCHA, December 2019).

ACUTE FOOD INSECURITY OVERVIEW

Over a third (37 percent) of the population, or 11.3 million people, were forecast to be in Crisis or worse (IPC Phase 3 or above) from November 2019–March 2020.¹ Of them, 8.6 million people were forecast to be in Crisis (IPC Phase 3) and nearly 2.7 million in Emergency (IPC Phase 4). In addition, around 9.45 million were expected to be in Stressed (IPC Phase 2). Six provinces – Ghor, Nimroz, Badakhshan, Daykundi, Nuristan and Uruzgan – were

classified in Emergency (IPC Phase 4) (IPC, November 2019). Comparison with the 2018 (IPC, October 2018) peak numbers among the rural population shows that the numbers of people in Crisis or worse (IPC Phase 3 or above) reduced compared to the previous year but remained high due to the prominent impacts of the 2018 drought. Badakhshan, Balkh, Herat, Kabul and Nangarhar were estimated to have the highest numbers of acutely food-insecure populations in need of urgent assistance.

FACTORS DRIVING ACUTE FOOD INSECURITY

Conflict/insecurity

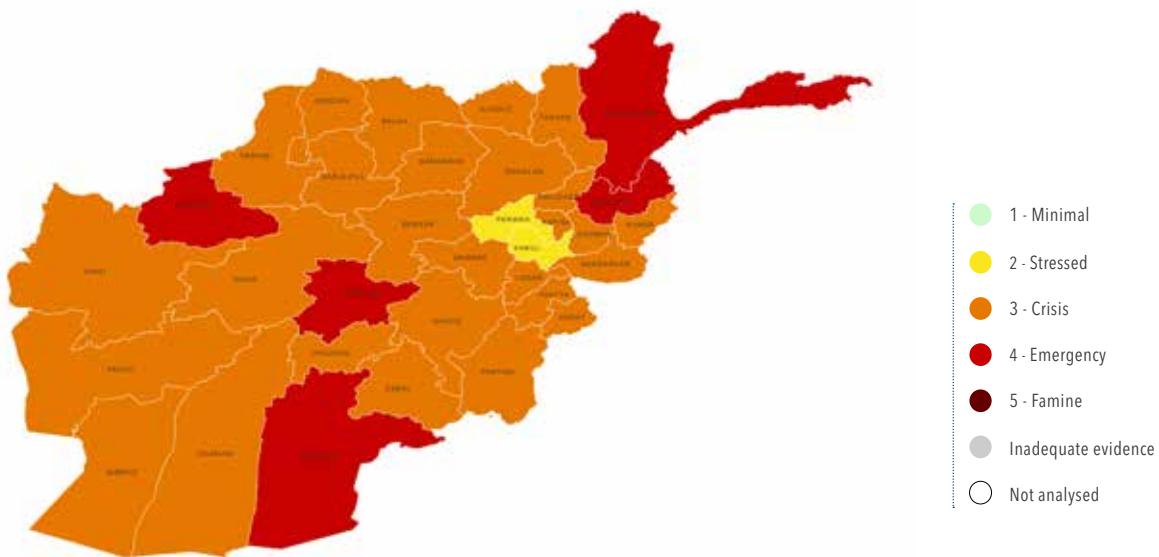
From July–September the United Nations Assistance Mission in Afghanistan (UNAMA) documented a record-high number of civilian casualties, mostly caused by anti-government elements. From August to mid-October, there was a further uptick in conflict, with the largest number of events near Kabul, Helmand and Kunduz provinces (FEWS NET, October 2019).

Conflict and insecurity continued to displace people, with over 400 000 fleeing their homes in the first 10 months of 2019 across 32 out of 34 provinces (OCHA, December 2019). Those displaced in areas of temporary conflict were likely to return home to rebuild their livelihoods, including agricultural production, but those displaced in areas of frequent conflict faced a longer period

¹ FEWS NET's analysis of available evidence suggests the population requiring emergency food assistance in 2019 was lower than the IPC estimate. For more information, see <https://fews.net/central-asia/afghanistan>.

Map 5

Afghanistan, IPC Acute food insecurity situation, November 2018–February 2019



Source: Afghanistan IPC Technical Working Group, October 2018.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

of displacement and challenges finding new income sources (FEWS NET, October 2019). Many of the displaced accumulate debts that take years to pay off (OCHA, December 2019).

During 2019, about half a million Afghan refugees returned, mainly from Iran (430 000), followed by Pakistan and other countries (OCHA, December 2019). Voluntary repatriation was down by 49 percent compared to 2018, to just 8 000 returnees (UNHCR).

Despite generally favourable livestock conditions in the third quarter of the year, in some areas conflict made pastureland inaccessible and prevented farmers from accessing their fields to prepare for winter wheat planting (FEWS NET, October 2019).

Economic shocks

Sustainable, paid employment is scarce and 80 percent rely on self-employment, daily labour or unpaid work. A quarter of the labour force is unemployed (WB, October 2019). Returnees (mainly from Iran) compete with residents for work, leading to labour supply further outstripping demand and depressing daily wage rates (OCHA, December 2019). Remittances from Iran were below average due to worsening economic conditions there.

Casual labour opportunities were below the five-year average because of lower demand in construction and other industrial sectors (FEWS NET, June 2019). Daily wage labour rates were below the two-year average, leading to an overall decrease in household purchasing power (FEWS NET, October 2019).

According to the Seasonal Food Security Assessment, of the 63 percent of households that claimed to have experienced shocks, 29 percent referred to loss of employment, 25 percent reduced income and 9 percent increased food prices (FSAC, September 2019).

In May, inflation rates reached almost 5 percent and the food component of the Consumer Price Index increased to 7 percent – but returned to 2 percent in September 2019. Following the Government of Pakistan's ban on wheat and wheat flour exports, wheat grain prices increased in all markets in July–August 2019. Prices differed between provinces with wheat grain costing 25 percent more in Kandahar than in Herat (FAO-GIEWS, December 2019).

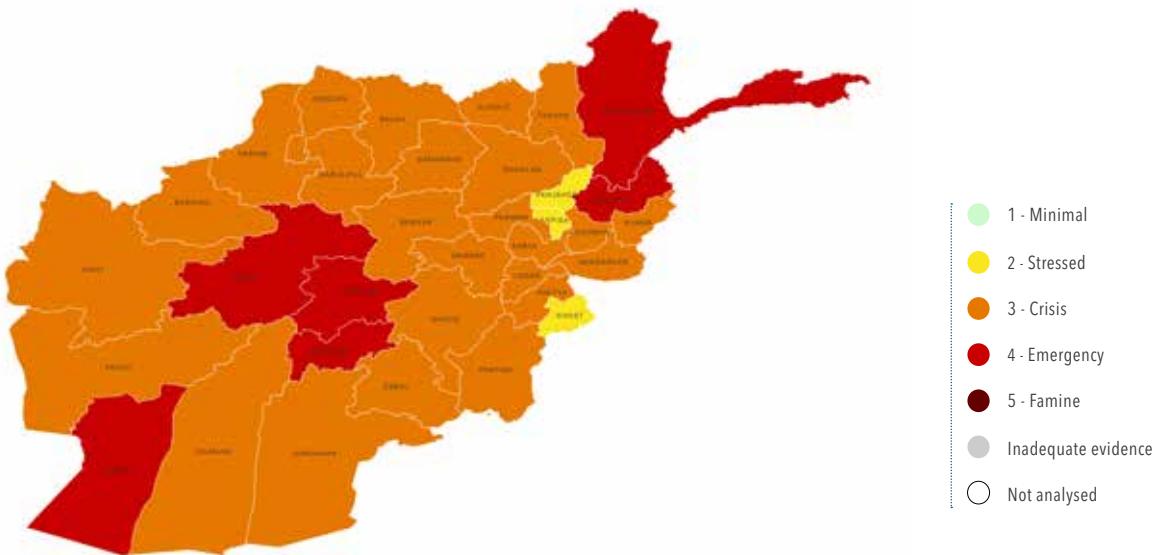
The *Whole of Afghanistan Assessment* shows the financial situation of displaced people worsens over the first two years of displacement. It is only after an average of two years that IDP households begin to reduce their overall debt, but they still fall short of ever recovering to a pre-displacement debt level (REACH, September 2019).

Weather extremes

Nationwide, some households had not fully recovered their lost livelihood assets following the 2018 drought (FEWS NET, October 2019). Despite average to above-average livestock prices, purchasing power was below average for pastoral and agropastoral households across wealth groups because of below-normal herd sizes following livestock losses (FEWS NET,

Map 6

Afghanistan, IPC Acute food insecurity situation, November 2019–March 2020



Source: Afghanistan IPC Technical Working Group, November 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

October 2019). However above-average precipitation improved pasture availability for livestock in most rangelands (FAO-GIEWS, December 2019).

The number of people affected by seasonal floods was unusually high in 2019, reaching 300 000 in 32 out of 34 provinces (OCHA, December 2019). However, the floods had minimal impact on the national 2019 cereal harvest (FEWS NET, June 2019), which was one-third above that of the 2018 drought-reduced harvest and 7 percent above the five-year average. Winter wheat planting was expected to be above average due to abundant rains (FAO-GIEWS, December 2019).

NUTRITION OVERVIEW

The number of acutely malnourished children under 5 years of age increased by 25 percent since 2018 to an estimated 2.5 million children, with 690 000 of them being severely malnourished and in need of life-saving treatment. The findings of the most recent nutrition surveys across the country show that 25 out of 34 provinces (Kapisa, Wardak, Nangarhar, Laghman, Bamyan, Paktika, Paktia, Kunar, Nuristan, Badakhshan, Takhar, Kunduz, Samangan, Balkh, Sar-e-Pol, Ghor, Daykundi, Uruzgan, Zabul, Jawzjan, Faryab, Helmand, Badghis, Herat, Farah) had

an under 5 wasting prevalence above emergency thresholds (>15 percent) (OCHA, December 2019).

Rapid nutrition assessments in IDP settlements found 'high' child wasting levels at 11–13 percent in Badghis, and close to 11 percent in Herat (ANC, July 2019). Population displacement and poor water and sanitation conditions trigger disease, particularly diarrhoea, and raise the risk of malnutrition. Around 563 000 PLW were under-nourished (OCHA, December 2019). The overwhelming majority (92 percent) of rural women faced problems accessing health care services, with distance and cost the major barriers (DHS 2015).

Drivers for malnutrition include sub-optimal childcare and feeding practices, poor access to health services, sanitation and safe water, acute food insecurity and the negative impact of conflict-related shocks. Only 16 percent of children aged 6–23 months receive the minimum acceptable diet for their development with around half receiving an adequate number of meals, and only 24 percent a nutritionally diverse diet (at least four food groups) (DHS 2015). Outbreaks of measles and the Crimean Congo Hemorrhagic Fever continued to affect most provinces. Afghanistan remains one of the last countries yet to have eradicated polio (OCHA, December 2019).

Country profile

Angola



ACUTE FOOD INSECURITY

2019

Total population of country **31.8M**

2018-19 Change

In 2019, acute food insecurity **increased** as a result of severe drought and soaring temperatures in southern provinces, as well as refugee influx.

2020 Forecast

Acute food insecurity **persisted** at similar levels in early 2020 following poor weather conditions in 2019, but improved seasonal rainfall helped regenerate pasture and boost crop production prospects.

NUTRITION INDICATORS

 8.2% of children under 5 years are acutely malnourished.	WAC 2019	 33.2% of children 6–23 months meet the minimum dietary diversity requirement.	IMAS 2015–16	 64.8% of children under 5 years and 47.7% of women 15–49 years are anaemic .	WHO 2016
 29.9% of children under 5 years are stunted .	WAC 2019	 37.5% of children under 6 months are exclusively breastfed .	IMAS 2015–16	 56% of households have access to at least basic drinking water services.	JMP 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

 Weather extremes	 Economic shocks
<ul style="list-style-type: none"> Erratic and below-average rainfall caused a reduction in the national cereal output. Currency depreciation and poor agricultural output contributed to an increase in cereal prices. The severe drought and soaring temperatures in southern provinces led to animal fodder shortages and high livestock mortality rates. 	<ul style="list-style-type: none"> In April 62% of the refugees (mainly from the Democratic Republic of the Congo) in Lovua settlement had inadequate food consumption. Besides household acute food insecurity, poor child feeding practices and low access to safe water are a cause of high rates of child malnutrition.

DISPLACEMENT

 55 000 refugees were from the Democratic Republic of the Congo, Côte d'Ivoire and Mauritania.	UNHCR 2019
The number of Congolese refugees decreased from 36 500 in November 2018 to 12 500 in November 2019 and rose again to 23 500 in December.	

¹ This IPC analysis was conducted with minimal support from the IPC Global Support Unit



ANGOLA

Smallholder farmers from Huambo and Huila provinces deliver fruit and vegetables to a wholesale market in the drought-stricken province of Cunene in southern Angola. By December, the drought had affected 857 000 people and around 72 000 stock animals had died in Cunene.

BACKGROUND

During the 27-year civil war, which ended in 2002, many people moved to cities, which shifted the country from a primarily agrarian economy to a net food importer. Angola's mainly rain-fed, small-scale subsistence farming leave it particularly vulnerable to increased temperatures and rainfall variability (USAID, October 2018) and even minor dry spells may lead to acute food insecurity (JRC-GDO, October 2019). Domestic cereal production covers about 60 percent of needs (FAO-GIEWS, October 2019). Despite the end of the war almost two decades ago, Angola still has around 105 square kilometres contaminated by landmines (Government of Angola, August 2019), which is an impediment to sustainable socio-economic development, particularly in the agriculture sector, in the affected areas (SIPRI, November 2019).

ACUTE FOOD INSECURITY OVERVIEW

Between October 2019 and February 2020, almost 562 000 people were projected to be in Crisis conditions or worse (IPC Phase 3 or above), including 290 000 in Emergency (IPC Phase 4) across 24 communes in the Cuando Cubango, Cunene and Huila provinces. In addition, over 193 000 were in Stressed (IPC Phase 2) conditions and required action for disaster risk reduction and to preserve livelihoods (IPC, October 2019).¹

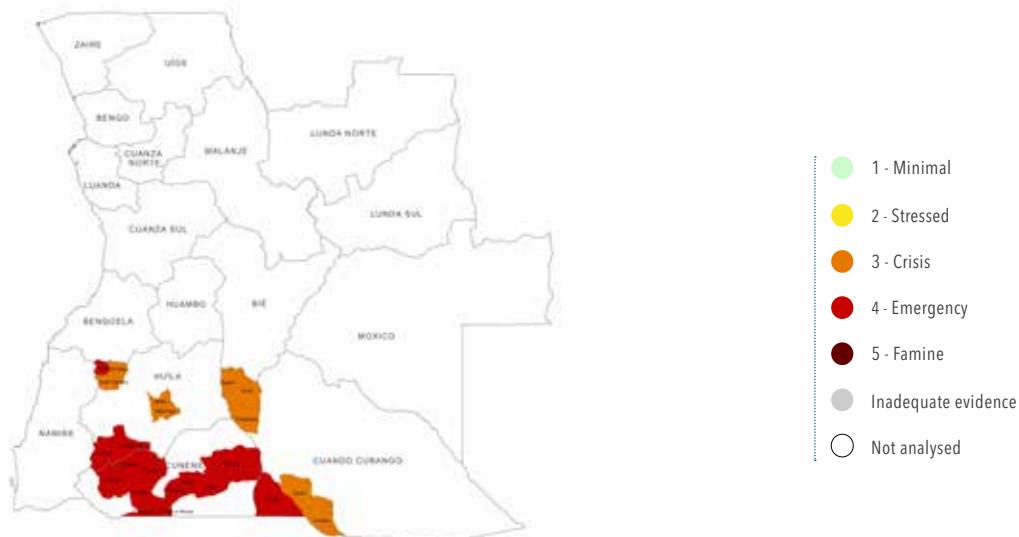
Fourteen communes out of 24 were classified in Emergency (IPC Phase 4) mainly in the municipios of Cahama, Cuangar, Cuanhama, Gambos/ex-Chiange, Ombadja and Quilengues. The remainder were all classified in Crisis (IPC Phase 3), even though four communes in Cuangar and Cuchi had more than one in two inhabitants facing Crisis conditions or worse (IPC Phase 3 or above) (Bondo, Kutato) rising to more than two in three inhabitants in the Chinguanja and Cuchi communes (IPC, October 2019).

This constituted a 33 percent increase in the numbers of people in need of urgent food assistance compared with July–September 2019, when approximately 422 000 were food insecure and required urgent action in the 24 communes.

¹ This analysis was conducted with minimal support from IPC Global Support Unit.

Map 7

Angola, IPC Acute food insecurity situation, October 2019–February 2020



Source: Angola IPC Technical Working Group, October 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

During that period almost 222 000 people were in Emergency (IPC Phase 4). A higher number were classified in Stressed (IPC Phase 2) (267 000 people) compared with the projected period of October 2019–February 2020 (IPC, October 2019).

Acute food insecurity among refugees

Following the outbreak of violence in the Kasai region of the Democratic Republic of the Congo in March 2017, around 35 000 refugees arrived in Angola's Lunda Norte province. Their repatriation was underway in 2019, but was interrupted between September and October at the request of the Congolese government (UNHCR, November 2019).

As of late September some 14 800 Congolese refugees had been repatriated (Government of Angola, September 2019). By the end of November the country still hosted around 45 000 refugees, including 12 000 Congolese (UNHCR, December 2019).

The food consumption status of refugees in Lovua settlement improved between April and July 2019. By July the percentage of refugee households with inadequate food consumption had fallen to 40 percent from 62 percent in April. Over 90 percent were reducing meal portion sizes and 80 percent reducing the number of meals they consumed each day to cope with food shortages (WFP, July 2019).

FACTORS DRIVING ACUTE FOOD INSECURITY

Weather extremes

In early 2019 erratic and below-average rainfall negatively affected crop yields – particularly of maize – at the national level. Vegetation stress was reported over the east-west belt (JRC-GDO, October 2019). Pest infestations (fall armyworm and birds) also contributed to low maize yields (IPC, October 2019). As a result, the 2019 cereal output was estimated at 16 percent below the favourable harvest of a year earlier and 9 percent below the five-year average (FAO-GIEWS, October 2019). In some areas agricultural campaigns failed completely. Millet and sorghum production declined significantly and livestock herd sizes decreased (IPC, October 2019). The 2019/2020 cereal import requirements increased to meet the deficit of 1.2 million metric tonnes (SADC, July 2019) with maize imports 15 percent above average.

The three southern provinces of Cuando Cubango, Cunene and Huila, which produce a minor share of the national cereal production, were severely affected by drought. Given the severe dry conditions, livestock body conditions deteriorated as a result of poor pasture and water availability (FAO-GIEWS, October 2019), and local populations faced loss of assets, displacements and significantly disrupted livelihoods (IPC, October 2019). By December the drought had affected over

857 000 people and one million cattle. Around 72 000 animals, including cattle, goats and pigs, had died as a result of dry conditions and poor animal health in Cunene (Government of Angola, December 2019). It also destroyed agricultural fields (Government of Angola, November 2019), and reduced households' resilience in a context of recurrent shocks, as it spurred many to adopt extreme coping mechanisms, including taking children out of education to work (Government of Angola, September 2019).

Economic shocks

The national currency depreciated by 54 percent against the USD between January 2018 and March 2019 due to the implementation of a floating exchange rate (IMF, June 2019). Although over the past two years year-on-year the inflation rate decreased, it remained high at 17 percent in July 2019 because of weak economic activity and exchange rate depreciation (WB, 2020). In October, maize flour prices were 19 percent higher than their levels a year earlier in Luanda, and 38 percent higher than two years earlier, while cassava flour prices were 9 percent above their October 2018 levels and 25 percent above their 2017 levels (FAO-GIEWS, January 2020). In the provinces affected by drought, shortages in staples led to a steep rise in food prices in the main markets, further limiting food access, which was already hampered by the poor state of road infrastructure (IPC, October 2019).

NUTRITION OVERVIEW

An estimated 464 500 children under 5 years old were affected by acute malnutrition and 1.7 million by chronic malnutrition in 2019 (VAC, July 2019). Acute malnutrition prevalence increased from 5.9 percent in 2015–16 to 8.2 percent in 2019, considered a 'medium' prevalence, with an additional 333 000 children wasted. The increased levels of acute food insecurity are likely driving the increasing levels of acute malnutrition. Meanwhile, rates of chronic malnutrition fell from 37.6 percent in 2015–16 to 29.9 percent in 2019, which is classified as a 'high' prevalence.

Poor child-feeding practices are also contributing to malnutrition. In 2015–16 only 13.3 percent of children aged 6–23 months consumed a minimum acceptable diet required for their growth and development, while only one out of three children had acceptable dietary diversity. Just 37.5 percent of infants were exclusively breastfed (IIMS, 2015–16).

A total of 71 vaccine-induced polio (cVPDV2) cases were found in Angola in 2019 (WHO, December 2019), and Capunda municipality in Malanje province reported 11 deaths related to measles (Government of Angola, October 2019). A small number (19) of cholera / AWD cases were confirmed in the first part of 2019 (UNICEF, May 2019).

Country profile



Bangladesh (Cox's Bazar and host populations)

ACUTE FOOD INSECURITY

2019

Total population in Cox's Bazar district 2.7M plus 915 000 refugees

Population analysed 3.5M (100% of total population, including displaced people)

 **1.3M** Food-insecure people in need of assistance
in January–December 2019

2018-19 Change

There was **no change** in the number of Rohingya refugees and members of the host community who were acutely food insecure and in need of urgent food assistance.



2020 Forecast

The majority of the Rohingya refugees currently residing in Cox's Bazar are expected to **remain** in 2020 and dependence on external aid will likely **continue**.

WFP

JOINT RESPONSE TO THE ROHINGYA HUMANITARIAN CRISIS JAN-DEC 2019

NUTRITION INDICATORS

Refugee population



48 300 children under 5 years are **acutely malnourished**, of whom **3 900** are affected by SAM.



32.6-39% of children under 5 years are **stunted**.

UNHCR 2019



12.6% of children 6-23 months in the makeshift settlements and **37.4%** in Nayapara camp meet the **minimum dietary diversity** requirement.



50% of children under 6 months in the makeshift camps and **74%** in Nayapara are **exclusively breastfed**.

EHA/R2/2018



37.1-41.6% of children under 5 years and **20.2-31.8%** of women 15-49 years are **anaemic**.

ENHVC/AROUND 4, 2019

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS



Conflict/insecurity



Economic shocks



Weather extremes

- As the root causes of the conflict in Myanmar have not been addressed Rohingya refugees remain displaced in Cox's Bazar and reliant on food assistance.
- Limited income earning opportunities continued to compel refugees to resort to unsustainable coping mechanisms.
- Refugees have depleted their savings; daily labour wages are low and they are increasingly falling into a cycle of debt.
- Incidents of tension and violence have been observed, both within the camps and between refugees and host communities.

- Bangladeshi host communities have lost access to previously farmed lands and casual labour opportunities due to competition with cheaper refugee labour.
- Refugees live in highly challenging circumstances, exposed to cyclic climatic shocks resulting in soil erosion, slope failure, storms and damaged or destroyed shelters.
- Early marriage and poor infant and caring practices drive malnutrition alongside poor sanitation and hygiene and high levels of water contamination.

DISPLACEMENT



There were **915 000** Rohingya refugees/Forcibly Displaced Myanmar Nationals under the joint Government-UNHCR registration exercise as of 31 December 2019.

UNHCR DEC 2019

This figure was released after the completion of the JRP 2020 process, which used a planning figure of 855 000 persons.

The refugees live in 34 extremely congested camps formally designated by the Government of Bangladesh in Ukhia and Teknaf Upazilas of Cox's Bazar district.



BANGLADESH

A Rohingya refugee girl in Cox's Bazar stands outside shelters damaged by floods during September's heavy monsoon rains that triggered landslides, flash flooding and renewed displacement.

BACKGROUND

Between August and December 2017, about 750 000 Rohingya nationals crossed into Bangladesh following a major offensive against them in Rakhine state, Myanmar. They joined about 169 000 refugees already living in camps in Cox's Bazar. Kutupalong and Nayapara registered camps and the makeshift camps have become the world's largest refugee settlements. The influx exacerbated an already-fragile situation, overwhelming infrastructures for health, education and WASH. Two years on the situation has improved thanks largely to assistance provided by the Government and humanitarian community and resilience of the Rohingya. But socio-economic challenges, such as poverty and constrained self-reliance opportunities, raise serious food security concerns (UNHCR/WFP, October 2019).

ACUTE FOOD INSECURITY OVERVIEW

In 2019, 1.3 million people were food insecure and in need of humanitarian food and livelihood assistance in Cox's Bazar district of Bangladesh. Around two thirds of them were Rohingya refugees (855 000) in Ukhia and Teknaf upazilas and 444 000 were members of the Bangladeshi host community (JRP, March 2020).

According to the latest Refugee Influx Emergency Vulnerability Assessment, the percentage of refugee households with inadequate food consumption remained unchanged at 42 percent (REVA 3, 2019) compared to 44 percent in November 2018 (REVA 2, 2018). Around 94 percent of refugees were entirely dependent on assistance to help them meet their minimum essential needs (REVA 3, 2019).

Buying food on credit, borrowing money to buy food and selling off humanitarian assistance continued to be the most adopted coping strategies to support consumption in 2019 (REVA 3, 2019). Half of refugee households were buying food on credit or borrowing money to buy food, a reduction from 58 percent in 2018 (REVA 3, 2019) – although this decrease could be due to people losing their credit worthiness.

The most vulnerable included unregistered refugees who arrived in the camps prior to the influx, newly-arrived

Map 8

Bangladesh, Cox's Bazar, Rohingya refugee population (as of 31 December 2019)

Note: Rohingya refugees/Forcibly Displaced Myanmar Nationals (FDMN) registered under the joint Government-UNHCR registration exercise as of 31 December 2019. This figure was released after the completion of the JRP 2020 planning process, which was undertaken using a planning figure of 855 000 persons.

Source: Joint Response Plan, 2020. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.



refugees, large families with fewer adults potentially involved in income generation, single parents and child-headed households, especially if they had to support vulnerable household members, such as disabled persons (REVA 2, 2018 and UNHCR/WFP, October 2019).

The food security situation among the host community improved between 2018 (REVA 2, 2018) and 2019 (REVA 3, 2019) as the percentage of households with inadequate food consumption dropped from 30 percent to 21 percent and utilization of consumption-based coping strategies remained low. The share of households that purchased food on credit and/or were borrowing money to buy food halved from around 45-50 percent in 2018 to 25 percent in 2019 – although again, this seeming improvement could be attributed to people losing their credit worthiness.

their return (JRP, January 2019). But until these refugees/Forcibly Displaced Myanmar Nationals are given citizenship in Myanmar and officially recognized and accepted as one of many ethnic groups in the country with the same rights as all Myanmar nationals, they will remain as refugees in the camps in Cox's Bazar and compelled to rely upon government support and humanitarian aid (UNHCR/ WFP, October 2019).

Incidents of tension and violence have been observed, both in camps and between refugees and host communities, exacerbated by congested conditions in the camps and limited opportunities for education and skills development. Relocations and displacement related to weather hazards, inter-community tensions and new arrivals increased the need for rapid food assistance (JRP, January 2019).

Economic shocks

Displacement from Myanmar has almost tripled the total population in Ukhia and Teknaf Upazilas, with profound consequences for the Bangladeshi residents. While the rapid population increase has brought economic opportunities to segments of the local population, the influx has led to higher inflation and a sharp drop in daily wages due to the increased supply of unskilled labour (JRP, January 2019).

The food and nutrition security of the poorest among the host community is a growing concern. Many have lost access to previously farmed land/forest and have lost work opportunities to the cheaper refugee labour market. Forest

DRIVERS OF ACUTE FOOD INSECURITY

Conflict/insecurity

Despite progress, the stateless Rohingya still face an extremely precarious future as the root causes of the conflict in Myanmar have not been addressed (OCHA, accessed January 2020).

In 2018 UNHCR, UNDP and the Government of Myanmar signed an agreement to create conditions conducive to

products on which they previously depended are no longer available (JRP, March 2020).

While in late 2017 a large share of the refugee population had some savings or household items and jewellery that could be monetized, by 2019 their resource base had largely been depleted. About 70 percent of households borrowed money (or food) from other refugees in the camp and about 80 percent were in debt.

The REVA 2 identified a looming risk of getting stuck in a vicious circle of indebtedness (UNHCR/WFP, October 2019). Credit dependency remains high in both Rohingya and host communities. Six out of 10 Rohingya households and 4 out of 10 host community households had contracted debts, three months prior to the survey in December 2019. The vicious cycles of debt remain high; 9 out of 10 Rohingya households that had contracted debts were yet to repay at the time of the survey (REVA 3, 2019).

According to surveys conducted with 1 034 Rohingya refugees in 30 camps in April 2019, there was a 15 percent increase in the percentage of respondents reporting that people in their community sold aid items – mainly food – to meet their need for cash (59 percent). Food was also named as the most common purchase when using money from selling aid (Ground Truth solutions, June 2019). This practice of selling aid items persisted towards the end of the year with around half of refugee households continuing to do so (REVA 3, 2019).

Weather extremes

Although they have access to the basics, refugees are still extremely vulnerable, living in highly challenging circumstances, exposed to the monsoon elements (OCHA, accessed January 2020).

By mid-year, 50 500 refugees had been affected by soil erosion, slope failure, wind, storms and rain, with over 6 000 temporarily displaced to family, friends and collective centres inside the camps while the floodwaters receded and shelters could be re-established (JRP, June 2019). In early September, Cox's Bazar experienced 200–300mm of rain, which triggered serious landslides and flash flooding, particularly in the low-lying regions of Teknaf sub-district. Following the flooding the restricted telecommunications services and decreased mobile and internet signal hampered the emergency response, including the delivery of critical, life-saving healthcare services (ISCG, October 2019).

NUTRITION OVERVIEW

According to the 2020 JRP, 76 000 people are in need of essential curative nutrition services (JRP, March 2020).

The acute malnutrition rates in Nayapara, Kutupalong and makeshift camps are classified as 'high'. The findings indicated a decline in Global Acute Malnutrition (GAM) in makeshift camps from 19.3 percent in 2017 to 10.9 percent in 2019. The prevalence was 12.1 percent in Kutupalong camp and 13.3 percent in Nayapara. Stunting was slightly lower, but remained very high in makeshift camps (32.6 percent) compared to Nayapara and Kutupalong (35.4–39 percent) (SMART, October 2019).

Anaemia levels among children age 6–59 months were 'severe' in Kutupalong camp, at 41.6 percent. In the other camps anaemia levels among children of this age group were 'moderate' ranging from 37.1–39.4 percent. For women of reproductive age anaemia was 'moderate' ranging from 20.2–31.8 percent (SMART, 2019).

In the two weeks before the September/October nutrition surveys over 25 percent of children aged 6–59 months had had diarrhoea in the makeshift and Nayapara camps (SMART, October 2019). While 84 percent of children had received measles vaccinations in Kutupalong camp, the rate dropped to 76 percent in Nayapara and 25 percent in makeshift camps (SMART, October 2019).

Safe sanitation, hygiene, and solid waste management are inadequate and inequitable: only 69 percent of refugees had access to functional latrines, with space availability remaining the core constraint (JRP, June 2019). Open defecation remained common practice for children under 5 years. In some camps the share of households using self-made latrines reached 46 percent (UNHCR/WFP, October 2019).

Household level water contamination remained a critical concern: only 25 percent of households used water treatment options, and only 34 percent had knowledge of important hand-washing times (UNICEF/WASH Sector/REACH, May 2019). In July, 71 percent of household samples of drinking water were contaminated with faecal coliforms and 35 percent with E.coli. Secondary contamination of drinking water – during collection and storage – remained a challenge across all camps (UNHCR/WFP, October 2019).

Country profile

Burkina Faso**ACUTE FOOD INSECURITY**

2019

Total population of country **21.4M**Population analysed **21.4M** (100% of total population)

1.2M CH Phase 3 or above in October–December 2019

1.2M	28 000
CH Phase 3 Crisis	CH Phase 4 Emergency

3.6M CH Phase 2 Stressed

2018-19 Change

The number of acutely food-insecure people **increased** by 28% as violence and insecurity spread through large parts of northern and eastern Burkina Faso, displacing hundreds of thousands of people and disrupting livelihoods.

2020 Forecast

Conflict is expected to continue, displacing growing numbers of people from their homes and livelihoods and **increasing** reliance on humanitarian assistance.

NUTRITION INDICATORS**Host population**

	465 800 children under 5 years are acutely malnourished , of whom 133 100 are affected by SAM.	HRP 2019
	25% of children under 5 years are stunted .	SMART 2018

24.6% of children 6–23 months meet the **minimum dietary diversity** requirement.

55.8% of children under 6 months are **exclusively breastfed**.

86.2% of children under 5 years and **49.6%** of women 15–49 years are **anaemic**.

61% of households have access to at least basic **drinking water** services.

Refugee population

	647 children under 5 years are acutely malnourished , of whom 112 are affected by SAM.	SENS/UNHCR 2017/19
	32.9–36.2% of children under 5 years in 2 camps are stunted .	SENS 2017

44.2–64% of children under 6 months in 2 camps are **exclusively breastfed**.

65.7–70.3% of children under 5 years and **54.9–64%** of women 15–49 years in 2 camps are **anaemic**.

100% of households in 2 camps have access to improved **drinking water** sources.

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS
 Conflict/insecurity
 Economic shocks
 Weather extremes

- An escalation of armed conflict displaced more than half a million people in the Centre-Nord, Sahel, Nord and Est regions in 2019.
- Conflict disrupted livelihoods, especially those related to agriculture and livestock, and constrained access to grain and livestock markets in the Sahel region.
- Drought and conflict created fodder deficits in the Sahel region, threatening pastoralist-based livelihoods and aggravating the risk of conflict between farmers and animal herders.

- Insecurity, carjacks and kidnappings of humanitarian staff prevented humanitarian actors from reaching vulnerable populations in need of urgent food assistance.
- This escalating crisis is exacerbating poor child-feeding practices, disease prevalence and low access to safe water, sanitation and health services, driving up malnutrition.

DISPLACEMENT

Over 500 000 Burkinabés have been **internally displaced** in 2019, bringing the total to **560 000**.

There were **25 900 refugees** from Mali, with little change since September 2018.

UNHCR DEC 2019

UNHCR DEC 2019



BURKINA FASO

The number of internally displaced people has increased following rapidly escalating armed conflict that has spread from northern to eastern parts. Conflict cut off humanitarian access to some camps and IDP hosting areas, particularly in the Centre-Nord and Sahel regions.

BACKGROUND

In December 2018, a state of emergency was declared in several provinces of Burkina Faso (WB, October 2019). In 2019, the humanitarian situation was one of the world's fastest growing crises with the daily lives and livelihoods of hundreds of thousands of civilians disrupted by insecurity and violence in central and northern regions.

ACUTE FOOD INSECURITY OVERVIEW

In October–December 2019, over 1.2 million people were in Crisis or worse (CH Phase 3 or above), including about 28 400 people in Emergency (CH Phase 4) in Centre-Nord and Sahel provinces. The largest numbers were in the Sahel, Nord, Est and Centre-Nord regions, particularly in the areas of Bam, Sanmatenga, and Soum (CILSS-CH, November 2019). The figure represents a fourfold increase in the number of people in Crisis or worse (CH Phase 3 or above) since October–December 2018 (CILSS-CH, November 2018).

The escalation of the crisis is particularly concerning when considering the rate at which it advanced throughout the year. Although acute food insecurity was considerable in March–May 2019 with 420 000 in Crisis or worse (CH Phase 3 or above), it increased to almost 688 000 during the pre-harvest

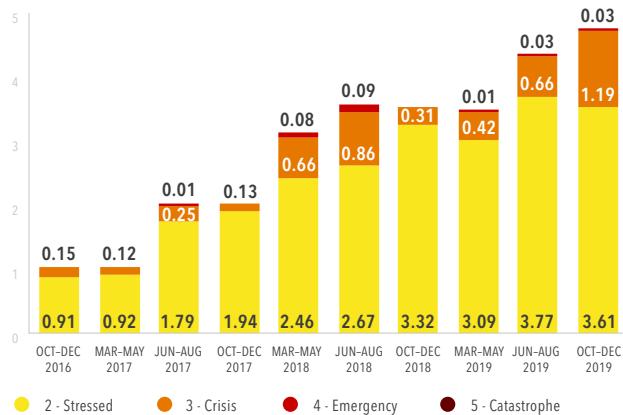
period from June–August 2019 (RPCA, 2018–2019) and to 1.2 million at the end of the year. A further 3.6 million people were classified in Stressed (CH Phase 2) during that period.

Acute food insecurity among refugees

Burkina Faso hosts more than 23 000 Malian refugees who live in and around two consolidated camps in the Sahel region. The prolonged crisis and increased insecurity in Mali, in most of the return zones, prevents a return in safety and

Figure 46

Number of people (millions) in CH Phase 2 or above in 2016–2019



Source: CILSS-Cadre Harmonisé

Map 9

Burkina Faso, CH Acute food insecurity situation, June-August 2019



Source: CILSS-Cadre Harmonisé, March 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

dignity. At the same time, security in the Sahel region is rapidly deteriorating and there is a possibility that Malian refugees will spontaneously relocate to safer areas.

Refugee acute food insecurity deteriorated significantly between 2018 and 2019 with the percentage of households with inadequate food consumption increasing from 20 percent in 2018 to 38 percent in 2019 (WFP, 2019).

FACTORS DRIVING ACUTE FOOD INSECURITY

Conflict/insecurity

The security situation deteriorated as violence spread from the northern regions to eastern parts. A state of emergency in 14 provinces – declared in December 2018 – was extended until January 2020 (ACAPS, December 2019).

The number of violent incidents in 2019 was almost three times higher than in 2018, while reported civilian deaths in the first half of the year were four times higher than the total for 2018 (ACLED, January 2020). The severity of the conflict contributed to the displacement of 560 000 people as of December 2019, up from 47 000 in January (UNHCR, December 2019). In conflict-affected areas, agricultural activities decreased by 20–70 percent, while land cultivation dropped by 50 percent compared to 2017–2018. Difficulties in

accessing fields, the destruction of production infrastructure, and looting and loss of livestock disrupted market functioning and households' livelihoods (FAO, October 2019).

Consequently, displaced populations faced a major deficit in the quality and quantity of food consumption since they were unable to resort to other coping or adaptation strategies (RPCA, November 2019). Conflict cut off humanitarian access to a number of camp areas and IDP-hosting areas, particularly in the Sahel region, where a large number of IDPs and the majority of Malian refugees were located (UNHCR, May 2019).

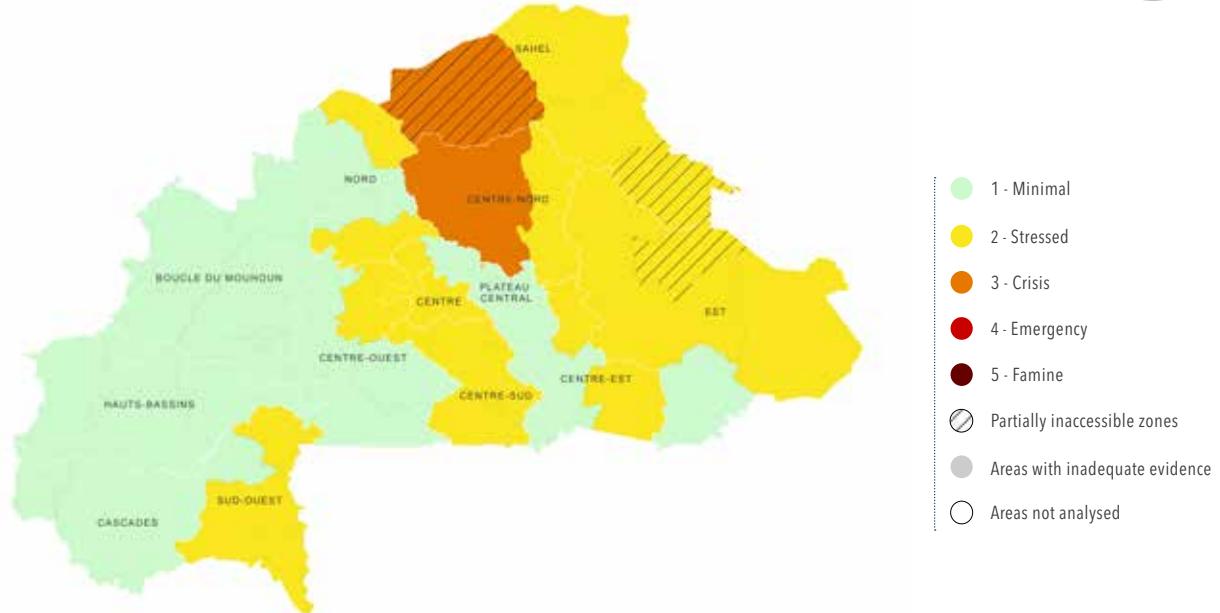
Economic shocks

Conflict constrained access to markets in the Sahel region and vulnerable households were obliged to rely on host communities and humanitarian assistance (AVI, November 2019). Insecurity disrupted normal livestock market functioning (RPCA, November 2019), particularly in northern regions. However, livestock prices remained stable or declined by 5–10 percent relative to the average (FEWS NET, November 2019). Although weak cereal prices ensured favourable terms of trade for livestock owners as of November 2019, a rapid deterioration was forecast in areas suffering from limited fodder resources due to insecurity (RPCA, November 2019).

Incomes from cash crop production and sales were expected to remain below average because of localized declines in production (FEWS NET, December 2019).

Map 10

Burkina Faso, CH Acute food insecurity situation, October-December 2019



Source: CILSS-Cadre Harmonisé, November 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Weather extremes

Pockets of drought were reported during August in some of the main crop-producing areas such as Boucle du Mouhoun, Sud-Ouest and Hauts-Bassins, leading to a 5 percent decline in cereal output compared to 2018 (PREGEC, November 2019). Fodder deficits were estimated at between 1 320 and 1 350 tonnes in all regions except for the Sud-Ouest (FSC, November 2019). Reports of restricted mobility of animal herds and concentration of animals in more secure regions could increase the risk of conflict between pastoralists and other livelihood groups (RPCA, November 2019). In areas least-affected by insecurity, the growing season was favourable and the late 2019 harvests were expected to be above the five-year average (FEWS NET, December 2019).

NUTRITION OVERVIEW

Nationally in 2018, 8.5 percent of children aged 6–59 months were wasted, 1.7 percent severely so, reaching 13 percent ('high') in the Sahel region. The national prevalence of stunting was 'medium' at 25 percent (MoH, December 2018).

Preliminary results of the national SMART survey carried out in 2019 show high levels of acute malnutrition in Sanguié (Centre Ouest region), Boulgou (Centre Est region) and Séno (Sahel region). Out of the 33 provinces analysed, 27 showed a 'high' or 'very high' prevalence of stunting, with Séno and

Yagha provinces (Sahel region) reporting a prevalence above 40 percent (45 percent and 48 percent respectively). An estimated 465 800 children aged 6–59 months were acutely malnourished, 133 100 severely so and in need of nutrition prevention and treatment programmes (OCHA, July 2019).

Results from a rapid SMART survey conducted in November 2019 in areas most affected by violence and insecurity (Sahel, Nord, Centre Nord and Est regions) found a deteriorating nutrition situation among children and women in communities with high concentrations of displaced people. The acute malnutrition prevalence in children aged 6–59 months was above 10 percent in most municipalities surveyed. The prevalence was 'very high' in Barsalogho and Djibo at around 17 percent. A 'high' prevalence exceeding 10 percent was observed among pregnant and breastfeeding women in the communes of Matiacoali and Kaya, as well as at the Barsalogho host site. Overall, the situation was most concerning among IDPs (FEWS NET, December 2019).

By November 2019, 71 health centres had been closed, while services in 75 others had been impaired by insecurity and armed attacks. This left some 881 000 people with limited or no access to health care (OCHA, November 2019).

Acute malnutrition in Mentao and Goudebou camps was below 10 percent (8.5 percent and 7 percent respectively). Chronic malnutrition ranged from 32–36 percent in the two camps while anaemia was of significant public health concern, at over 63 percent in both camps (SENS 2017).

Country profile

Cameroon



ACUTE FOOD INSECURITY

2019

Total population of country 25M



Population analysed 16.1M (64% of total population, including IDPs, returnees and refugees)

1.4M CH Phase 3 or above in October–December 2019

1.2M CH Phase 3 Crisis **172 000** CH Phase 4 Emergency

3.8M CH Phase 2 Stressed

2018-19 Change

Acute food insecurity levels rose sharply in North-West and South-West regions and remained concerning in the Far North.



2020 Forecast

The number of people in Crisis or worse (CH Phase 3 or above) is expected to almost double nationally and treble in the Far North although the geographical coverage has expanded significantly.



NUTRITION INDICATORS

Host population

4.3% of children under 5 years are acutely malnourished, of whom **1.6%** are affected by SAM.
28.9% of children under 5 years are stunted.

DHS 2018

10% of children 6–23 months meet the minimum acceptable diet.
39.7% of children under 6 months are exclusively breastfed.

DHS 2018

57.4% of children under 5 years and **39.7%** of women 15–49 years are anaemic.

DHS 2018

60% of households have access to at least basic drinking water services.

JMP 2017

Refugee population

17 700 children under 5 years are acutely malnourished, of whom **2 400** are affected by SAM in 11 sites.
42.2–54.9% of children under 5 years in 11 camps are stunted.

SENS 2015/16

31.4% of households do not consume micronutrient-rich food in Minawao camp.
40–87.3% of children under 6 months in 11 camps are exclusively breastfed.

SENS 2015/16

33.2–60% of children under 5 years in 8 camps and **24.7–62.5%** of women 15–49 years in 7 camps are anaemic.

SENS 2015/16

6.6–100% of households in 11 camps have access to improved drinking water sources.

SENS 2015/16

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Conflict/insecurity

Weather extremes

Economic shocks

- Clashes in the North and South-West regions forced huge numbers to abandon their homes, crops and livelihoods.
- In the Far North intensified Boko Haram related violence and insecurity prevented people from farming or working.
- The acute food insecurity status of refugees from neighbouring countries worsened as humanitarian food rations shrank.

- In the Far North, crops were destroyed by floods, birds and fall armyworm leading to reduced income for farmers and reduced food availability.
- The drivers of acute food insecurity also inhibited child feeding practices, access to safe water, sanitation and health services to the detriment of child nutrition.

DISPLACEMENT

950 300 Cameroonian were internally displaced, up by one third since late 2018, with a huge increase in Oct 2019.

UNHCR DEC 2019

There were **416 200** refugees and asylum seekers, mainly from Central African Republic (72%) and Nigeria (27%). **16 700** refugees arrived in 2019 but the increase rate was slower than in previous years.

UNHCR DEC 2019

There were **347 900** Cameroonian IDP returnees.

UNHCR DEC 2019



Violence in Nigeria has driven well over 100 000 Nigerians across the border. A displaced woman looks out from her shelter in the Cameroonian town of Goura.

BACKGROUND

A country endowed with rich natural resources, Cameroon enjoyed several decades of stability, but in recent years it has been grappling with attacks by armed groups in the Far North and for the past four years with a secessionist insurgency in the North-West and South-West Anglophone regions (WB, October 2019). In 2014, 24 percent of Cameroonians were living in extreme poverty (USD1.90 a day) (WB). Refugees from the Central African Republic and Nigeria are in areas already deprived of social services and development support.

ACUTE FOOD INSECURITY OVERVIEW

The number of people in Crisis or worse (CH Phase 3 or above) peaked at almost 1.4 million (8 percent of the population analysed) in October–December 2019 (CILSS-CH, November 2019). Over 70 percent of them (968 500) were in the Anglophone regions while around 17 percent (233 000) were in the Far North. Of the 171 700 classified in Emergency (CH Phase 4), around 89 percent were in the Anglophone regions. In addition, 3.8 million people were in Stressed (CH Phase 2).

In June–August 2019, 947 700 people were in Crisis (CH Phase 3) and at least 25 percent of the populations of Bui, Menchum, Momo and Boyo departments in the North-West

and Mémé, Manyu, Lebalem and Ndian in the South-West were classified in Crisis or worse (CH Phase 3 or above).

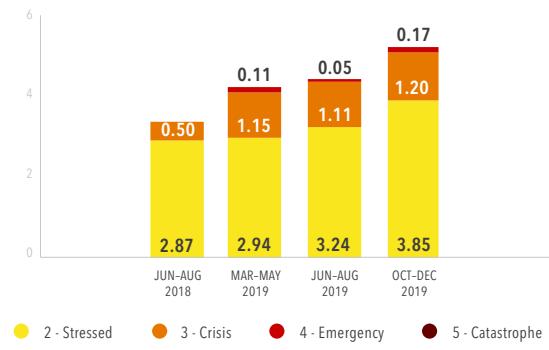
Acute food insecurity among refugees

Cameroon hosts 416 200 refugees and asylum seekers, mainly from the Central African Republic (72 percent) followed by Nigeria (27 percent). In 2019 the refugee population increased by 16 700, although this marks a slower rate of increase than previous years (UNHCR, December 2019).

Cameroon has more Central African refugees than any other country, with 252 000 in the East and Adamaoua,

Figure 47

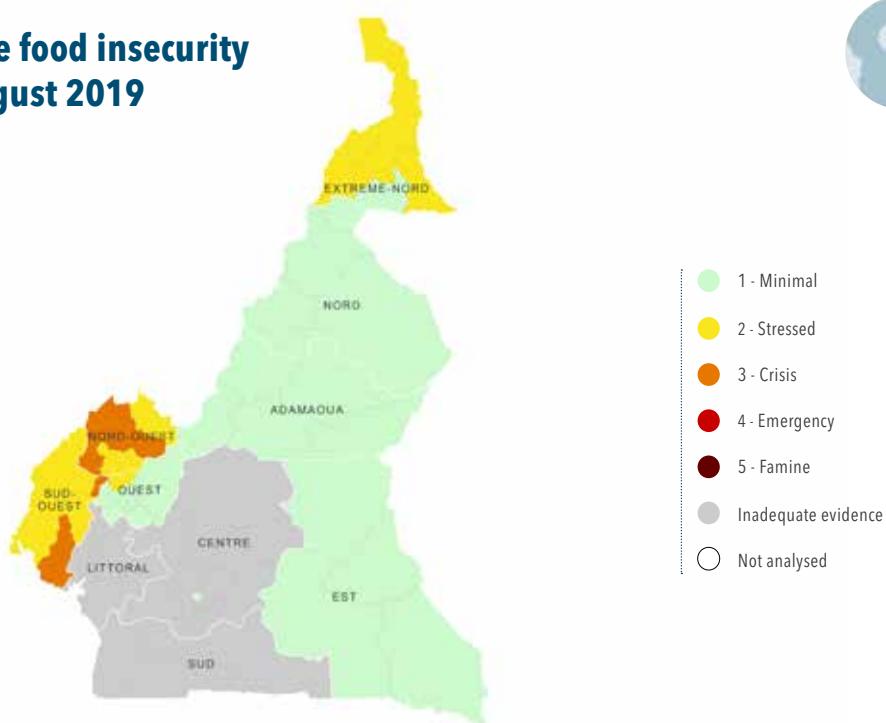
Number of people (millions) in CH Phase 2 or above in 2018–2019



Source: CILSS-Cadre Harmonisé

Map 11

Cameroon, CH Acute food insecurity situation, June-August 2019



Source: CILSS-Cadre Harmonisé, March 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

where poverty levels are high. Over 70 percent live in host communities. The influx has overstretched already-weak basic services, systems and resources (OCHA, January 2019).

Refugees' acute food insecurity deteriorated from 18 percent with poor food consumption in 2016 to 37 percent in 2019. Over 150 000 Central African Republic refugees were in need of food assistance, with poverty the main driver. Funding shortfalls caused a break in all food assistance, raising extreme concerns about food security in the near future (WFP, January 2019). Rural areas in Anglophone regions are often inaccessible to humanitarian agencies making it hard to assess IDPs' needs or provide them with aid (OCHA, 2019).

FACTORS DRIVING ACUTE FOOD INSECURITY

Conflict/insecurity

Cameroon is experiencing the impact of three distinct, complex humanitarian crises fuelled primarily by violence and insecurity (OCHA, January 2019). In the Far North the security situation stemming from the Lake Chad Basin worsened in 2019, with the number of Boko Haram incursions increasing from 20 per month between January and August to 28 in the following three months. Communes along the border with Nigeria faced abductions, livestock theft and destruction of property (OCHA, 2019). Incursions constrained

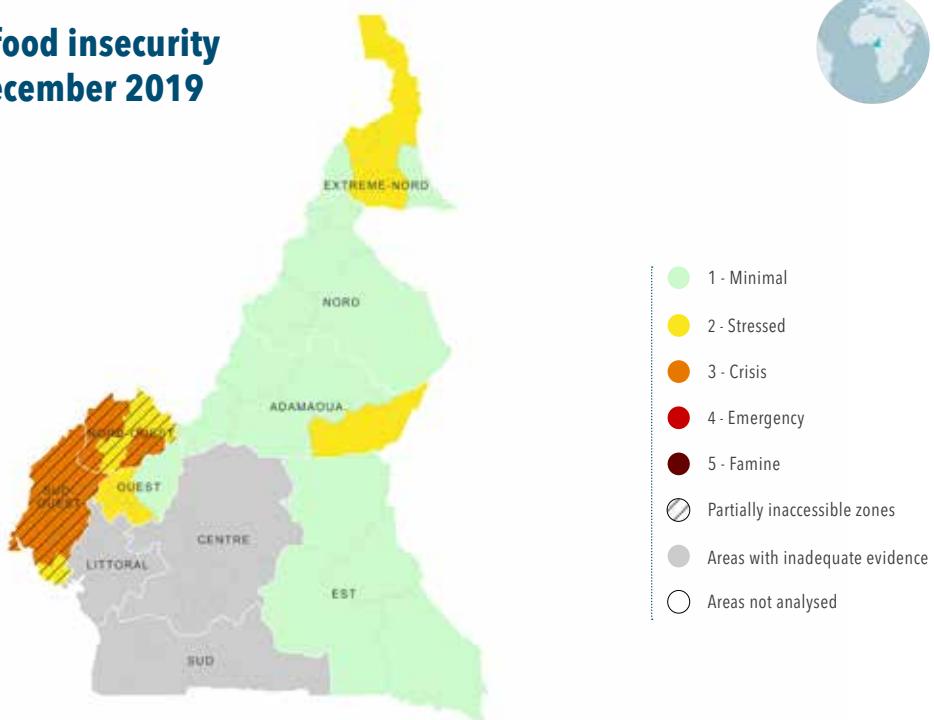
agricultural production, causing localized production shortfalls and prevented people from moving far, limiting income generation, especially in places where border trade is an important means of livelihood (FEWS NET, December 2019). By the end of the year the Far North hosted around 297 400 IDPs (IOM DTM, November 2019) and around 109 000 Nigerian refugees (UNHCR, December 2019).

In the Anglophone regions, what began as a political crisis turned into a significant, complex humanitarian emergency (OCHA, December 2019). Although the conflict diminished in intensity from September, the security situation remained precarious as clashes persisted between separatists and the national army. Roadblocks, general strikes, kidnappings, fires and destruction of property continued to impair livelihoods, prompting people to flee towards forests or urban centres. Limited access to fields and lack of maintenance of plantations diminished crop production by comparison with the pre-crisis period (FEWS NET, December 2019).

By December 2019, the Anglophone regions had 679 400 IDPs and 347 900 returnees. Stripped of their assets, livelihoods and ability to grow crops, these people could not ensure their food security without assistance from aid agencies or host households or the use of negative coping strategies (UNHCR, 2019). This displacement has strained the resources and livelihoods of the host population too.

Map 12

Cameroon, CH Acute food insecurity situation, October–December 2019



Source: CILSS-Cadre Harmonisé, November 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Weather extremes

In the Mayo Danay department in the Far North region, crops were destroyed by floods, birds and fall armyworm (CILSS-CH, 2019) leading to reduced income for farmers and reduced food availability locally (FEWS NET, November 2019). Localized floods affected over 40 000 people in Logone-et-Chary and Mayo-Danay in September–October, destroying crops and depleting stocks at the end of the lean season (OCHA, October 2019). The floods further limited humanitarian access to vulnerable populations, led to new displacements, and aggravated the already serious humanitarian situation.

Economic shocks

In the North-West and South-West regions the closure of land borders curbed trade and added additional upward pressure on prices in border markets (FEWS NET, 2019).

NUTRITION OVERVIEW

Although nationally the prevalence of acute malnutrition among children aged 6–59 months was classified as 'low' (4.3 percent), it was 'high' in the Far North (10.1 percent) and Adamaoua (10.0 percent) regions (DHS 2018).

Nationally, stunting in children under 5 was considered 'high' (28.9 percent), reaching 'very high' levels in North (41.3 percent), Far North (37.3 percent), East (37.3 percent) and

Adamaoua (34.6 percent) regions. Children in rural areas were far more likely to be chronically malnourished than in urban (36.2 percent vs. 19.8 percent). (DHS 2018).

At 40 percent, exclusive breastfeeding rates of children under 6 months were better than those of neighbouring Chad, the Niger and Nigeria, but only 1 in 10 children aged 6–23 months received the minimum acceptable diet. Child anaemia rates (57.4 percent) were a 'severe' public health issue (DHS 2018). Just 39 percent of rural Cameroonian households had access to at least basic drinking water services (UNICEF/WHO, 2017).

Households in many areas have limited access to health services (WHO, December 2019). In the North-East and North-West, attacks on medical staff and infrastructure were frequent and more than 80 percent of Government-run health facilities were closed (OCHA December 2019). By December, 1 071 cases of cholera and 1 170 suspected cases of measles had been reported (WHO, December 2019).

Nutrition status of refugees

The wasting prevalence was 'very high' in two out of eight Central African refugee camps in the eastern regions. In the Far North, wasting was 4.2 percent among Nigerian refugees in Minawao camp and 8.2 percent among out-of-camp refugees. Stunting was particularly concerning among children under 5 in camps (40.2 percent–54.9 percent) as were anaemia levels (50 percent in most camps, peaking at 68 percent in Mbile camp) (SENS 2015/2016).

Country profile



Central African Republic

ACUTE FOOD INSECURITY

2019

Total population of country **4.8M**Population analysed **4.4M** (91% of total population, including displaced populations)

1.8M IPC Phase 3 or above in May–August 2019

UN DESA
2017
WB 2018
CENTRAL AFRICAN REPUBLIC IPC TECHNICAL WORKING GROUP JUNE 2019

2018-19 Change

Although the number of food-insecure people in need of urgent assistance fell slightly, deterioration was notable in eastern and south-eastern areas.

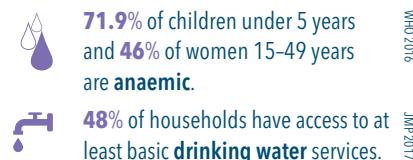


2020 Forecast

Without taking into account the effect of humanitarian assistance, acute food insecurity is projected to **increase** as attacks by armed groups intensify in some areas.



NUTRITION INDICATORS

HNO 2020
SMART 2018WHO 2016
JMP 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Conflict/insecurity Economic shocks Weather extremes

- ▶ Despite the February 2019 peace agreement, the level of violence and attacks only decreased temporarily.
- ▶ In eastern and south-eastern prefectures, in particular, insecurity and conflict limited agricultural activities.
- ▶ Displaced people were unable to work as insecurity prevented them from returning to their area of origin, putting pressure on resources of host communities.
- ▶ Violence and insecurity curtailed trade and contributed to high food prices and staple shortages.
- ▶ Below-average rainfall and floods affected agricultural production – although the 2019 harvest was above the five-year average.
- ▶ Malnutrition is linked with poor access to health, water and sanitation services and is higher among displaced populations and in remote rural areas.

DISPLACEMENT

687 200 Central Africans were internally displaced.

CNR NOV 2019

There were **7 500** refugees, mostly from the Democratic Republic of the Congo, South Sudan and Chad. There were **594 000** Central African refugees, mainly in Cameroon, the Democratic Republic of the Congo and Chad.

UNHCR NOV 2019

There were **130 300** spontaneous returnees, **13 700** facilitated repatriations and **61 400** IDP returnees.

UNHCR NOV 2019



CENTRAL AFRICAN REPUBLIC

Traumatized by having been imprisoned and threatened at knife and gunpoint by armed group members, including her own father, 19-year-old Fatime Ramadam now lives in an IDP shelter in Bria.

BACKGROUND

After more than six years of hostilities between rival armed groups, a ceasefire was brokered through the Khartoum peace agreement in February 2019 (ACAPS, September 2019). But some armed groups firmly opposed participating in dialogue and violence against civilians increased in several areas (OCHA 2019). The country ranks 188 out 189 in the 2019 Humanitarian Development Index (UNDP, 2019). The most recent estimates show that more than 71 percent of the population was living below the international poverty line (USD 1.90 per day) in 2018 (WB, 2019).

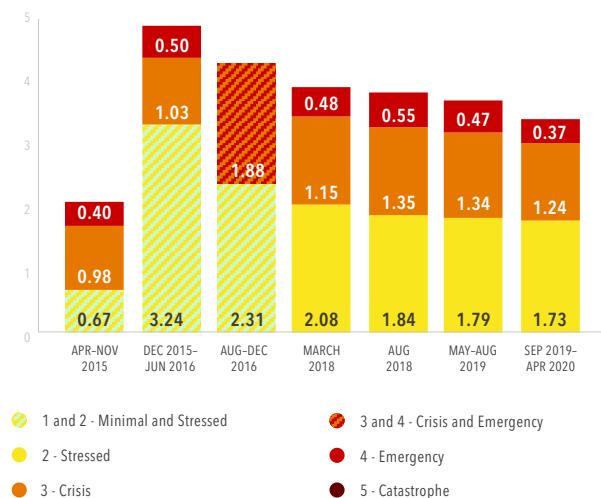
ACUTE FOOD INSECURITY OVERVIEW

Over 1.8 million people (representing 41 percent of the analysed population) were acutely food insecure and in need of urgent assistance (IPC Phase 3 or above) season from May–August. This included around 466 000 people in Emergency (IPC Phase 4). In addition 1.8 million people were classified in Stressed (IPC Phase 2).

The most-affected areas were the east and south-east prefectures of Mbomou, Haute Kotto and Haut Mbomou and five areas with a high concentration of IDPs – Bria, Kaga-Bandoro, Obo, Rafai and Zémio – which experienced

Figure 48

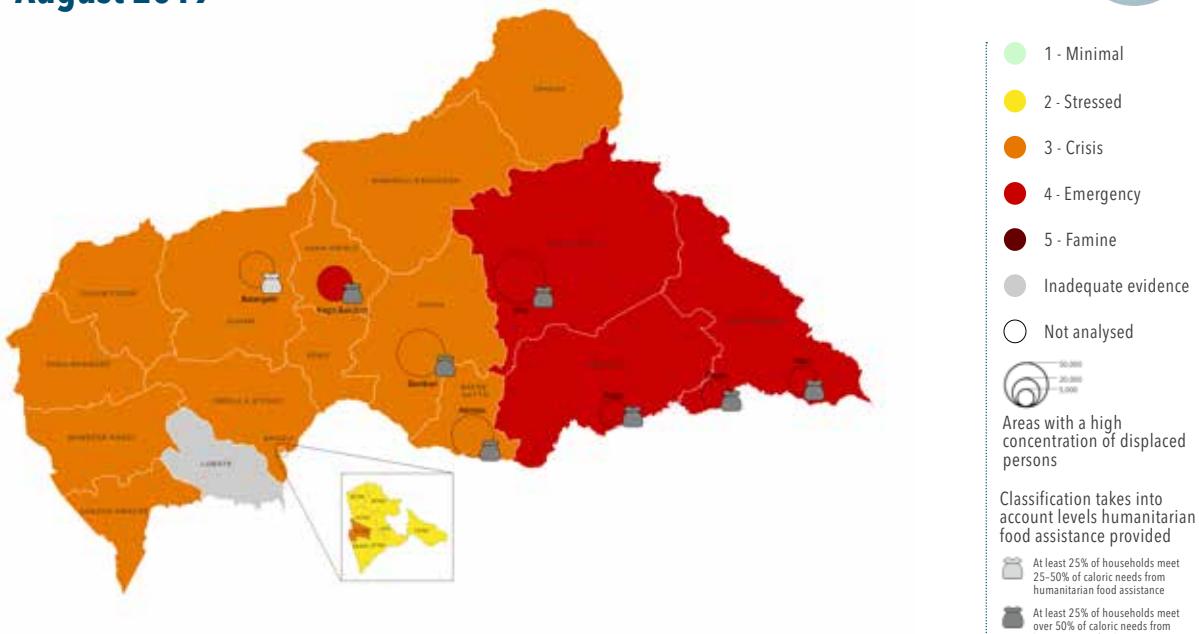
Number of people (millions) in IPC Phase 2 or above in 2015–2020



Source: Central African Republic IPC Technical Working Group

Map 13

Central African Republic, IPC Acute food insecurity situation, May-August 2019



Source: Central African Republic IPC Technical Working Group, June 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Emergency conditions (IPC Phase 4). Three areas with a high concentration of IDPs (Alindao, Bambari and Batangafo) and 13 prefectures were in Crisis (IPC Phase 3). Around 326 000 IDPs and host populations in high concentration areas were in Crisis or worse (IPC Phase 3 or above), representing 56 percent of the population analysed in these areas (IPC, June 2019).

While the overall number of people in Crisis or worse (IPC Phase 3 or above) was similar to that of 2018, the numbers were higher in Mbomou, Haut Mbomou and Haute Kotto prefectures (IPC, June 2019). In the last quarter of 2019, the food security situation was forecast to improve, but still critical for 1.6 million people in need of urgent assistance, including nearly 375 000 in Emergency (IPC Phase 4). Eight sub-prefectures in Haut Mbomou, Haute Kotto, Kémo, Ouaka and Ouham prefectures were classified in Emergency (IPC Phase 4) and another 47 sub-prefectures in Crisis (IPC Phase 3) (IPC, November 2019).

FACTORS DRIVING ACUTE FOOD INSECURITY

Conflict/insecurity

Despite the peace agreement, the level of violence and attacks only decreased temporarily throughout the country and the overall levels of violence remained worrying, with women and children among the most affected (MINUSCA, October

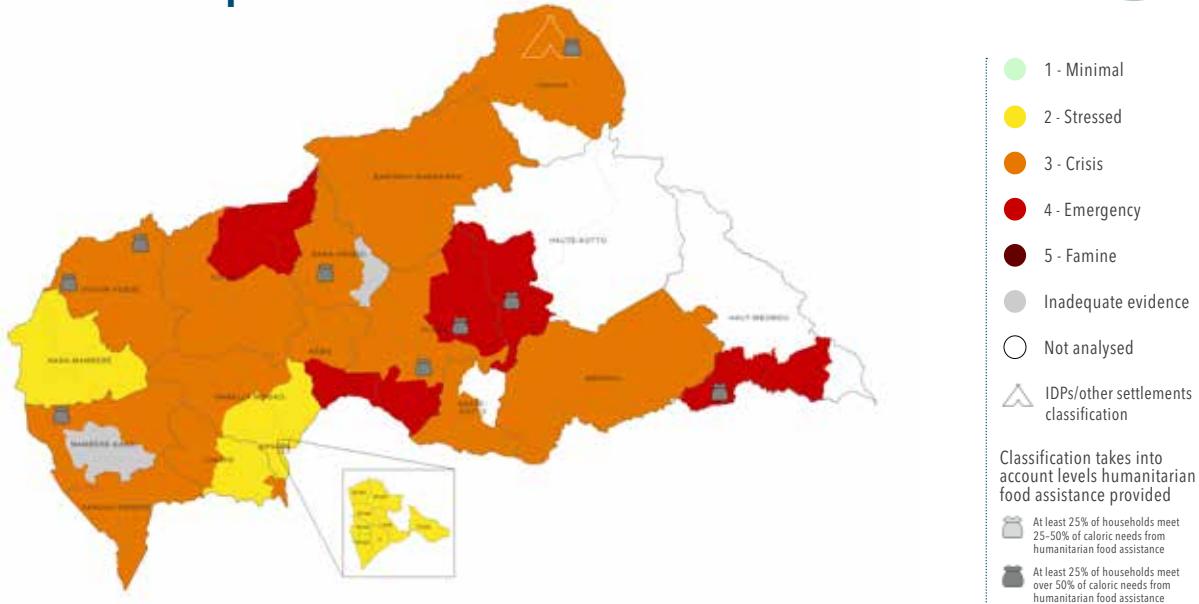
2019). After a decline in June and July, violence intensified in August and September, including in areas previously unaffected. Clashes in August led to the displacement of an estimated 13 000 civilians (UNSC, October 2019). Violence and armed groups hindered humanitarian access with more than 100 attacks reported between January and August (ACAPS, September 2019). As of 30 November, 687 000 people were still internally displaced, with almost two in three living among host communities (Shelter Cluster, November 2019). Basic services were dysfunctional or non-existent in many areas of the country, and people's access to livelihood opportunities severely hindered (FAO, October 2019).

Violence and insecurity constrained food production because of abandonment and lack of access to fields, particularly in the eastern and south-eastern areas (IPC, June 2019). However, thanks to voluntary returns of farmers and overall adequate and well-distributed rainfall, 2019 agricultural output was estimated to be above-average – but still below pre-crisis levels. Localized production shortfalls were reported in Basse Kotto, Mbomou and Ouaka due to the activities of armed groups (FAO-GIEWS, December 2019).

Raiding, theft and attacks by armed groups have devastated the livestock sector. Pastoralist mobility remained difficult in north-western areas, exacerbating tensions with farmer communities and affecting livestock herding and production (FAO, October 2019). Lack of vaccinations increased animal disease outbreaks (FAO, March 2019).

Map 14

Central African Republic, IPC Acute food insecurity situation, September 2019-April 2020



Source: Central African Republic IPC Technical Working Group, November 2019.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Economic shocks

Insecurity severely affected trade activities and contributed to high food prices and macroeconomic difficulties. Two in three households depended on markets for food during the lean season from May–August 2019 (IPC, June 2019). In May, cassava prices increased by 54 percent, while maize and rice increased by 19–23 percent compared to the same period in 2018 (WFP, May 2019).

A bowl of cassava was six times more expensive in eastern markets than in western in September. The same month, the closure of the border between the Sudan and Vakaga and Upper Kotto prefectures in response to the hostilities had a further negative impact on trade (FEWS NET, September 2019). In November, insecurity-related supply and trade disruptions kept the prices of cassava, maize and rice 50 percent higher year-on-year (FAO-GIEWS, December 2019).

Returnees, IDPs and refugees faced lack of assets and inputs to restart agriculture and cattle-rearing (IPC, November 2019).

Weather extremes

Delayed rainfall affected the first agricultural season and contributed to localized production shortfalls in western prefectures, the breadbasket of the country (IPC, November 2019). Flooding of the Oubangui and Ouaka rivers affected at least 57 000 people in October (FEWS NET, November 2019), and damaged crops in the prefectures of Bangui,

Ombella-Ponko, Ouham, Ouaka and Basse-Kotto (FAO-GIEWS, December 2019).

NUTRITION OVERVIEW

The latest nutrition survey in 2018 found that 7 percent of children aged 6–59 months were acutely malnourished, 2.1 percent severely so. Vakaga (11.1 percent) and Basse Kotto (10.1 percent) had the highest rates of wasting, indicating a ‘high’ prevalence (MoH, December 2018).

According to the most recent estimates, 178 000 children aged 6–59 months were acutely malnourished, 49 000 of them severely so. Children in IDP sites and remote rural locations with limited access to basic services were more likely to be affected by wasting. The supply chain for nutritional products is challenged by persistent insecurity in some areas in the centre and south-east (OCHA, October 2019).

In 2018, stunting among children under 5 years of age was considered ‘very high’ with a 37.7 percent prevalence (MoH, December 2018). An estimated 367 000 children were chronically malnourished and in need of malnutrition treatment and prevention (OCHA, October 2019).

Child-feeding practices in 2018 were far from optimal with just 17.4 percent of children aged 6–23 months consuming the minimum acceptable diet required for their growth and development (MoH, December 2018).

Country profile

Chad



ACUTE FOOD INSECURITY

2019

Total population of country 16M



Population analysed 14.3M (91% of total population, including displaced populations)

0.6M CH Phase 3 or above in June–August 2019

619 000 CH Phase 3 Crisis **22 000** CH Phase 4 Emergency

2.7M CH Phase 2 Stressed

2018-19 Change



Thanks to a good harvest and favourable pasture conditions and the provision of humanitarian assistance, food security **improved** compared to 2018.

2020 Forecast



The situation is expected to **worsen** during the next lean season, especially in the western and north-western areas, such as Lac and Tibesti.

NUTRITION INDICATORS

Host population

12.9% of children under 5 years are **acutely malnourished**, of whom **2.9%** are affected by SAM.
32% of children under 5 years are **stunted**.

SMART 2019

7.3% of children 6–23 months meet the **minimum dietary diversity** requirement.
17.7% of children under 6 months are **exclusively breastfed**.

SMART 2018

63.6% of children under 5 years and **39.8%** of women 15–49 years are **anaemic**.

SMART 2017/19 JMRP 2017

39% of households have access to at least basic **drinking water** services.

Refugee population

23 600 children under 5 years are **acutely malnourished**, of whom **3 300** are affected by SAM, in 19 camps.
29.9–51.0% of children under 5 years in 19 camps are **stunted**.

SENSS 2017/19

14.9–30.5% of households do not consume micronutrient-rich food in 3 camps in Eastern Chad.
1.7–83.6% of children under 6 months in 19 camps are **exclusively breastfed**.

SENSS 2017

26.1–60.0% of children under 5 years and **11.7–53.5%** of women 15–49 years in 19 camps are **anaemic**.

SENSS 2017/19

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Conflict/insecurity



Conflict/insecurity

Weather extremes



Weather extremes

Economic shocks



Economic shocks

- ▶ The Boko Haram conflict, related violence and insecurity have created large-scale displacement and damaged livelihoods in the Lake Chad area.
- ▶ Pests and floods damaged/destroyed crops in the Sahelian belt.
- ▶ Internal displacement and the ongoing arrival of refugees from conflict-affected neighbouring countries put additional stress on vulnerable host populations.

- ▶ In Tibesti, markets were disrupted by increasing violence and the temporary border closure with Libya.
- ▶ Recurrent drought over the last years in the Sahelian belt has depleted livelihoods and eroded people's resilience to shocks.
- ▶ Extremely low rates of exclusive breastfeeding and low dietary diversity are among the drivers of a deteriorating malnutrition crisis.

DISPLACEMENT



The Chadian IDP population increased by 3% to **170 300** compared to 2018, but has almost doubled since 2017.

IOM 2019



There were around **438 000** refugees and **3 700** asylum seekers, mostly Sudanese (76%) and Central African (22%).

UNHCR 2019



There were **69 600** Chadian returnees from Central African Republic and **47 400** Chadian IDP returnees in the Lac region.

UNHCR 2019



Newly arrived Sudanese refugee Achta Amine cooks gruel for her sister and nine-month-old daughter in Adre, Chad, after fleeing violence in West Darfur. Gruel is the only food they have eaten since their arrival 12 days previously.

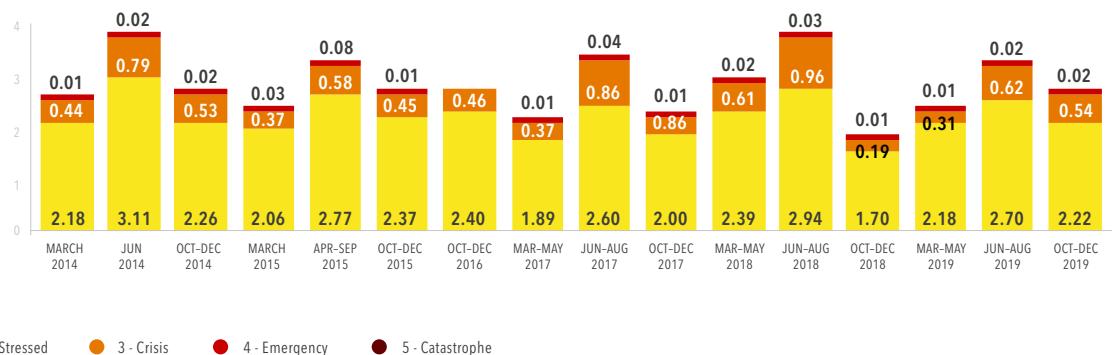
BACKGROUND

Chad is facing a series of humanitarian crises against a backdrop of chronic poverty and low economic and social development. The humanitarian situation deteriorated significantly in 2019. In August, the Government declared a state of emergency in the east, following a resurgence of inter-community conflicts. Regional insecurity has prompted hundreds of thousands of people from the Sudan, the Central

African Republic and Nigeria to flee and seek refuge in Chad. Outbreaks of disease overwhelm a weak health system, with prevention measures extremely limited. Active since 2009 in Nigeria, Boko Haram launched its attacks in Chad from March 2015 (ISS, May 2019). While the country has made some progress in reducing the poverty rate (from 55 percent in 2003 to 47 percent in 2011), the number of poor people was projected to increase from 4.7 million to 6.3 million between 2011 and 2019 (WB, October 2019).

Figure 49

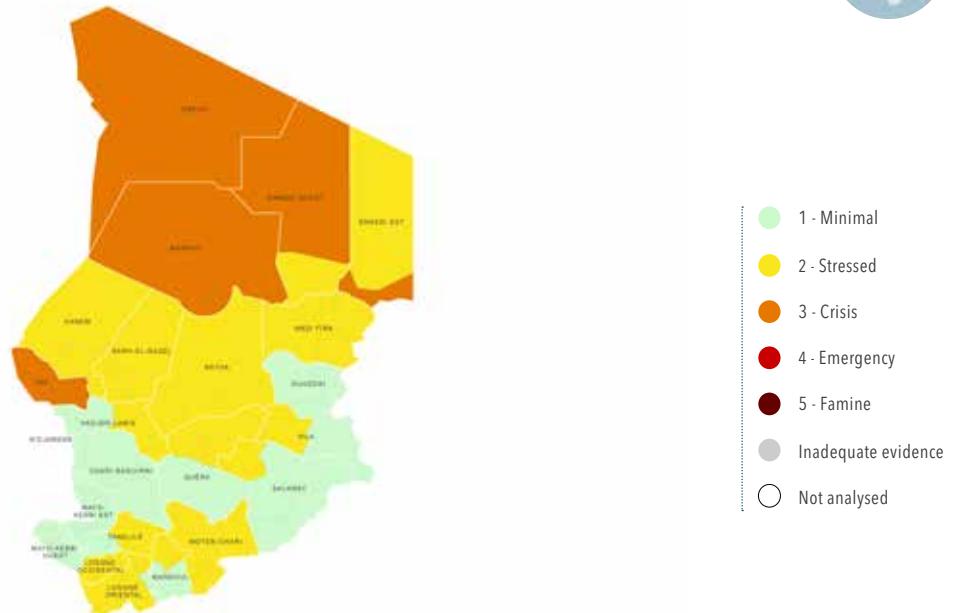
Number of people (millions) in CH Phase 2 or above in 2014-2019



Source: CILSS-Cadre Harmonisé

Map 15

Chad, CH Acute food insecurity situation, June–August 2019



Source: CILSS-Cadre Harmonisé, March 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

ACUTE FOOD INSECURITY OVERVIEW

The number of people in Crisis or worse (CH Phase 3 or above) peaked at 641 000 (4 percent of the population analysed) during the June–August 2019 lean season. Of these, 22 000 were classified in Emergency (CH Phase 4) and 619 000 in Crisis (CH Phase 3), while 2.7 million (19 percent of the population analysed) were in Stressed (CH Phase 2). Out of 69 areas analysed, 11 were classified in Crisis (CH Phase 3) in the regions of Lac (four areas), Tibesti (two areas), Ennedi Est (two areas), and Borkou (two areas). Another 34 areas were classified in Stressed (CH Phase 2) (CILSS-CH, March 2019).

During the October–December 2019 period, the number of people in Crisis or worse (CH Phase 3 or above) decreased to 564 000 with the seasonal availability of the harvest from September. However, this number was 200 percent higher than the same period in 2018 (189 000) and 77 percent higher than in 2017 (318 000). The 544 000 in Crisis (CH Phase 3) and 20 000 in Emergency (CH Phase 4) during this time were mainly in the Sahelian belt (CILSS-CH, November 2019).

Acute food insecurity among refugees

According to UNHCR, as of 31 October 2019, the country hosted about 438 000 refugees from neighbouring countries, mainly from the Sudan, the Central African Republic and Nigeria (UNHCR, accessed 16 January 2020). This includes

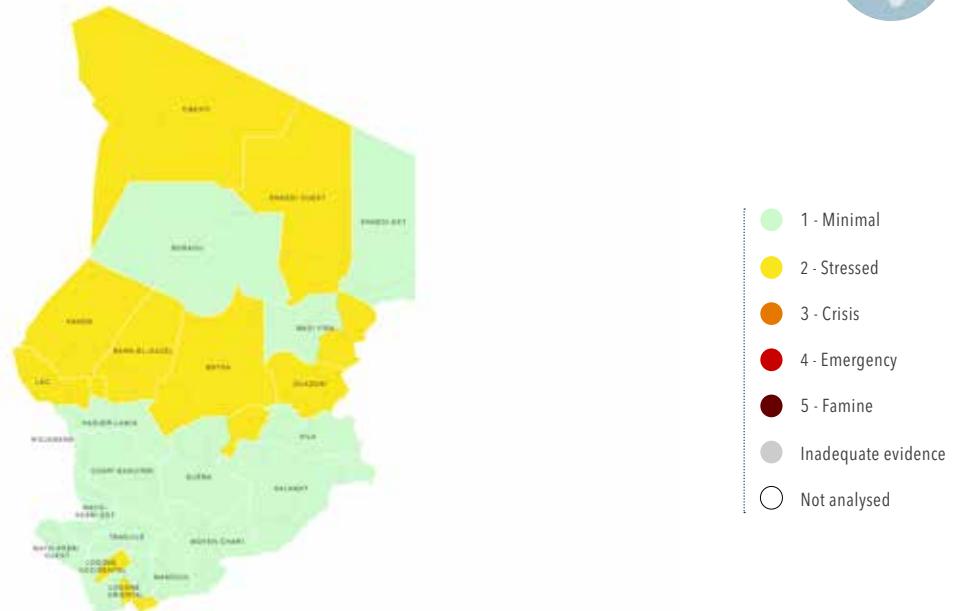
around 333 000 Sudanese refugees, who arrived since 2003, living in 12 camps along the border with the Sudan in eastern Chad; around 90 000 Central African refugees, who arrived since 2003, living in six camps in the south and around 12 000 Nigerian refugees from the Boko Haram insurgency living in one camp and villages in the Lake Chad region (UNHRC, October 2019).

The majority of displaced people, refugees and host communities are highly dependent on humanitarian assistance to satisfy their basic needs. However, as one of the poorest countries in the world, Chad's capacity to provide assistance is limited (ECHO, June 2019).

The acute food insecurity status of refugees remained critical and deteriorating, most notably among the Sudanese refugees from Darfur in the regions of Wadi Fira, Ouaddai, Sila and Salamat, near Chad's border with the Sudan (UNHCR, November 2019; OCHA April 2019). In Centre East, some 63.5 percent of Sudanese refugees were moderately or severely food insecure (UNHCR, February 2019 and UNHCR, December 2017). Faced with limited livelihood opportunities, refugees in the North and Centre East resorted to use of concerning negative coping strategies (in addition to food-based strategies) including onward migration to Libya and transactional sex. In-kind and cash assistance to refugees in Chad has decreased over the past four years, often falling to only 50 percent of a ration, and was well below basic energy requirements. Only a percentage of the population

Map 16

Chad, CH Acute food insecurity situation, October-December 2019



Source: CILSS-Cadre Harmonisé, November 2019.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

was targeted with food assistance. Livelihood support was extremely limited and refugee households remained reliant on food assistance to meet their needs (WFP, June 2019 and UNHCR, December 2017).

FACTORS DRIVING ACUTE FOOD INSECURITY

Conflict/insecurity

Deteriorating insecurity linked to Boko Haram and military operations in the Lac region as well as increasing violence linked to militant and criminal groups in the Tibesti region (ACAPS, 2019) impeded trade flows and the movement of people and animals, degrading food availability, livelihoods and food access (FEWS NET, August 2019). In addition, insecurity forced pastoralists to stay close to cities, increasing tensions between herders and farmers.

Lac, Ouaddai, Sila and Tibesti regions were all under a state of emergency due to ongoing violence, preventing affected populations from accessing their livelihoods and humanitarian assistance (ACAPS, October 2019).

The protracted violence and insecurity in the Lac and Tibesti regions increased the number of internally displaced people from 165 300 at the end of 2018 to 170 300 by the end of October (UNHCR, 2019).

Weather extremes

While abundant rainfall in 2018 pushed the country's cereal production to 14 percent above the five-year average, improved pasture conditions (FAO-GIEWS, June 2019) and kept food prices below their five-year average, longer-than-usual dry spells and pests decreased crop production in the Sahelian belt (CILSS-CH, November 2019). In recent years recurrent drought has stressed livelihoods and made households less able to cope with and recover from any type of shock (FAO, April 2019).

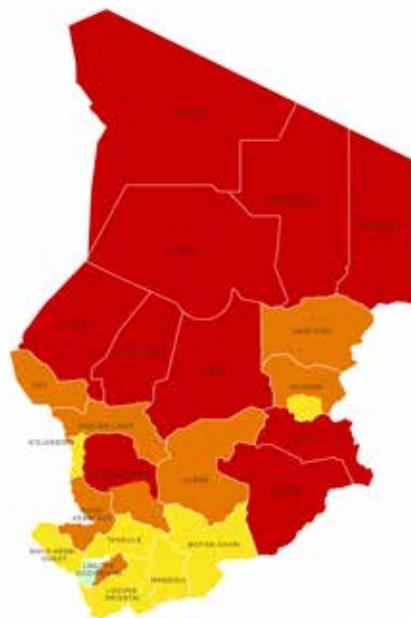
Rains caused widespread flooding in many provinces, affecting 171 200 people by the end of October. Around half of these people were in the southern province of Mayo-Kebbi East, where torrential rains and floods caused extensive destruction of houses, loss of animals, food stocks and other assets (OCHA, November 2019).

Economic shocks

In Tibesti, households' limited income, mainly from petty trade, the black market, livestock sales, remittances from migrant workers and gold panning, has fallen since the conflict started, while the cost of food in markets has remained high. A significant proportion of food in markets is imported from Libya or other parts of Chad, but trade routes have been disrupted (FEWS NET, August 2019), and the border temporarily closed (CILSS-CH, March 2019).

Map 17

Chad, IPC Acute malnutrition situation, June-September 2019



- 1 - Acceptable
- 2 - Alert
- 3 - Serious
- 4 - Critical
- 5 - Extremely critical
- Phase classification based on MUAC
- Areas with inadequate evidence
- Areas not analysed

Source: Chad IPC Technical Working Group, December 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

In Lac, IDP households were relying primarily on humanitarian assistance, which barely met their food needs. Income from salaried agricultural work also declined. Closed borders with Nigeria and the Niger limited access to food markets and trade (OCHA, June 2019 and FAO-GIEWS, June 2019).

13.3 percent of children aged 6–23 months met the minimum acceptable diet for their growth and development. Just 7.3 percent of children of this age consumed food from five or more food groups, satisfying the minimum dietary diversity. Minimum meal frequency was 37.8 percent (SMART, 2018).

Anaemia affected 63.6 percent of children aged 6–59 months, indicating a 'severe' public health concern (SMART, 2019). It affected 39.8 percent of reproductive-age women, indicating a 'moderate' public health significance (SMART, 2017).

Nationally, only two out of five households (39 percent) had access to basic drinking water sources (UNICEF and WHO 2017) and only 15.9 percent had access to improved sanitation facilities (SMART, 2019). By the end of 2019, a measles outbreak was ongoing, with 26 623 suspected cases reported (WHO, December 2019).

NUTRITION OVERVIEW

Nationally a 'high' percentage of children suffered from GAM (12.9 percent). Of them, 2.9 percent were affected by SAM (SMART 2019). As shown in map 17, 6 provinces and 27 departments were classified in a Serious (IPC Phase 3) to Critical (IPC Phase 4) nutritional situation. Household food insecurity appeared to be a minor contributory factor among many others. Some 1.8 million children aged 6–59 months will require treatment for acute malnutrition in 2020 (IPC AMN, December 2019).

In 9 out of 23 provinces GAM prevalence was above the 'very high' threshold with the worst levels in Ennedi Est, Borkou, Barh El-Ghazel, Ennedi Ouest, Salamat and Kanem. In 12 provinces SAM prevalence was over 2 percent. The national stunting prevalence was 'very high' at 32 percent of children aged 6–59 months. Regionally, stunting levels were over 40 percent in Kanem, Mayo Kebbi Ouest and Logone Occidental (SMART, 2019).

Child care and feeding practices were extremely poor. The exclusive breastfeeding rate was 17.7 percent. Only

Nutrition status of refugees in camps

Across the 19 camps, 23 600 children were acutely malnourished, 3 300 severely so. The wasting prevalence was 'very high' among refugees in 4 out of 19 camps, and 'high' in 4 others. The severe wasting prevalence was over 2 percent in five camps. All camps with high wasting were in north-eastern Chad. Stunting levels were 'very high' (over 30 percent) in 18 camps. Barely any children had adequate dietary diversity (5–6.9 percent). In eight camps child anaemia levels were 'very high'. The percentage of breastfed children (52.2 percent) has been falling in recent years (SENS 2017 and 2019).

Country profile



Democratic Republic of the Congo

ACUTE FOOD INSECURITY

2019

Total population of country **86.8M**Population analysed **59.9M** (69% of total population, including displaced populations)

15.6M IPC Phase 3 or above in July–December 2019

11.7M IPC Phase 3 Crisis **3.9M** IPC Phase 4 Emergency

27M IPC Phase 2 Stressed

2018-19 Change

Acute food insecurity **worsened** in eastern areas where violence intensified and forced huge numbers to abandon their homes, exacerbated by the Ebola outbreak in North Kivu.

2020 Forecast

Acute food insecurity is expected to remain extremely concerning, particularly in eastern regions where conflict intensified in 2019 and the early 2020 harvest was expected to be below average, prompting an early start to the lean season.

NUTRITION INDICATORS

Host population

3.4M children under 5 years are **acutely malnourished**, of whom **1.1M** are affected by SAM.
41.8% of children under 5 years are **stunted**.

HNO 2020
MICS 2017-18

15% of children 6–23 months meet the **minimum dietary diversity** requirement.
53.5% of children under 6 months are **exclusively breastfed**.

MICS 2017-18
MICS 2017-18

63.2% of children under 5 years and **41%** of women 15–49 years are **anaemic**.

WHO 2016

33.6% of households have access to at least basic **drinking water** services.

MICS 2017-18

Refugee population

4.6% of Burundian, **4–6.5%** of Sudanese and **4.1–12.4%** of Central African children under 5 years are **acutely malnourished**, of whom **2.6%** of Burundian and **0–3.2%** of Central African children are affected by SAM.

SIRS 2019

51.9% of Burundian, **30–35%** of South Sudanese and **32.6–61.4%** of Central African children under 5 years are **stunted**.
19.6–72.2% of children under 6 months in 4 camps are **exclusively breastfed**.

SIRS 2019
SIRS 2019

32.6–61.4% of Burundian, **66%** of South Sudanese and **45–63%** of Central African children under 5 years are **anaemic**.

SIRS 2019

36.5–100% have access to improved **drinking water**.

SIRS 2019

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Conflict/insecurity Weather extremes Economic shocks

- Violent inter-ethnic conflict between armed groups drove mass displacement and abandonment of livelihoods.
- Conflict/insecurity severely damaged food production, trade, transport systems and market functioning.
- It hampered the delivery of basic services and drove up food prices.

- Plant diseases and pests lowered agricultural productivity.
- The Ebola epidemic in North Kivu aggravated the situation in a conflict zone.
- Malnutrition is linked with acute household food insecurity, poor childcare and feeding practices, disease, poor access to health services, water and sanitation, and conflict-related shocks.

DISPLACEMENT

5M Congolese were **internally displaced**.

OCH/DEC

There were **524 100 refugees** and **3 200 asylum-seekers**, largely from Rwanda, Central African Republic, South Sudan and Burundi.

UNHCR 2019

2.1M Congolese **returned** since August 2019, mainly from Angola.

OCH/DEC 2019



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DEMOCRATIC REPUBLIC OF THE CONGO

Nzigire Cideka, a nurse at a community health centre near Goma, North Kivu, faces stigma for having treated several people with Ebola virus disease, and other patients no longer visit her for treatment. She has lost her main source of income as a result and struggles to provide for her 10 children.

BACKGROUND

Although the December 2018 elections marked the country's first peaceful transfer of power and armed conflict diminished in some areas in 2019, it intensified in others. Decades of conflict, displacement and lack of civilian protection coupled with very high levels of poverty, weak political and economic governance and persistent structural deficiencies aggravate humanitarian needs (OCHA, December 2019). The country hosts Africa's largest IDP population at over 5 million (UNHCR, January 2020).

ACUTE FOOD INSECURITY OVERVIEW

In the latter half of 2019 an estimated 15.6 million people were in Crisis or worse (IPC Phase 3 or above), representing 26 percent of the analysed rural population.¹ Of these, 3.9 million were in Emergency (IPC Phase 4). The situation was worst in 15 areas classified in Emergency (IPC Phase 4) in Ituri, South Kivu, the Kasais and Tanganyika provinces. Another 52 territories were classified in Crisis (IPC Phase 3). Some 27 million people were in Stressed (IPC Phase 2).

The most vulnerable included forcibly displaced populations (IDPs, returnees and refugees) as well as people living in conflict-active zones or in areas hosting large numbers of displaced people.

The July–December 2019 number of people in Crisis or worse (IPC Phase 3 or above) is not directly comparable with that of 2018 since the analyses did not cover exactly the same geographical areas. However, when considering the areas analysed in both years, there was a 1.3 million increase. The major deterioration in acute food insecurity was in South Kivu province where an additional 711 000 people were in Crisis or worse (IPC Phase 3 or above), a rise from 13 percent to 26 percent of the population. While the number of people in Crisis or worse (IPC Phase 3 or above) decreased in Kasai and Tanganyika provinces, the proportion remained extremely high at around 40 percent.

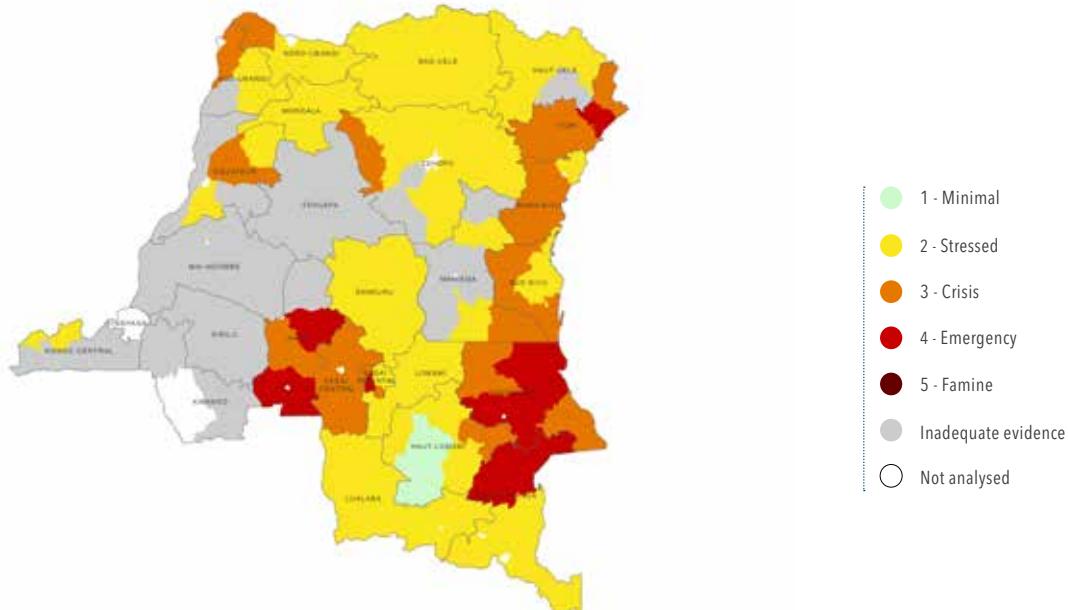
Acute food insecurity among refugees

The country hosts a refugee population of 524 100, largely from Rwanda, the Central African Republic, South Sudan and Burundi: 26 percent live in 11 camps or sites and 74 percent in host communities (UNHCR, January 2020). Although all Burundian, South Sudanese and Central African refugees receive food assistance, a large percentage face poor or borderline food consumption and employ coping strategies to meet basic needs. While refugee households with poor food

¹ FEWS NET's analysis of available evidence suggests the population requiring emergency food assistance in 2019 was lower than the IPC estimate. For more information, see <https://fews.net/southern-africa/drc>

Map 18

Democratic Republic of the Congo, IPC Acute food insecurity situation, August 2018-June 2019



Source: Democratic Republic of the Congo IPC Technical Working Group, June 2018.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

consumption decreased from 37 percent to 31 percent from 2018 to 2019 for Central Africans in Bosobolo, in Libenge the share with poor food consumption increased from 1.6 percent to 7 percent (WFP 2019).

FACTORS DRIVING ACUTE FOOD INSECURITY

Conflict/insecurity

ACLED data shows that political violence – around half of it against civilians – rose at even higher rates in 2019 than in 2018, especially in the eastern provinces of North Kivu, South Kivu and Ituri (ACLED, December 2019). The conflict has taken on many forms in these areas including inter-ethnic and intercommunal conflicts, and clashes between multiple armed groups that have attacked and obliterated villages, destroying fields and harvests and stealing herds, thus reducing household food sources and incomes (FEWS NET, December 2019).

Between October 2018 and September 2019, 1.1 million were forced to abandon their homes and livelihoods often during critical periods for transhumance and crop preparation (OCHA, 2020). Around 34 percent of the newly displaced IDPs were from North Kivu, 31 percent from South Kivu and 22 percent from Ituri (UNHCR, 2019).

In the Kasais and Tanganyika, the scale of violence decreased, but the provinces still hosted a large number of IDPs. The Kasais also hosted a large number of returnees from Angola.

The number of cases of Ebola, which broke out in North Kivu and Ituri in August 2018, increased dramatically from March 2019 as the response was severely hindered by armed groups. The outbreak disrupted agricultural activities and limited access to livelihoods (FEWS NET, April 2019).

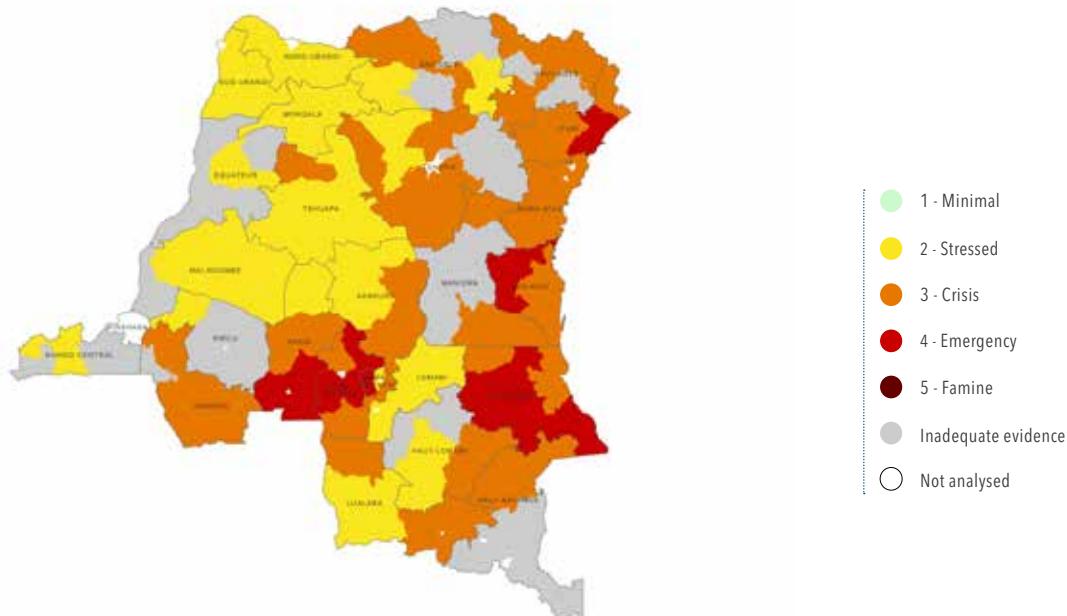
Weather extremes and crop pests

Adequate, well-distributed precipitation during most of the year benefitted crops, except in the Bas and Haut-Uélé and western provinces. However, localized heavy rains, particularly in the agro-pastoral mountains of South Kivu, resulted in flooding and crop damage. Significant crop losses were also reported due to fall armyworm infestations, particularly in maize-growing regions (FAO-GIEWS, September 2019). Other pests reduced agricultural production in the Grand Katanga, Grand Kasai, the Ex-Oriental and Western provinces. In Maniema, mealybug ravaged more than 3 500 hectares of cereals. Around 4 800 households were affected by the pest as well as by various small ruminant epizootic diseases (FEWS NET, July 2019). In December floods and landslides in the north-eastern, central-eastern and western provinces damaged the crop cycle (FEWS NET, December 2019).

The 2019 main season food crop production was forecast below the previous five years, limiting market supplies and

Map 19

Democratic Republic of the Congo, IPC Acute food insecurity situation, July–December 2019



Source: Democratic Republic of the Congo IPC Technical Working Group, August 2019.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

prompting the lean season to start a month earlier than usual in northern, central-eastern and south-eastern provinces (FAO and FAO-GIEWS, September 2019).

Economic shocks

Maize flour prices remained high in many markets because of low production levels over the last five growing seasons and limited availability in local markets, particularly in Kasai. This was exacerbated in south-eastern areas by the dire shortage of maize in the main supplying countries, including Zambia and Zimbabwe, and by weak local currency (FEWS NET December 2019).

NUTRITION OVERVIEW

In 2019, an estimated 3.4 million children were wasted, 1.1 million of them severely so, requiring urgent treatment for acute malnutrition (HNO, December 2019). The GAM prevalence was 'medium' at 6.5 percent, reaching 'high' levels in Nord Ubangi, Ituri, Kwilu, Tshuapa and Haut Uélé. The national prevalence of stunting was 'very high' at 41.8 percent and exceeded 50 percent in Kwango, Kasai Central and Sankuru (MICS, 2017–18).

Child feeding practices were extremely poor. Overall just 8 percent of 6–23 month-olds consumed the minimum acceptable diet required for their growth and development (MICS, 2017–18).

Anaemia levels were of 'severe' public health significance for both children under 5 and women of reproductive age (WHO, 2016). More than two thirds of households did not have access to an improved source of water within a 30-minute round trip from home (UNICEF and WHO, 2017).

Displaced people were often denied access to health care, safe drinking water and adequate sanitation. Immunization schedules for children were interrupted by violence, while attacks on health providers and centres prevented people from receiving treatment (WHO, April 2019).

The country is grappling with the outbreak of many diseases. Besides the world's second biggest ever Ebola outbreak in North Kivu, South Kivu and Ituri provinces, it had one of the world's most severe measles epidemics with a total of 311 471 suspected cases in 2019 (WHO, January 2020). Over 30 300 cases of cholera were reported in 23 out of 26 provinces by the end of 2019 (WHO, January 2020).

Nutrition status of refugees

Nutrition surveys conducted in three refugee populations in 2019 found under-5 acute malnutrition rates of 5 percent in Burundian camps, 4–6.5 percent in South Sudanese and 5–12 percent in Central African. Chronic malnutrition and anaemia are serious public health problems in all camps, ranging from 45–66 percent. Breastfeeding practices are concerning especially in South Sudanese camps (SENS, 2019).

Country profile



El Salvador

ACUTE FOOD INSECURITY

2019

Total population of country **6.5M**Population analysed **1.4M** (22% of total population)

302 000 IPC Phase 3 or above in April-July 2019

239 000 IPC Phase 3 Crisis **63 000** IPC Phase 4 Emergency

473 000 IPC Phase 2 Stressed

2018-19 Change

The number of food-insecure increased largely due to the effects of dry spells and excessive rains, crop losses and low grain reserves from the previous year.



2020 Forecast

Persisting lack of grain reserves following the 2019 drought and depressed household incomes, particularly for coffee growers, will continue to drive acute food insecurity.

WHO 2016

JMP 2017

NUTRITION INDICATORS

2.1% of children under 5 years are acutely malnourished, of whom **0.4%** are affected by SAM.
13.6% of children under 5 years are stunted.

MICS 2014

78.3% of children 6-23 months meet the minimum dietary diversity requirement.
46.7% of children under 6 months are exclusively breastfed.

MICS 2014

30.6% of children under 5 years and **22.7%** of women 15-49 years are anaemic.
97% of households have access to at least basic drinking water services.

WHO 2016

UNHCR 2019

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Weather extremes Economic shocks Insecurity

- ▶ Several short dry periods affected the eastern part of the country causing crop losses and water scarcity.
- ▶ Excessive rains affected production in northern and western areas.
- ▶ Deterioration of livelihoods and assets and the effects of the 2018 drought left poor households severely affected.

- ▶ Lower international coffee prices in 2019 affected production, while erratic and excessive rains lowered the harvest
- ▶ High levels of insecurity and lack of economic opportunities intensified food insecurity and out-migration.

DISPLACEMENT

71 500 Salvadorans were internally displaced.

There were **46 800** Salvadoran asylum-seekers worldwide.



EL SALVADOR

For the last five years smallholder farmer Cirilo Mendoza's crops have been severely damaged by recurrent drought and he has been unable to find a job to support his wife and young child. He borrowed money to migrate to the US but was detained and deported home.

BACKGROUND

El Salvador is densely populated and suffers from persistent low levels of economic growth. However, it has experienced a moderate reduction in poverty (the poverty rate declined from 39 percent in 2007 to 29 percent in 2017) and improvements in public services in recent years (WB, October 2019). Its challenges include insufficient food production and high dependence on imports (WFP, November 2019). It is frequently exposed to natural hazards including earthquakes and volcanic eruptions. Its territory is entirely within the Dry Corridor, which is highly vulnerable to climate change impacts, including higher frequency of floods, droughts and tropical storms (WB, October 2019). Recurrent droughts hamper progress in poverty and food insecurity alleviation. Around 33 percent of households live in multidimensional poverty and on average allocate 65 percent of expenditures to food (WFP, August 2019).

ACUTE FOOD INSECURITY OVERVIEW

Over 302 000 people, 22 percent of the analysed population, were estimated to be in Crisis or worse conditions (IPC Phase 3 or above) from April to July 2019. This includes 63 000 in Emergency (IPC Phase 4) and 239 000 in Crisis (IPC Phase 3) (IPC, November 2018).

The number of acutely food-insecure people in Crisis or worse (IPC Phase 3 or above) increased by over 88 000 between 2018 and 2019 in the areas analysed, but the increase could be even higher as several areas in the northern and western parts of the country, which suffered a reduction in agricultural production, were not assessed in 2019 (IPC, 2019).

The situation was projected to be most critical in Usulután, which was estimated to have the highest proportion (35 percent) and number of acutely food-insecure people (134 000) facing Crisis or worse (IPC Phase 3 or above) conditions, even before taking into account the effects of shocks in 2019 (IPC, November 2018).

Subsistence farmers and minimum wage labourers were the most vulnerable to food insecurity, especially households headed by women, as in recent years high levels of out-migration have left many women single-handedly heading farms and families (WFP et al., 2017).

Map 20

El Salvador, IPC Acute food insecurity situation, April-July 2019



Source: El Salvador IPC Technical Working Group, November 2018.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

FACTORS DRIVING ACUTE FOOD INSECURITY

Weather extremes

Rainfall amounts during planting of the main season were more than 50 percent above the long-term average. However, this was followed by drought in June–July, which particularly affected production in eastern parts (FAO-GIEWS, October 2019). Between June and August five dry periods affected the main season in eastern El Salvador (MARN, August 2019).

These irregular rains and above-average temperatures in July and August particularly affected agricultural production during the main season in San Salvador, La Unión, San Miguel and Santa Ana. This marks the second consecutive year of poor primera season harvests and particularly high losses for subsistence farmers across the Dry Corridor, after the severe drought of 2018 (GEOGLAM, October 2019).

However, the aggregate main maize crop in 2019 was anticipated to be around average at 835 000 tonnes (FAO-GIEWS, October 2019).

Heavy rains in September affected Morazán, La Union, Santa Ana, Chalatenango and Cabañas departments, causing interruption of access to potable water for 450 households (OCHA, October 2019), and delayed planting operations for the second season in the large producer departments of

San Miguel and La Unión (FAO-GIEWS, October 2019). The rains damaged crops and the Government estimated that 18 300 tonnes out of a forecast 250 000 tonnes of postrera season beans would be lost, with most losses in the central and western parts, particularly in Ahuachapán, La Libertad, Cuscatlán and Santa Ana departments (El Economista, October 2019).

Some coffee losses were also expected, while flooding in pasture areas caused animal disease (El Diario de Hoy, October 2019). In addition, the local producer association (CAMPO) estimated 5 percent of the postrera season maize crop would be lost (El Economista, November 2019).

Economic shocks

In the last decade the country suffered a great decline in coffee production, once the most important source of revenues from exports. The sector had not recovered from the leaf rust damages of 2011–2013 and continued to decline due to low international prices, lack of investment and also from the erratic weather and dry conditions that affected flowering and bean development.

In the last six years jobs in the sector halved to 44 600, prompting migration to urban areas or abroad, with 30 percent of farmers abandoning their farms (USDA GAIN, May 2019). However, the sector still represents an important source of work. The 2019 decline in international coffee

prices particularly affected households reliant on the sector in Morazán, San Miguel and Usulután (IPC, November 2018).

While the price of white maize remained lower year-on-year, the price of red beans increased in September 2019 with the news of the effect of rains on the main season output (FAO-GIEWS, October 2019).

Insecurity

Criminal actors generate widespread human rights violations (NRC, June 2019). The homicide rate in 2018, estimated at 50.3 per 100 000 people, was the third highest in the world after Venezuela (Bolivarian Republic of) and Jamaica (IGARAPE Institute, 2018).

Widespread violence forced thousands to flee their homes. In 2018, around 46 800 Salvadorans sought asylum worldwide, with the country ranking as the sixth country of origin for new asylum seekers globally. In addition, at least 71 500 Salvadorans have been internally displaced by violence (UNHCR, July 2019), accumulating a total of 246 000 people by 2018 (IDCM, 2019).

NUTRITION OVERVIEW

Global Acute Malnutrition (GAM) prevalence among children under 5 in El Salvador was classified as 'very low' in 2014. GAM was considered 'medium' in Usulután (7.4 percent) and Santa Ana (7 percent) departments. At 13.6 percent the stunting level was classified as 'medium' (MICS, 2014).

Infant and young child-feeding practices need improvement, as fewer than half (46.7 percent) of infants under 6 months of age were exclusively breastfed and 67 percent of children aged 6–23 months consumed a minimum acceptable diet (MICS, 2014). Anaemia was also found to be a 'moderate' public health concern among children and women (WHO, 2016).

Around 13 percent of children suffered from diarrhoea two weeks prior to MICS data collection (MICS, 2014). By 2017, access to basic drinking water services was good (97 percent of the households) (JMP, 2017).

In 2019, El Salvador was experiencing a dengue outbreak with a 220 percent increase in the number of reported cases compared to 2018. By the end of July almost 8 900 cases were reported with nine possible deaths linked to the disease (OCHA, July 2019).

Country profile



Eswatini

ACUTE FOOD INSECURITY

2019

Total population of country 1.4M



Population analysed 0.9M (67% of total population, not including displaced populations)

232 000 IPC Phase 3 or above in October 2019–March 2020

185 000 IPC Phase 3 Crisis **47 000** IPC Phase 4 Emergency

370 000 IPC Phase 2 Stressed

UN DESA WFP 2018

ESWATINI IPC TECHNICAL WORKING GROUP JULY 2019

2018-19 Change



The number of people in Crisis or worse (IPC Phase 3 or above) remained unchanged, reflecting a second consecutive year of localised shortfalls in food production and constrained food availability.

2020 Forecast



Acute food insecurity is forecast to persist at current levels in early 2020. Drier weather towards the end of the cropping season is likely to maintain near-average cereal production levels.

NUTRITION INDICATORS



1.5% of children under 5 years are acutely malnourished, of whom 0.4% are affected by SAM.



59% of children 6–23 months meet the minimum dietary diversity requirement.



26.3% of children under 5 years are stunted.



64.8% of children under 6 months are exclusively breastfed.

EWAC 2019

EWAC 2019

MICS 2014

WHO 2016

JMP 2017



42% of children under 5 years and 27.2% of women 15–49 years are anaemic.



69% of households have access to at least basic drinking water services.

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS



Weather extremes



Economic shocks

- Rainfall deficits triggered localized shortfalls in staple food production in 2019.
- The lower harvests reduced availability of food for rural households and constrained income-generating opportunities.
- Prices of the main cereal staple, maize, increased in 2019, impeding access to food.

- Chronic malnutrition is a far greater problem than acute malnutrition. Lack of knowledge, myths, misconceptions and misinformation lead to parents and caregivers failing to adequately nourish their children with just over half of children aged 6–23 months receiving a minimum acceptable diet.

DISPLACEMENT



There were 900 refugees and 800 asylum seekers.

UNHCR

JULY 2019



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ESWATINI

Eswatini is still recovering from the 2015/16 El Niño-induced drought, which dried up water sources and caused widespread crop failure and hunger. In 2019, rainfall deficits again caused shortfalls in food crop production.

BACKGROUND

Eswatini's economy is closely tied to South Africa. Agriculture is the primary livelihood for the predominantly rural population (WB, 2019). However, amid low agricultural productivity, the country remains structurally deficit in key food staples (KoE, December 2018). A high rate of poverty, estimated at 59 percent in 2017, limits improvements in agricultural productivity and food security, with slow economic growth, high inequality, high HIV/AIDS prevalence and weather shocks being key factors inhibiting significant improvements in the population's welfare (WB, 2019).

ACUTE FOOD INSECURITY OVERVIEW

An estimated 232 000 people faced Crisis or worse (IPC Phase 3 or above) from October 2019–March 2020, representing 25 percent of the rural population during this peak hunger period. Out of this total, 47 000 people were classified in Emergency (IPC Phase 4) and 185 000 people were in Crisis (IPC Phase 3).

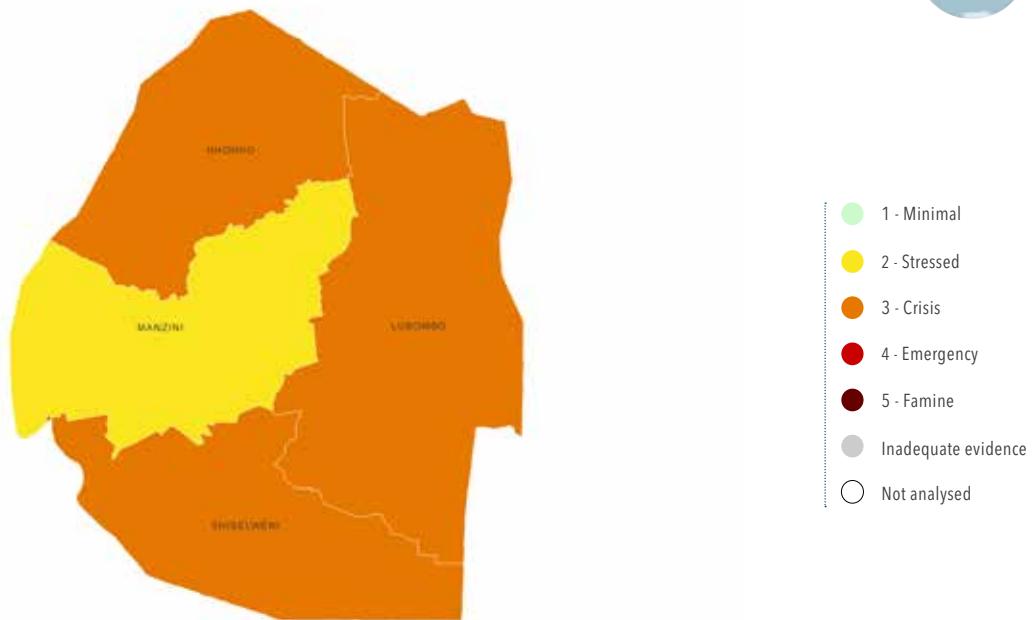
The majority of the population analysed were in IPC Phase 1 (Minimal) and Phase 2 (Stressed), with an estimated 370 000 in Stressed (IPC Phase 2). At the sub-national level, the highest rates of acute food insecurity were assessed to reach 25–35 percent of the population in Hhohho, Shiselweni and Lubombo regions (IPC, July 2019).

Compared to the previous year's peak (December 2018–March 2019) (IPC, December 2019), the number of people in need of urgent humanitarian food assistance remained largely unchanged with a negligible improvement of 6 percent, as a second consecutive year of localized shortfalls in cereal production maintained high humanitarian needs.

Food security conditions improved seasonally in mid-2019 straight after the 2019 harvest. From June–September 2019 around 205 000 people (22 percent of the rural population) were in Crisis or worse (IPC Phase 3 or above).

Map 21

Eswatini, IPC Acute food insecurity situation, October 2019–March 2020



Source: Eswatini IPC Technical Working Group, July 2019.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Nevertheless, crop failures and a consequent decrease in labour opportunities, combined with higher food prices, caused a worsening of acute food insecurity towards the end of the year (IPC, July 2019).

FACTORS DRIVING ACUTE FOOD INSECURITY

Weather extremes

Eswatini is still recovering from the 2015/16 El Niño-induced drought, which cost the country over SZL 3.8 billion (USD 264 million). As most of the food crop production is rain-fed and irrigation infrastructure remains unaffordable to smallholder farmers (KoE, December 2018), the rainfall deficits during a critical crop development phase in the 2018/19 cropping season caused localized shortfalls in food crop production in 2019, which underpinned the poor food security situation (FAO-GIEWS, October 2019).

Over one in four people reported having experienced a weather-related shock, such as drought, irregular rains or dry spells in 2019, rising to almost half of the population in Lubombo region (EVAC, July 2019).

The aggregate national cereal harvest in 2019 declined by about 16 percent compared to the previous year, with most crop failures concentrated in the eastern Lubombo and

southern Shiselweni regions because of erratic rainfall. Cereal import requirements increased to 200 000 tonnes which is slightly above the average (FAO-GIEWS, October 2019). Comparing households' harvests in 2019 with the previous year, about 46 percent reported to have harvested half of the previous season and around 9 percent had no harvest or experienced total crop failure (EVAC, July 2019).

Although the 2019 cereal harvest fostered a cyclical improvement in food security from June–September, reflecting a boost in food stocks and a seasonal increase in income-generating opportunities, these improvements were short-lived.

By October, the 25 percent of the rural population classified as in Crisis or worse (IPC Phase 3 or above) had depleted their food stocks earlier than normal and were engaged in crisis or emergency coping strategies, such as the sale of productive assets, to meet their essential food needs (IPC, July 2019).

Economic shocks

In mid-2019, casual labour opportunities were limited and by June unemployment in Lubombo region had increased to 29 percent and was expected to increase even further at the end of the year (IPC, July 2019). Nationally, unemployment was estimated at 28 percent (EHES, 2018). Over 80 percent of households in most areas experienced a loss of income. Only around 10 percent fully recovered from the shocks they experienced, which included loss of assets (EVAC, July 2019).

Almost 40 percent of households had depleted their food stocks within three months of harvest, and were reliant on markets for food, resorting to coping strategies when they were unable to afford to buy the food they needed (EVAC, July 2019). The National Maize Corporation (NMC) kept prices of the main staple maize meal stable until mid-June when the retail price increased (FAO-GIEWS, October 2019).

By October 2019, the national average maize meal price was 11 percent higher than its year-earlier level. Much of the price growth during 2019 was due to rising prices in South Africa, the country's main supplier of grains (FAO-GIEWS, December 2019). However, market regulations, administered by the NMC, lessened the effects of imported inflation and contributed to more stable domestic retail prices of maize meal (FAO-GIEWS, October 2019).

The situation in 2019 is aggravated by structural challenges and widespread poverty, with higher rates in rural areas, accentuated the impacts of weather shocks on food security in 2019 (WB, 2019).

Low incomes constrain access to farming inputs, while poor access to markets and agricultural-related information further impede improvements in agricultural productivity. The lack of competitive labour skills also limits households' ability to find alternative employment when weather shocks minimize agricultural work opportunities (WB, 2011).

Out of the top six main livelihood activities, which cover some 83 percent of the population, only three could be considered sustainable: formal labour (18 percent), small business (14 percent) and remittances (17 percent), while food crop production (12 percent) and casual labour (11 percent), particularly in the agriculture sector, are highly susceptible to weather anomalies. Social grants represent the primary income for 11 percent of the population, indicating either unemployment or lack of working-age people in those families (EVAC, July 2019).

NUTRITION OVERVIEW

Acute malnutrition among children under 5 years of age remained 'very low' (1.5 percent) but the stunting prevalence was 'high' at 26.3 percent – with boys more affected than girls by almost 10 percentage points. Some regions experienced both undernutrition and overweight. For example, Hhohho region had the highest rates of stunting at 28.6 percent, but above national-average levels of overweight at 16.4 percent. Stunting levels were higher in areas categorized in Crisis or worse (IPC Phase 3 or above) levels of acute food insecurity (EVAC, July 2019).

Reproductive aged women (15–49 years) had low levels of underweight (3 percent) based on body mass index while 27 percent were overweight and another 29 percent obese (EVAC, July 2019).

Just over half (51 percent) of children aged 6–23 months received a minimum acceptable diet with Manzini and Lubombo regions recording below-national levels. Around 59 percent of children received recommended dietary diversity (EVAC, July 2019). Consumption of fruits and vegetables remained below global recommendations. Besides household food insecurity, limited knowledge paired with misconceptions about child feeding challenge adequate nutrition for children (KoE, December 2018).

Eswatini has one of the highest HIV prevalence rates in the world. In 2018, 27.3 percent of the adult population were living with HIV, representing 210 000 people. Well over half of them (63 percent) were women (UNAIDS, 2018).

Nationally, a third of households do not have access to at least basic drinking water services, dropping to 21.8 percent in Manzini. On average, it takes up to 30 minutes for people to collect the water during the dry season (UNICEF and WHO, 2017).

Country profile

Ethiopia



ACUTE FOOD INSECURITY

2019

Total population of country **112.1M**Population analysed **28.7M** (26% of total population, including displaced populations)

8M IPC Phase 3 or above in July–September 2019



10M IPC Phase 2 Stressed

2018-19 Change

The number of food-insecure people in need of urgent assistance was almost as high as in 2018, despite difference in population coverage of analyses.

2020 Forecast

Numbers forecast to increase from February–June 2020 (to 8.5 million). Food access will be constrained due to declining stocks and above-average food prices in pastoral zones and Belg dependent areas.

NUTRITION INDICATORS

Host population

	4.5M children under 5 years are acutely malnourished, of whom 0.6M are affected by SAM.
	36.8% of children under 5 years are stunted.

HRP 2020
EBRD 2019

	13.8% of children 6–23 months meet the minimum dietary diversity requirement.
	58.6% of children under 6 months are exclusively breastfed.

DHS 2016
EBRD 2019

	56.9% of children under 5 years and 24.3% of women 15–49 years are anaemic.
	41% of households have access to at least basic drinking water services.

DHS 2016
JMP 2017

Refugee population

	38 900 children under 5 years are acutely malnourished, of whom 7 400 are affected by SAM.
	4.0–51.0% of children under 5 years in 24 camps are stunted.

SENS 2017/18
SENS 2017/18

	23.0–90.6% households in 11 camps do not consume micronutrient-rich food.
	56.5–98.4% of children under 6 months in 24 camps are exclusively breastfed.

SENS 2017/18
SENS 2017/18

	12.0–60.3% of children under 5 years and 3.3–44.7% of women 15–49 years in 24 camps are anaemic.
	97.5–100% have access to improved drinking water sources.

SENS 2017/18
SENS 2017/18

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Weather extremes Conflict/insecurity Economic shocks

- Below-average and erratic seasonal rains diminished crop and livestock production.
- Pastoralists' recovery was later curbed by floods, which killed livestock and increased animal diseases.
- As a result of an intense period of conflict and climate shocks between January and April, the number of IDPs reached 3.2 million.
- IDPs experienced deplorable conditions in camps, and limited access to basic services and livelihoods.

- By October cereal prices were up to 70% higher than year earlier levels as a result of reduced crop production, local currency depreciation and increased prices of fuel and agricultural inputs.
- Drought, displacement, poor sanitation and low access to health care contribute to disease outbreaks and deteriorating malnutrition.

DISPLACEMENT

1.6M Ethiopians were internally displaced.

IOM
DEC 2019

There were around **735 200** refugees from South Sudan (45%), Somalia (26%), Eritrea (21%), and the Sudan (7%).

UNHCR
DEC 2019

There were **1.1M** Ethiopian returnees.

IOM
DEC 2019



ETHIOPIA

Following years of drought and poor rainy seasons in the Somali region pastoralists faced another extended dry and hotter-than-average period in 2019.

BACKGROUND

While Ethiopia has made development gains over the last two decades (WFP, January 2020), 27 percent of the population, or 30.2 million people, were still living below the poverty line (USD 1.90 a day). Over 70 percent of rural Ethiopians are severely poor according to the Multidimensional Poverty Index (OPHI, September 2019). Frequent and severe droughts have eroded resilience for rural households that have lost productive assets and have had little time for recovery between drought events (WFP, January 2020).

ACUTE FOOD INSECURITY OVERVIEW

About 8 million people were in Crisis or worse (IPC Phase 3 or above) across Afar, Amahara, Oromiya, Southern Nations, Nationalities and Peoples' region (SNNPR), Somali and Tigray from July–September 2019, despite receiving humanitarian food assistance.¹ This includes about 1.9 million in Emergency (IPC Phase 4) of whom over 1 million were in Oromiya. Around a third of the populations in Somali and Oromiya faced Crisis or worse (IPC Phase 3 or above). An additional 10 million people were classified in Stressed (IPC Phase 2) (IPC, November 2019).

The population in Crisis or worse (IPC Phase 3 or above) was similar to that of 2018, when the HNO estimated that 8.1 million people were food insecure and in need of assistance (OCHA, February 2019). At the start of Meher harvests in October 2019, food security improved, but about 6.7 million people remained in Crisis or worse (IPC Phase 3 or above) (IPC, November 2019).

Ethiopia is the second largest host of refugees in Africa (UNHCR, December 2019). The result of the annual SENS report indicated that monthly food assistance for refugees lasted from 14–25 days, creating food gaps for up to 17 days a month. Dietary diversity was often poor mainly due to lack of access to fresh fruits and vegetables (UNHCR/WFP, 2016).

FACTORS DRIVING ACUTE FOOD INSECURITY

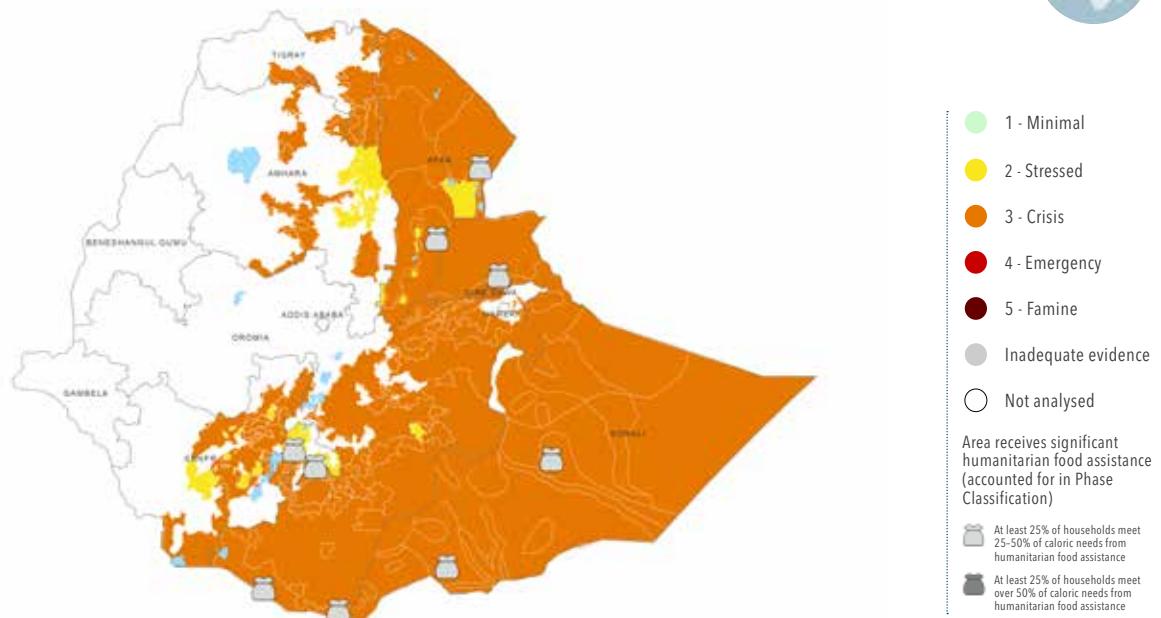
Weather extremes and crop pests

The February–May Belg rainy season was characterized by late onset, erratic distribution and below-average rains. A below-average secondary Belg season harvest in eastern Amhara, eastern Oromiya and north-eastern SNNP regions was expected. In East and West Harerghe zones, where no significant rains were received until April and seasonal cumulative precipitations were up to 60 percent below average, the cereal output was very poor, with crop failures

¹ FEWS NET's analysis of available evidence suggests the population requiring emergency food assistance in 2019 was lower than the IPC estimate. For more information, see <https://fews.net/east-africa/ethiopia>

Map 22

Ethiopia, IPC Acute food insecurity situation, July–September 2019



Source: Ethiopia IPC Technical Working Group, November 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

reported in some areas (FEWS NET June 2019, FAO-GIEWS, December 2019). In western key-producing areas, the June–September Kiremt rains were up to 30 percent above average and aggregate cereal production is estimated at above-average levels. However, unseasonal heavy rains during the October/November harvest resulted in localized crop production shortfalls (FAO-GIEWS, December 2019). Crops were attacked by desert locusts at the end of the year in northern and south-eastern Tigray, north-eastern Amhara and Eastern Oromiya regions. While coordinated control measures implemented by farmers, local communities and the Government have contained crop losses, substantial localized losses were reported in parts of Oromiya zone (FEWS NET December 2019, FAO-GIEWS).

Households in pastoral and agroastoral areas of southern SNNP, southern and eastern Oromiya and southern Somali regions, faced an extended dry and hotter-than-average period through April 2019. The Gu/Genna (March–May) rains were delayed, erratically distributed and below normal, resulting in poor regeneration of pasture and water resources and poor livestock body conditions and little to no milk production (FEWS NET, June 2019). Subsequently, abundant October–December 2019 Deyr-Hageya rains regenerated rangeland resources and improved vegetation conditions, livestock body conditions and conception rates. However, pastoralists' recovery was curbed by widespread floods that killed livestock and increased waterborne animal diseases, as well as by locust infestations damaging pasture (FAO-GIEWS, December 2019).

Conflict/insecurity

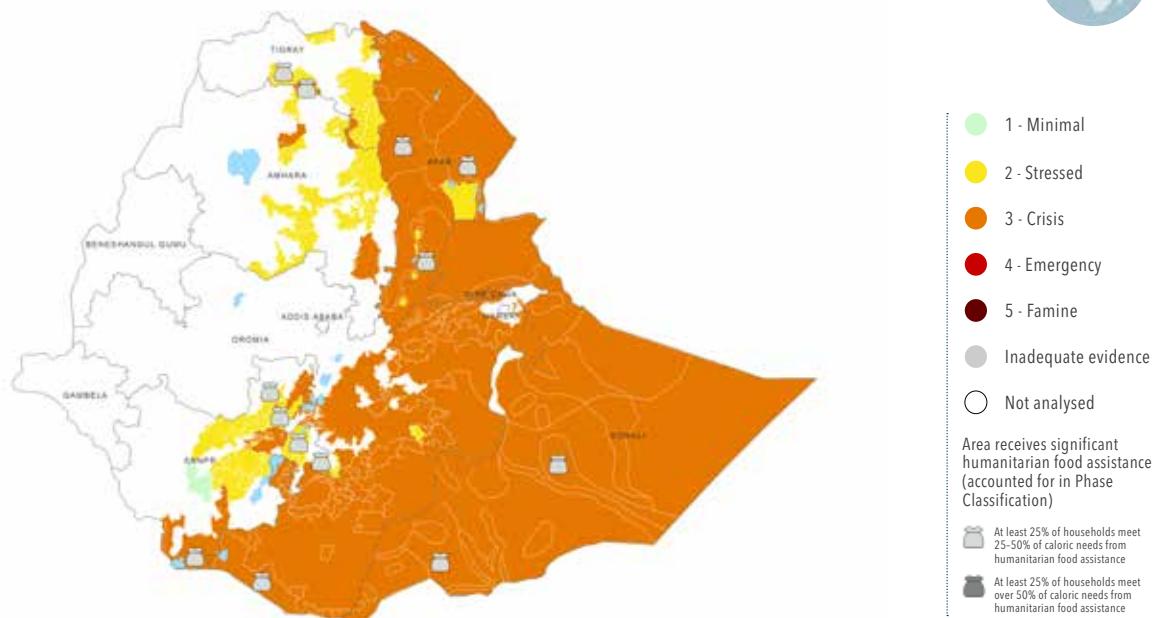
Continued intercommunal violence as well as clashes between Government forces and unidentified armed groups (UAG) in rural areas persisted, driving internal displacement, disrupting livelihood activities and distorting food market systems and prices (OCHA, 2020). While violent events occurred in all regions, most were in western and southern Oromia. Violence in Gambella affected local communities and refugees, while ethnic tensions in Amhara and areas bordering Benishangul Gumuz and Tigray displaced thousands. Many communities continued to be affected by unresolved historical tensions and grievances over resources, mainly land and water, as well as political, administrative and social rights (OCHA, 2020).

Of the 1.6 million IDPs, about two thirds were displaced by intercommunal violence. At the peak of the displacement crisis from January–April 2019, conflict and climate shocks brought the number of IDPs to 3.2 million (OCHA, 2020). IDPs in collective sites experience deplorable conditions and limited access to basic services (OCHA, January 2020).

Economic shocks

Prices of maize increased by 30–65 percent from January–October in several markets, including the capital, Addis Ababa, as seasonal upward trends were amplified by reduced supplies from the secondary Belg harvest, and by depreciation of the local currency that increased the prices of fuel and agricultural

Map 23

Ethiopia, IPC Acute food insecurity situation, October 2019–January 2020

Source: Ethiopia IPC Technical Working Group, November 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

inputs, inflating transport and production costs. Prices of other cereals, including teff, wheat and white sorghum were up to 40 percent above their year-earlier levels in Addis Ababa by October (FAO-GIEWS, December 2019). Although prices of livestock increased through 2019 in the southern Somali region due to lower supplies, staple food prices increased at faster rates. The deterioration of terms of trade created severe food access constraints for pastoralist households, at a time when they were trying to repopulate their herds and had few animals to sell (FAO-GIEWS, December 2019).

High youth unemployment (64 percent of the population is under 25) was identified by the Government as a key contributor to political fragility and increased migration (internationally and rural to urban) (OCHA, January 2020). As a result of sluggish export performance and a foreign exchange crunch purchases of food for humanitarian relief were constrained (OCHA, January 2020).

Although stunting decreased significantly among children under 5 from 58 percent in 2000 to 36.8 percent in 2019, it is still classified as 'very high' (DHS, 2000–2019). In Afar, Amhara and Tigray regions stunting levels exceeded 40 percent, and only 7.3 percent of children received a minimum acceptable diet (OCHA, January 2020).

Food insecurity along with water shortages, poor sanitation facilities and lack of access to quality healthcare contributed to deteriorating child nutrition. Nationally sanitation coverage was only 57 percent – in other words more than 45 million people lack access to improved sanitation (IFRC, July 2019). As of 8 December 2019 and since the beginning of the outbreak in April 2019, 2 089 cases of cholera had been reported (ECDC, December 2019). There were 9 672 cases of measles in Amhara, Afar, Oromiya and Somali and five cases of vaccine-derived polio reported in 2019 (WHO, December 2019).

Nutrition status of refugees

Refugee nutrition was concerning in the 21 camps assessed by the 2019 SENS: 33 percent of camps had GAM rates above the 'very high' threshold, while 48 percent had 'high' levels. In over 60 percent of camps child anaemia levels were of 'high' public health significance. Nursing mothers may stop breastfeeding due to psychological distress and insufficient access to food and water. Unsolicited donations of breast milk substitutes and milk products risked adequate young child feeding (IYCF) practices (OCHA, January 2020).

NUTRITION OVERVIEW

Nationally acute malnutrition rates are classified as 'medium' at 7.2 percent (Ministry of Finance and UNICEF, October 2019). Almost 1 million children have severe acute malnutrition annually (EmDHS, 2019). Malnutrition rates are highest in rural, hard-to-reach areas where people face difficulties and/or discriminations in accessing health and nutrition services and among pastoralist populations (OCHA, January 2020).

Country profile

Guatemala



ACUTE FOOD INSECURITY

2019

Total population of country **17.6M**Population analysed **16.6M** (95% of total population)

3.1M IPC Phase 3 or above in March-June 2019

2.5M IPC Phase 3 Crisis

568 000 IPC Phase 4 Emergency

4.8M IPC Phase 2 Stressed

2018-19 Change



Intense climate shocks, crop losses and high prices increased the number of people Crisis or worse (IPC Phase 3 or above).

2020 Forecast



Persisting lack of grain reserves following the 2019 drought and depressed household incomes, particularly for coffee growers, will increase acute food insecurity.

NUTRITION INDICATORS

0.7% of children under 5 years are acutely malnourished, of whom **0.1%** are affected by SAM.

46.5% of children under 5 years are stunted.

DHS 2014-15

62.6% of children 6-23 months meet the minimum dietary diversity requirement.

53.2% of children under 6 months are exclusively breastfed.

DHS 2014-15

36.5% of children under 5 years and **16.4%** of women 15-49 years are anaemic.

94% of households have access to at least basic drinking water services.

WHO 2016

JMP 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Weather extremes Economic shocks Insecurity

- Erratic rainfall and a prolonged dry period during the main season affected most of the country, causing major crop losses.
- Subsistence households were particularly badly affected and had very low grain stocks.

- Minimum wage workers and agricultural labourers had insufficient income to cover their basic needs and maize and beans prices were higher than normal.
- Households were yet to recover their livelihoods and assets following the 2018 drought.

- Insecurity, lack of economic opportunities, evictions and food insecurity drive internal displacement and migration.



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GUATEMALA

Around 6 in 10 Guatemalans live in multidimensional poverty, facing deprivation in food security, nutrition, decent employment, health, housing and education.

BACKGROUND

Guatemala has one of largest economies in Central America, but around 6 in 10 Guatemalans live in multidimensional poverty, meaning they face deprivation in multiple aspects of their lives, including food security, nutrition, decent employment, health, housing and education (MPPN, November 2019).

It is also one of the most socially unequal societies with indigenous peoples particularly disadvantaged (ACAPS, November 2019). Social inequality is aggravated by the country's high vulnerability to climate change. Over the past three years, extended dry seasons have had a severe impact on the livelihoods of subsistence farmers, who rely on rain-fed agriculture, especially in the Dry Corridor (WFP, accessed January 2020).

ACUTE FOOD INSECURITY OVERVIEW

Around 3.1 million people – 18 percent of the analysed population – were estimated to be in Crisis or worse (IPC Phase 3 or above) during March–June 2019. This included 568 000 in Emergency (IPC Phase 4) and 2.5 million in Crisis (IPC Phase 3). An additional 4.8 million were classified in Stressed (IPC Phase 2) (IPC, March 2019).

The situation was most critical for the rural population yet to recover from the 2018 drought in the six departments facing Crisis (IPC Phase 3) conditions, namely Alta Verapaz, Baja Verapaz, Quiché, Santa Rosa, Jalapa and Chiquimula (IPC, March 2019) and extended later in the year also to Suchitepéquez and Retalhuleu (IPC, December 2019).

The lean season was expected to extend until August 2019. Due to high agricultural losses in the Primera season, subsistence farmers were particularly affected (IPC, March 2019). By September, some areas in Huehuetenango, Retalhuleu, Totonicapán and Jutiapa were estimated to be in Crisis (IPC Phase 3) by the IPC-compatible analysis (FEWS NET, September 2019). Towards the end of 2019, food security improved in rural areas thanks to the Postrera harvest and related labour opportunities (IPC, December 2019).

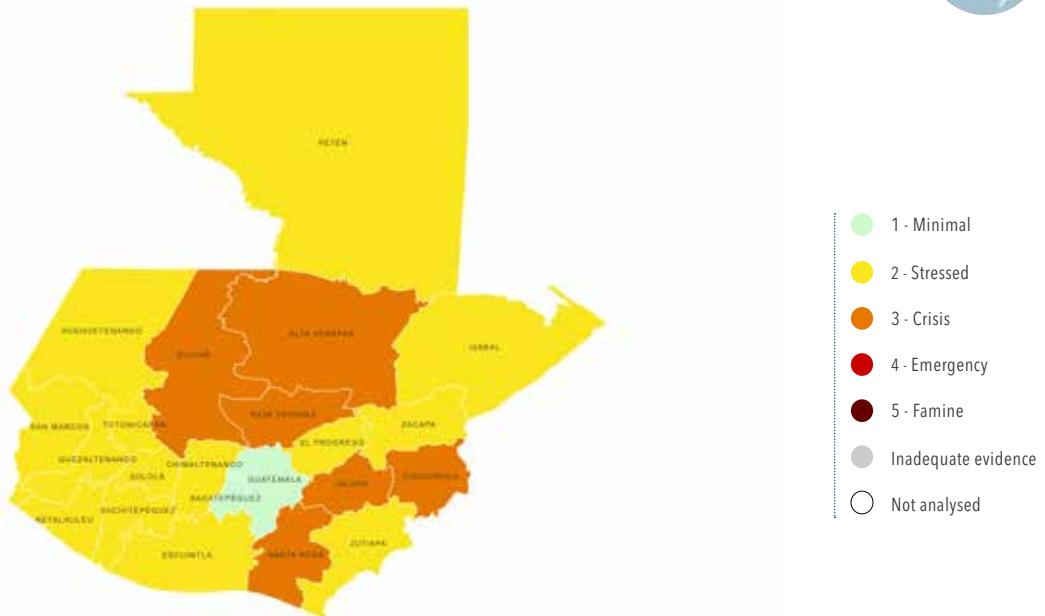
FACTORS DRIVING ACUTE FOOD INSECURITY

Weather extremes

The year 2019 marked the second consecutive year of poor Primera season harvests and particularly high losses for subsistence farmers after the severe drought of 2018 (GEOGLAM, October 2019). In contrast to the previous year when drought affected mostly subsistence production

Map 24

Guatemala, IPC Acute food insecurity situation, March-June 2019



Source: Guatemala IPC Technical Working Group, March 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

regions, the lower precipitation in the 2019 main season had negative impacts at the national level. The most affected northern departments of Alta Verapaz, Petén and Quiché, which contribute about 40 percent of the main season output, received rainfall that was 20–30 percent below average (FAO-GIEWS, November 2019).

By September, El Progreso, Jutiapa, Zacapa, Chiquimula, Baja Verapaz and Quiché departments of the Dry Corridor were affected by irregular rains, late onset of rains and high temperatures, which resulted in 50 percent losses of the Primera harvest (FEWS NET, August 2019). In central and eastern parts, subsistence farmers' yields were 75 percent below average, while some larger producers in Quiché and Retalhuleu departments reported around 40 percent reductions (GEOGLAM, October 2019).

Improvement in rainfall from mid-September was promising for the Postrera maize and bean harvests, which account for 20 percent of the annual production (FAO-GIEWS, November 2019) but June–August irregular rainfall and excess humidity in October resulted in low yields in Güija and Chortí micro-regions (IPC, December 2019). Thus, below-average overall aggregate maize production was anticipated for 2019 (FAO-GIEWS, November 2019).

Heavy rains in September caused flooding and landslides, and led to localized crop damages in Chiquimula, Escuintla, Jutiapa, Quetzaltenango and Retalhuleu departments (FEWS NET, October 2019). By November, almost 1.3 million

people nationwide had been affected by the rains with reported injuries, evacuations and damages to infrastructure (CONRED, November 2019).

In the first half of 2019, around 12 000 people were newly displaced by disasters. Between May and November excessive rains were responsible for over 5 000 displacements with many of them in need of shelter and food assistance (IDMC, January 2020).

Economic shocks

The poorest families in the Dry Corridor areas faced low incomes during April–May (FEWS NET, April 2019), and the situation remained the same towards the end of the year for subsistence farming families who had lost their Primera harvest. Their dependency on markets increased, they had to adopt consumption-based coping strategies and to consider atypical migration patterns (FEWS NET, October 2019; IPC, December 2019). In March, the minimum wage covered about 80 percent of a basic food basket while staple food prices remained more or less stable (FEWS NET, April 2019). Maize prices peaked during June–July before dropping to earlier levels by October, reflecting the seasonal pattern. The price of black beans however increased slightly from August (FAO-GIEWS, November 2019).

The coffee harvest represents a main source of labour for over 500 000 people dependent on work as small producers and/or cutters in the coffee industry in 204 out of 340

municipalities (IPC, December 2019). Coffee input costs increased and negatively affected production (FEWS NET, August 2019) lowering incomes for coffee-dependent families (FEWS NET, October 2019).

Insecurity

From January–May 2019, an average of 13 murders per day were recorded and gang-related violence is high. Overall, violence creates significant protection issues, especially for women, and poses a major constraint for humanitarian access (REDLAC, April 2019). The levels of violence, deficits of basic services and poverty continued to cause large groups to migrate to the United States or Mexico, although new border security measures and increasingly hostile immigration and asylum-seeking legislation and policies were of high concern for all Central American migrants (ACAPS, December 2019).

Insecurity and eviction of indigenous communities associated with large-scale business activities also drove internal displacement (IACHR, July 2018).

NUTRITION OVERVIEW

While acute malnutrition prevalence was very low (below 5 percent during March–June 2019 (IPC, March 2019), stunting was very high with 46.5 percent of children under 5 years short for their age. District-level differences in stunting levels were wide, reaching 70 percent in some departments (DHS, 2014–15).

The Ministry of Health reported an increase in acute malnutrition from March–August of 2019 compared to the same period in 2018 (MoH, 2020). Coverage of health services is poor and unequal, and is one of the biggest challenges in the country (PAHO WHO, 2020). Since July the country experienced an outbreak of dengue, which was worsened by the floods and heavy rains during the same period. Almost 40 600 cases were reported at national level from January–October 2019 (PAHO WHO, 2019). In addition, an increase in diarrhoeal diseases likely due to drinking untreated water also affected the population (IPC, December 2019).

General immediate causes of malnutrition include inadequate diets (52 percent of children aged 6–23 months consumed a minimum acceptable diet in 2014–15 (DHS, 2014–15)) and morbidity, while underlying causes include limited ability to acquire sufficient quantities and quality of food, limited purchasing power, poor access to services, limited household-level food production and knowledge gaps regarding nutrition (WFP, October 2017).

Country profile

Haiti



ACUTE FOOD INSECURITY

2019

Total population of country **11.3M**

45% Rural

55% Urban

Population analysed **10.5M** (93% of total population, not including displaced populations)

3.7M IPC Phase 3 or above in October 2019–February 2020

2.6M IPC Phase 3 Crisis

1.1M IPC Phase 4 Emergency

3.2M IPC Phase 2 Stressed

2018-19 Change



Poor economic and security conditions compounded by climate shocks and the long-term impact of natural disasters **worsened** acute food insecurity.

2020 Forecast



Acute food insecurity forecast to **increase** as the worsening economy and civil unrest are likely to deepen acute food insecurity during the lean season.

NUTRITION INDICATORS

65 500 children under 5 years are acutely malnourished.
 21.9% of children under 5 years are stunted.

HNO 2020
DHS 2016-17

25.4% of children 6–23 months meet the **minimum dietary diversity** requirement.
 39.9% of children under 6 months are **exclusively breastfed**.

DHS 2016-17
DHS 2016-17

49% of children under 5 years and **66.3%** of women 15–49 years are anaemic.
 65% of households have access to at least basic **drinking water** services.

DHS 2016-17
JMP 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Economic shocks Weather extremes Conflict/insecurity

- Currency depreciation and high inflation as well as reduced cereal production and low market availability increased staple prices.
- Work opportunities became scarcer for poor households both in rural and urban areas.
- Aggregate cereal output was expected to be 12 percent below year-earlier levels.
- Violent political demonstrations severely disrupted markets and livelihoods in urban areas.

- Civil strife disrupted humanitarian access and basic services.
- Although chronic malnutrition is more of a public health concern than acute at the national level, a sizeable number of under-5s needed treatment for acute malnutrition in drought-affected areas. Very few (11%) children receive a diet that meets the minimum acceptable level of quality and quantity for growth and development.

DISPLACEMENT

34 500 Haitians were internally displaced, slightly down from 38 000 in March 2018.

IOM JAN 2019

302 100 of Haitians internally displaced by the 2010 earthquake have returned.

IOM JAN 2019



©WFP/PAOLES MASCARELLI

Unable to attend school because of the socio economic unrest, 14-year-old Bevalie Jean-Jacques stays at home to help her single-parent mother, who is struggling to make a living by selling the vegetables that they grow on their smallholding.

BACKGROUND

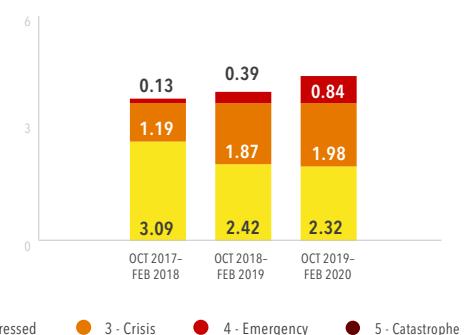
Haiti has slowly recovered from the 2010 earthquake and from 2016 hurricane Matthew, but more than 96 percent of the population is exposed to natural hazards (OCHA, January 2019, WB, October 2019). Around 25 percent of the population lives under the international poverty line (WB, December 2019). In February, violent anti-government protests and road-blocks gravely affected economic activities and public services (OCHA, June 2019). From March, Haiti had no government and civil unrest re-emerged in September (UNSC, October 2019).

ACUTE FOOD INSECURITY OVERVIEW

Around 3.7 million people – 35 percent of the population analysed – were Crisis or worse (IPC Phase 3 or above) and in need of urgent assistance in the last quarter of 2019, including over 1 million in Emergency (IPC Phase 4).¹ Some 3.2 million people were in Stressed (IPC Phase 2) during that period (IPC, October 2019). This marked an increase of almost 600 000 in rural areas since the same period a

Figure 50

Number of people (millions) in IPC Phase 2 or above in 2017–2020



Note: These figures represent IPC numbers for rural areas only to allow comparability.

Source: Haiti IPC Technical Working Group

¹ FEWS NET's analysis suggests the population requiring emergency food assistance in 2019 was lower than the IPC estimate. See <https://fews.net/central-america-and-caribbean/haiti>

Map 25

Haiti, IPC Acute food insecurity situation, March–June 2019



Source: Haiti IPC Technical Working Group, December 2018.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

year earlier, including an increase of more than 106 000 in Emergency (IPC Phase 4). The low areas of Nord-Ouest remained in Crisis (IPC Phase 3) and the very poor districts of Cité Soleil were classified in Emergency (IPC Phase 4). Four rural areas (in Artibonite, Nippes and Grande Anse) had 45–50 percent of their population in Crisis or worse (IPC Phase 3 or above). Four urban areas had up to 40 percent in Crisis or worse (IPC Phase 3 or above) (IPC, October 2019).

The situation was already precarious at the beginning of the year when around 2.26 million people were in Crisis or worse (IPC Phase 3 or above). It deteriorated to 2.63 million people during the lean season in March–June 2019 (IPC, December 2018).

FACTORS DRIVING ACUTE FOOD INSECURITY

Economic shocks

The Haitian Gourde depreciated by 35 percent against the US dollar between October 2018 and 2019 (FAO, December 2019), which triggered high inflation (23 percent year-on-year in October). Direct foreign investments, which fell by 78 percent in 2018, continued falling following the February civil strife (FEWS NET, June 2019). The lack of government compounded the situation with financing from international organizations blocked (FEWS NET, September 2019). Between 2018 and

2019, the national growth rate was reportedly the lowest since 2010, the year of the earthquake, prompting a rise in urban unemployment (IPC, October 2019).

In October, rice prices – mostly sourced from the international market – were at record or near-record highs despite sustained imports in the third quarter of 2019. Prices of local maize meal were on average about 50 percent higher than their year-earlier levels, and in the capital Port-au-Prince, they almost doubled compared to the October 2018 levels (FAO, December 2019).

In rural areas the most vulnerable households lacked agricultural work opportunities – because of high labour costs and limited resources of farmers (FEWS NET, April 2019) – and faced high food prices. They resorted to negative coping strategies and alternative sources of income such as migration, petty trade or selling charcoal (FEWS NET, March 2019).

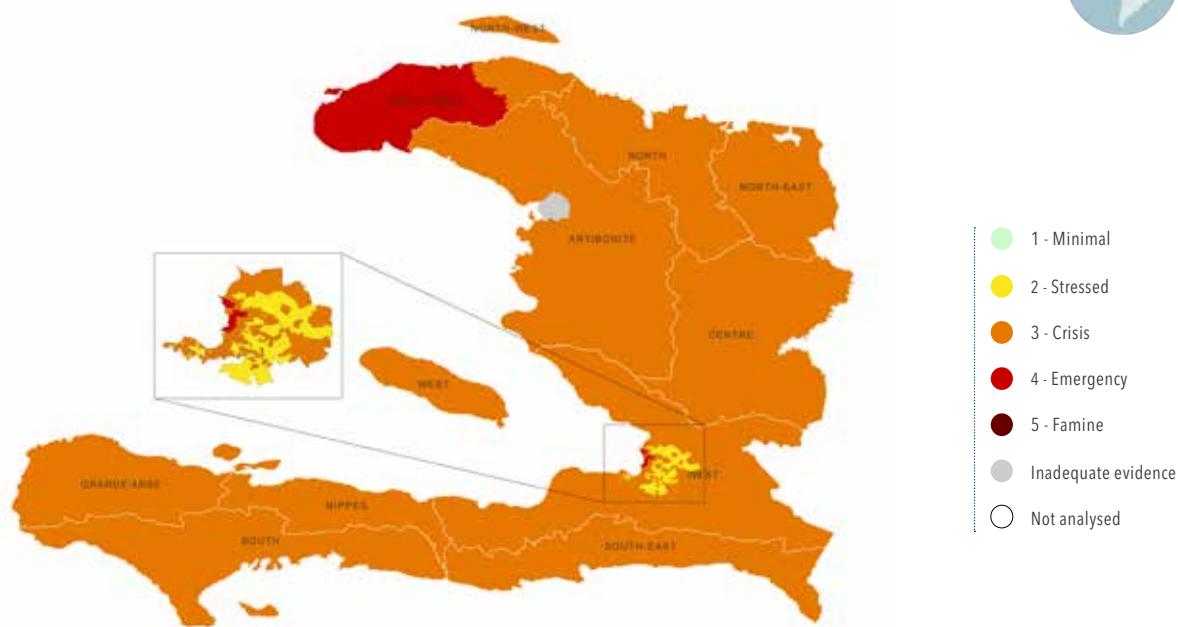
Weather extremes

The El Niño phenomenon, which resulted in rainfall deficits and dryness in 2018, continued until mid-2019, affecting the main agricultural season for the second season running, particularly in the main producing areas in Ouest, Sud and Sud-Est (FAO, July 2019).

Combined with high production costs resulting from currency depreciation and high inflation, the 2019/2020 prospects for

Map 26

Haiti, IPC Acute food insecurity situation, October 2019–February 2020



Source: Haiti IPC Technical Working Group, October 2019.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

aggregate cereal output (maize, rice and sorghum) decreased by an estimated 12 percent compared with the previous year (IPC, October 2019). From August–November, rainfall deficits and localized floods affected autumn harvest prospects (FEWS NET, October 2019).

Conflict/insecurity

Social unrest intensified from August 2018. In February, the growing demand for political reforms and better living conditions led to almost two weeks of demonstrations, which turned violent in some areas, blocked economic activities, and resulted in major market and livelihood disruptions in urban areas, such as Port-au-Prince, Cap Haïtien, Gonaïves and Les Cayes (FEWS NET, February 2019).

In September, Haitians again took to the streets to protest against the lack of government and lack of fuel (FEWS NET, September 2019). Barricades, insecurity and high fuel prices hindered movement of people and goods, which reduced market supplies and increased food prices (IPC, October 2019).

Rural traders could not access markets, sell their products or buy supplies, while the poorest households faced limited income-earning opportunities because of restrictions on urban migration and petty trade (FEWS NET, October 2019).

Some humanitarian organizations had to suspend operations due to security concerns and lack of fuel (ACAPS, October 2019).

NUTRITION OVERVIEW

In 2019 an estimated 65 500 children under 5 years in drought-affected areas were acutely malnourished and in need of nutrition interventions (OCHA, 2019). Nationally, the GAM rate of children under 5 years was 'low' at 3.7 percent but the stunting rate was 'high' at 21.9 percent (Ministère de la santé publique et de la population, July 2018).

Just 1 child in 10 consumed the minimum acceptable diet needed for growth and development, and 1 in 4 had minimum acceptable dietary diversity (MSPP, July 2018).

Anaemia affected 66.3 percent of children aged 6–59 months, indicating a moderate concern, while almost half (49.0 percent) of women of reproductive age were anaemic, classified as high (MSPP, July 2018).

Access to drinking water was a concern for malnutrition with just 65 percent of households having at least basic drinking water (WHO and UNICEF 2017).

Between 2010 and 9 November 2019 Haiti had around 820 450 suspected cholera cases – though the number fell from 3 777 in 2018 to 674 in 2019 (ECDC, November 2019).

High healthcare costs were the main reason for 58 percent of families with sick or injured members not seeking medical care (MSPP, July 2018). In 2019, hospitals and health centres closed because of access constraints, lack of medical supplies and staff (ACAPS, October 2019).

Country profile

Honduras



ACUTE FOOD INSECURITY

2019

Total population of country **9.7M**Population analysed **5.1M** (53% of total population)

1M IPC Phase 3 or above in November 2019–February 2020

787 000 IPC Phase 3 Crisis

177 000 IPC Phase 4 Emergency

1.8M IPC Phase 2 Stressed

UN DESA
2019

WB 2018

HONDURAS IPC TECHNICAL WORKING GROUP NOVEMBER 2019

2018-19 Change



The food security situation deteriorated due to lingering effects of the intense drought in 2018 that left rural households with low grain reserves, and exacerbated by the severe drought, crop losses and lower coffee prices in 2019.

2020 Forecast



Numbers are forecast to increase due to increase in staple grain prices, lower than normal grain stocks for poor households, early start of lean season, lower activity in coffee sector and depleted household assets and coping strategies.

NUTRITION INDICATORS

1.4% of children under 5 years are acutely malnourished, of whom **0.3%** are affected by SAM.
22.6% of children under 5 years are stunted.

DHS 2011-12

67.7% of children 6–23 months meet the minimum dietary diversity requirement.
31.2% of children under 6 months are exclusively breastfed.

DHS 2011-12

31.4% of children under 5 years and **17.8%** of women 15–49 years are anaemic.
95% of households have access to at least basic drinking water services.

WHO 2016
JMP 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Weather extremes Economic shocks Insecurity

- ▶ A prolonged widespread drought during the main agriculture season led to a near total crop failure, livestock deaths and water scarcity in major cities.
- ▶ Structural issues including high levels of poverty and lack of economic opportunities, poor public services causing vulnerability to food and nutrition insecurity.

- ▶ Rapid deterioration of livelihoods and assets.
- ▶ Lower international coffee prices in 2019 increased economic difficulties for hiring manual labour for harvest, affecting rural labourers and farmers.
- ▶ Outmigration is linked to insecurity, lack of economic opportunities and food insecurity.

DISPLACEMENT

247 100 Hondurans were internally displaced in mid-2019.

UNHCR 2019



WIRACOCO FRANCO

HONDURAS

In the face of high levels of poverty and inequality as well as increasing climate shocks, inequitable access to land, insufficient food production and high unemployment, subsistence farming families work hard to diversify their sources of income.

BACKGROUND

During recent years Honduras has registered the second highest economic growth rates in Central America, only behind Panama (WB, October 2019). Despite an improvement in economic output and decrease in public debt in recent years, high levels of poverty exist and inequality is among the highest in the region and the world. While the poverty rate fell from around 61 percent to 53 percent between 2005 and 2017, the extreme poverty rate was over 17 percent, the highest rate in Latin American countries after Haiti (WB, October 2019). It is vastly exposed to natural adverse events and climate change, especially heavy and irregular rainfall and long periods of drought in the southern and western regions of the country, known as the Dry Corridor, leading to major crop losses that disproportionately affect the poor (WB, October 2019).

ACUTE FOOD INSECURITY OVERVIEW

Approximately 963 900 people were estimated to be in Crisis or worse (IPC Phase 3 or above) in November 2019–February 2020, representing 19 percent of the 5.1 million people living in the analysed areas. Among those, 176 800 were in Emergency (IPC Phase 4). Around 1.8 million were in Stressed (IPC Phase 2) (IPC, December 2019).

This represents an increase from 519 000 (18 percent of population analysed) in 2018 in part due to wider coverage and spread of drought (Honduras TWG, 2019; and Honduras TWG, 2018).

In eight comparable areas the increase was from 509 500 in 2018, to 566 900 in 2019. In spite of better coverage, the numbers of acutely food-insecure people are likely higher than estimated as data gaps persist in areas with limited access (Gracias a Dios) and in areas where data was not collected (Atlántida, Cortés and urban Francisco Morazán) (IPC, December 2019).

Of the 13 departments analysed, the situation was most severe in the seven areas classified in Crisis (IPC Phase 3), namely El Paraíso, Francisco Morazán (except Central District), Intibucá, La Paz, Copán, Choluteca and Valle. The greatest number of people in Crisis or worse (IPC Phase 3 or above)

Map 27

Honduras, IPC Acute food insecurity situation, November 2019–February 2020



Source: Honduras IPC Technical Working Group, December 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

was in Choluteca with about 117 000, El Paraíso (99 000) and Olancho (97 000).

All areas analysed included between 2–6 percent of the population in Emergency (IPC Phase 4) (IPC, December 2019). The households most at risk of acute food insecurity were wage labourers and subsistence farmers, especially those in highly marginalized communities with difficult road and market access and those headed by women.

A comparative analysis for the Copán region which was also analysed earlier in the year showed an improvement in late 2019 compared to the March–June 2019 period, when around 288 000 people were classified in Crisis or worse (IPC Phase 3 or above), compared to 240 000 in November 2019–February 2020 (IPC, February 2019, IPC, December 2019).

FACTORS DRIVING ACUTE FOOD INSECURITY

Weather extremes

In August, the government declared a national state of emergency over drought, and the particular need to provide support to communities in approximately 100 municipalities in the central, eastern and southern parts of the country (FEWS NET, October 2019).

Rainfall amounts during June–August were more than

25 percent lower than the 29-year average in several maize-producing departments (FAO-GIEWS, October 2019). The low, sporadic rainfall resulted in 70–100 percent losses of the August–September Primera (main) maize harvest in eastern and southern parts. In the areas where subsistence agriculture is dominant losses were above 85 percent.

Nationally, the losses were estimated at around 50 percent for maize, 25 percent for beans and 27 percent for rice with the greatest losses concentrated in the main-producing municipalities of Olancho and El Paraíso as well as in Valle, the northern part of Choluteca, the south-western part of Francisco Morazán and the southern part of La Paz (FEWS NET, October 2019).

Rainfall amounts increased from mid-September, reducing soil moisture deficits and easing planting operations, so the minor season maize harvest in December was likely to be above-average. However, the aggregate maize crop in 2019 was anticipated to be below-average at 470 000 tonnes since the main season harvest accounts for about 80 percent of annual production. A large number of livestock also died due to forage and water deficits in Olancho department (FAO-GIEWS, October 2019).

This marks the second consecutive year of poor Primera season harvests and particularly high losses for subsistence farmers across the Dry Corridor, after the severe drought of 2018 (Crop Monitor, October 2019).

High temperatures and dry conditions also induced forest fires and pest outbreaks, further affecting crop production. During October, heavy rainfall triggered flooding and landslides in western Honduras, affecting 700 people, destroying 100 houses and damaging several roads (ECHO, October 2019).

Poor soil conditions, over exploitation of forest resources, degraded lands, small plots and lack of access to credit, agricultural supplies and technical assistance drive agricultural productivity and profitability further down (WFP, January 2020).

Economic shocks

Vulnerable subsistence farming families, who lost their primera harvest crops, needed a regular income to buy their food supplies in markets, but employment opportunities were scarce and income not sufficient, so they were likely to resort to coping strategies, such as money or grain borrowing and migration to urban areas (FEWS NET, October 2019).

For instance, many poor households depend on work as small producers and/or cutters in the coffee industry. But the 2019 decline in international coffee prices hit coffee growers in western Honduras hard and depressed the demand for wage labourers (IPC, December 2019).

Domestic prices of white maize increased from the beginning of 2019 to September when they started to decline with the commercialization of supplies from the main season harvests. Prices of red beans were on the rise since May 2019, following seasonal trends. In September 2019, they were higher than a year earlier, reflecting reduced minor season outputs (FAO-GIEWS, October 2019).

Insecurity

Criminal actors generate widespread human rights violations (threats and intimidation, homicides, extortion, trafficking, kidnappings, child recruitment and sexual and gender-based violence). Recent human rights reports show that the current fear and insecurity among the civilian population can be compared with that experienced in armed conflicts (NRC, June 2019).

Despite a downward trend in recent years, the country's murder rate continues to be among the highest in the world (HRW, January 2020). Civil riots and protests lead to confrontations between military forces and civilians (UN, June 2019).

Gang-related violence, poverty and lack of education opportunities are causing thousands of children and families to flee their homes. Without access to protection and safe migration pathways, most are forced onto dangerous routes where they are at risk from violence, exploitation and abuse (UNICEF, April 2019).

NUTRITION OVERVIEW

Data on child nutrition in Honduras was quite outdated. According to the latest available figures, it had 'high' levels of chronic malnutrition, which affected 22.6 percent of children under 5 years of age (DHS, 2011–12). The rate for acute malnutrition in 2011–12 was 'very low.' The rate for exclusive breastfeeding of infants was low at 31.2 percent (DHS, 2011–12). The most recent anaemia (WHO, 2016) rates – with 31.4 percent of children aged 6–59 months anaemic, indicating a moderate public health problem – suggests that children's diets may not contain adequate micronutrients.

People in Honduras had generally good access to an improved water source (93 percent). However, the difference between rural and urban areas was still wide at 14 percentage points, as almost all (99 percent) urban populations had access to improved water compared to 86 percent of rural people (JMP, 2017). Around 88 percent of people had access to improved sanitation and 7 percent practised open defecation, rising to 14 percent of the rural population (JMP, 2017).

In 2019, a dengue epidemic and diarrhoeal diseases – likely due to untreated water consumption and water scarcity in some areas – reached alarming levels. By October 2019, there were 86 705 cases of dengue, 20 percent of which were potentially lethal. There were also 197 cases of Chikungunya and 217 cases of Zika (GoH, October 2019).

Country profile

Iraq**ACUTE FOOD INSECURITY**

2019

Total population of country 39.3M

Population analysed 39.3M (100% of total population)

1.8M food-insecure people in need of urgent assistance
Jan-Dec 2019

Data not available for marginally food-insecure people

2018-19 Change

The numbers in need of urgent humanitarian assistance, including for food and livelihoods, fell, but many groups remained vulnerable, facing protracted displacement and political volatility.

2020 Forecast

Conditions for refugees remain highly precarious amid severe livelihood losses, refugee camp closures, and limited access to humanitarian assistance.

NUTRITION INDICATORS**Host population**

- 2.5%** of children under 5 years are **acutely malnourished**, of whom **0.8%** are affected by SAM.
- 9.9%** of children under 5 years are **stunted**.

MICS 2018

- 44.6%** of children 6–23 months meet the **minimum dietary diversity** requirement.
- 25.8%** of children under 6 months are **exclusively breastfed**.

MICS 2018

- 24.1%** of children under 5 years and **29.1%** of women 15–49 years are **anaemic**.

WHO 2016

- 93.1%** of households have access to at least basic **drinking water** services.

MICS 2018

Refugee population

- 2%** of children under 5 years in Duhok, **3.1%** in Erbil and **1.2%** in Sulaymaniyah are acutely malnourished.

SENIS 2015

- 13.9%** of children under 5 years in Duhok, **13.8%** in Erbil, and **13.8%** in Sulaymaniyah are stunted.

SENIS 2015

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS**Conflict/insecurity****Economic shocks****Weather extremes**

- The security situation remained fragile, hampering displaced people's safe returns.
- Some 78% of nearly 1.5 million IDPs have been displaced for more than three years, competing for scarce work with host communities.
- Although return rates have slowed, around a million returnees grapple with resilience and recovery needs and face a lack of livelihoods.

- From October, protests against corruption, unemployment and poor services became violent and further complicated the humanitarian response.
- Seasonal floods in March caused displacement and affected access to safe water.
- Child malnutrition rates seem not to be a concern, but exclusive breastfeeding rates are low and only one in three children receives a minimum acceptable diet.

DISPLACEMENT

Over **1.4M** Iraqis were internally displaced.



There were **245 800** Syrian refugees, up from 233 000 in July 2019.



There have been almost **4.5M** Iraqi IDP returnees since 2015.

IOM NOV 2019 UNHCR DEC 2019

IOM NOV 2019



© UNHCR/RAHED HUSSAIN RASHID

Five years after fleeing her home, Matra Nsayef is trying to rebuild her life in the small agricultural village of Yathreb – once known as the fruit basket of Iraq.

BACKGROUND

December 2019 marked two years since Iraq's military operations against the Islamic State of Iraq and the Levant (ISIL) ended. During ISIL's 2014–2017 occupation millions were displaced, infrastructure and livelihoods were destroyed, social cohesion eroded and basic services disrupted. The country still faces social, ethnic and sectarian tensions as well as political uncertainty and violence. Iraq is an anomaly of an upper middle-income country at 'very high risk' of a humanitarian crisis requiring international assistance (OCHA, November 2019).

ACUTE FOOD INSECURITY OVERVIEW

Out of the 4.1 million people in Iraq in need of humanitarian assistance, about 1.77 million are in acute need of support, including food and livelihoods assistance. More than 816 000 of them are children. Half of those in urgent need are concentrated in only two governorates – Ninewa and Al-Anbar – which host high numbers of returnees. Diyala, Salah Al-Din and Kirkuk governorates also have high numbers of people in acute need of assistance (OCHA, November 2019).

Those directly affected by the 2014–2017 conflict are the most vulnerable. Several population groups find it particularly hard to meet their basic needs or access essential services. These

include IDPs in camps and in out-of-camp locations; recent returnees to areas where humanitarian needs are already high; female- and child-headed households, women and girls; people with perceived affiliations to extremists; victims of physical, mental and psychological violence and people living with disabilities (OCHA, November 2019).

IDPs' food consumption deteriorated in the first four months of 2019: by April, 25 percent had inadequate food consumption, up from 8 percent in December 2018. Expenditure share on food purchases increased by 7 percentage points during the same time period (WFP, April 2019). By November, over 30 percent of Syrian refugees in Iraq were adopting crisis-level livelihood coping strategies, up from below 10 percent in April (WFP, November 2019).

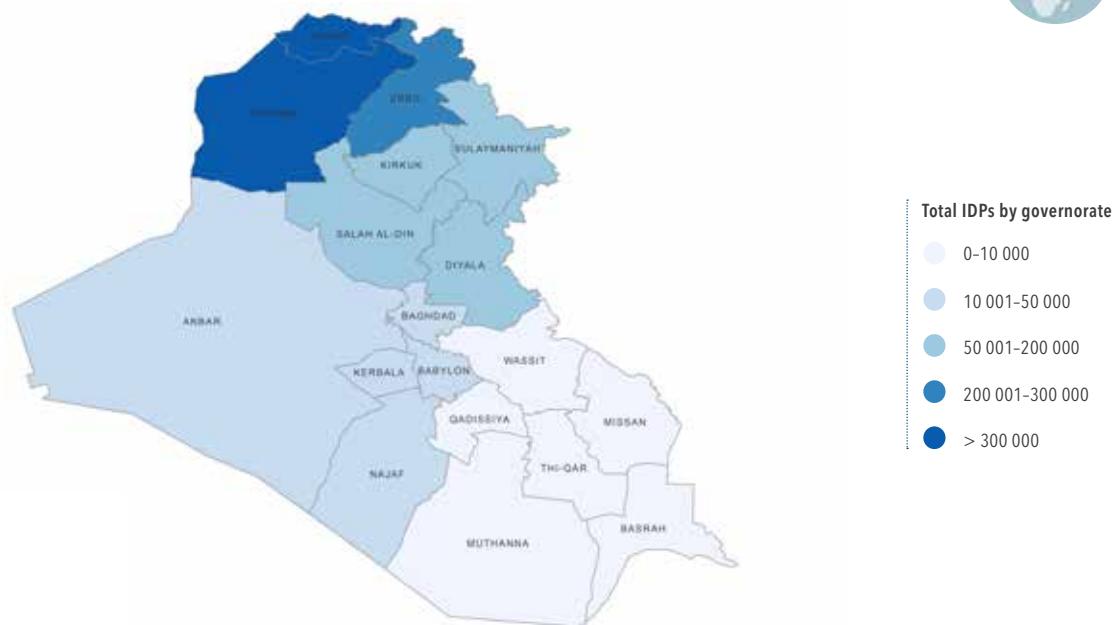
FACTORS DRIVING ACUTE FOOD INSECURITY

Conflict/insecurity

The security situation in Iraq remained unpredictable in 2019. The lack of civil and security control in disputed areas continued to enable non-state actors, including ISIL, to mount small-scale attacks almost weekly in certain governorates. Anti-government demonstrations against corruption, lack of basic services and high unemployment started in Baghdad and Shiite areas in October and later spread to other governorates

Map 28

Iraq, IDPs by governorate of displacement, December 2019



Source: FSN, based on data extracted from IOM, December 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

(ACLED, October 2019). By November, violence around the protests had escalated and the prime minister had resigned and by December, around 400 people had died (ACLED, December 2019).

The protests and uncertain security affected humanitarian operations. Intermittent curfews were imposed in Baghdad and the southern governorates, resulting in missions being delayed or cancelled. In Ninewa UN agencies and NGOs were unable to carry out relief activities in camps because of delays in getting approvals and access letters (OCHA, November 2019).

By October, there were still over 1.4 million IDPs across 18 governorates (IOM, November 2019). Out of 1.2 million people displaced outside of camps, more than two-thirds had not returned to their areas of origin for over three years (OCHA, November 2019). The remaining IDPs in camps include people who are not welcome to return due to unproven affiliations to extremist groups – they often face challenges in accessing assistance (ACAPS, October 2019).

However, some 4.4 million IDPs have returned since 2015 across eight governorates, usually to experience severe hardship (IOM, November 2019). Considerable secondary displacement has resulted from forced and premature returns and forced or coerced departures from camps and informal settlements in Nineva, Salah Al-Din, Al-Anbar, Kirkuk and Diyala governorates (OCHA, November 2019).

In August, the Government of Iraq consolidated and closed several IDP camps with the aim of all displaced people returning home by the end of 2020. Between August and October, on average 222 households left camps every day, many moving to non-camp settings, but 3 300 families transferred to other camps (IOM, October 2019). Many IDPs in out-of-camp locations are cut off from assistance (HNO, November 2019).

In October 2019, a military offensive by Turkey against Kurdish forces in north-east Syria compounded existing insecurity and uncertainty on Iraq's western border (OCHA, November 2019). Around 19 000 Syrians crossed the border to Iraq between mid-October and December 2019 (IOM, January 2020).

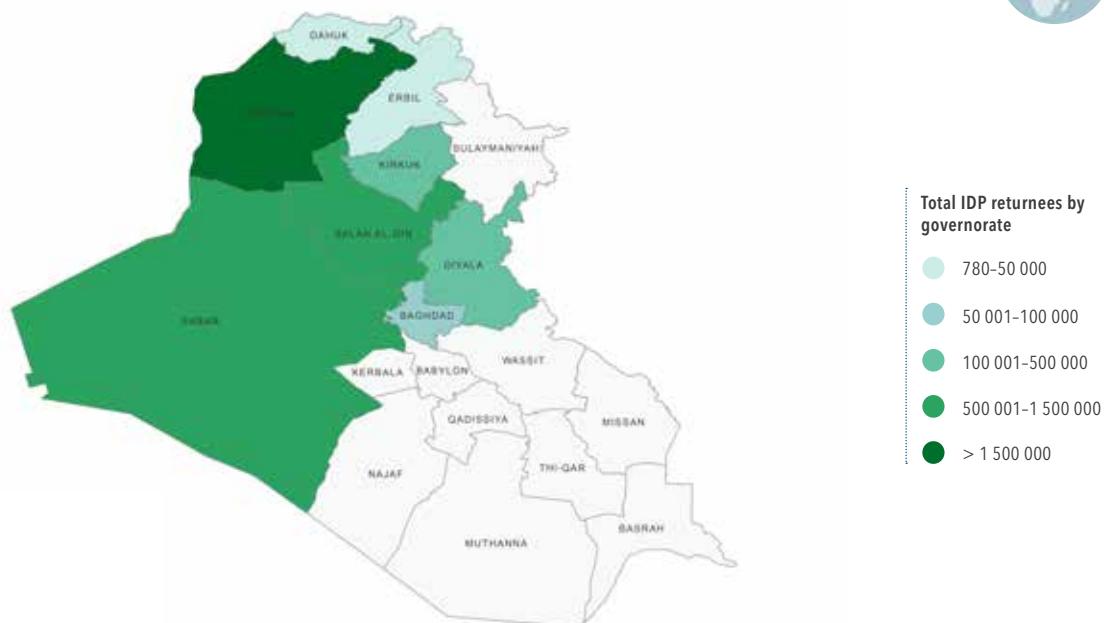
Insecurity and displacement continued to constrain farmers' access to agricultural lands, while agricultural inputs and machinery remained expensive and in short supply (FAO-GIEWS, April 2019), worsening medium-term food security prospects. Even though the agricultural sector is small, it still plays a role in Iraq's economy (FAO, January 2020).

Economic shocks

Iraq's economy is slowly recovering, with GDP expected to grow 5 percent in 2019 mainly due to higher oil prices and better security (WB, October 2019). But progress on reconstruction and development is slow and much of the infrastructure damaged or destroyed (OCHA, November 2019).

Map 29

Iraq, IDP returnees by governorate of return, December 2019



Source: FSN, based on data extracted from IOM, December 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

At nearly 49 percent, the labour force participation rate is one of the lowest in the world, especially for women (12 percent) and 15–24 year-old youth (26 percent). The unemployment rate has increased beyond the 2012 level to 9.9 percent in 2017/18, but was nearly 21 percent for women. Underutilization is particularly high among IDPs, with almost 24 percent unemployed or underemployed (WB, April 2019).

The poor performance of the agricultural sector and lack of rural employment have driven migration to urban areas where people face poor public service delivery and increasing poverty (FAO, January 2020).

Even though physical market access for IDPs and returnees was good, they were often unable to buy essential goods because their monthly income was lower than the basic needs threshold (MCNA, December 2019). Based on WFP price data, cereal prices remained stable during 2019 except for rice, which peaked in March before dropping. Bread prices peaked in August (WFP, December 2019).

Weather extremes

Heavy rains during March/April caused flooding in several governorates with Salah al-Din, Bara and Missan the worst affected. Floods caused temporary displacement and disrupted clean water supplies in some areas (OCHA, May 2019), affecting an estimated 273 000 people in central and southern governorates overall (USAID, June 2019). However, the 2019 cereal harvest was favourable – estimated at

5.6 million tonnes, over 80 percent above the 2018 harvest and 30 percent above the five-year-average (FAO-GIEWS, December 2019).

NUTRITION OVERVIEW

The 2018 MICS found ‘low’ prevalence (2.5 percent) of acute malnutrition among children aged 6–59 months. The highest prevalence of 5 percent was found in Najaf and Qadissiyah governorates. Like wasting, stunting was ‘low’ at 10 percent with the highest levels found in Kirkuk (15 percent) and Thiqar (14.5 percent) (MICS, 2018). Among pregnant and lactating women, only 3 percent were considered as acutely malnourished (CFSVA, 2016).

A very low percentage (25.8 percent) of children under 6 months were exclusively breastfed. Just 34.3 percent of 6–23 month-olds consumed the minimum acceptable diet required for their growth and development (MICS, 2018).

Nationally 93 percent of households had access to at least basic water services, falling to 87 percent in rural areas (MICS, 2018). Access to safe water, however, has been fragile in Basra governorate, which experienced a water crisis in 2018 (HRW, July 2019). Health facilities suffered huge damage during the 2014–2017 conflict with half destroyed in 13 of the 16 assessed cities in Iraq (Word Bank, January 2018). From 1 January through 17 November 2019, Iraq had 1 222 confirmed cases of measles (WHO, November 2019).

Country profile

Kenya



ACUTE FOOD INSECURITY

2019

Total population of country **52.6M**Population analysed **13.9M** (26% of total population, including IDPs, returnees and refugees)

3.1M IPC Phase 3 or above in August–October 2019

2.7M IPC Phase 3 Crisis

357 000 IPC Phase 4 Emergency

6M IPC Phase 2 Stressed

2018-19 Change

The acute food insecurity situation deteriorated mainly as a result of very late and erratic long rains as well as flash floods and landslides.



2020 Forecast

Conditions are expected to improve due to short rains boosting livestock conditions and productivity, although desert locust swarms are expected to expand further into the north-eastern areas of the country.



NUTRITION INDICATORS

Host population

- 4%** of children under 5 years are acutely malnourished, of whom **0.9%** are affected by SAM.
- 26%** of children under 5 years are stunted.

DHS 2014 DHS 2014

- 40.9%** of children 6–23 months meet the minimum dietary diversity requirement.
- 61.4%** of children under 6 months are exclusively breastfed.

DHS 2014 DHS 2014

- 41.1%** of children under 5 years and **27.2%** of women 15–49 years are anaemic.
- 59%** of households have access to at least basic drinking water services.

WHO 2016 JMP 2017

Refugee population

- 14 600** children under 5 years are acutely malnourished, of whom **2 400** are affected by SAM.
- 18–27.3%** of children under 5 years in 5 camps are stunted.

SENS 2018 SENS 2018

- 10.5%** of households in Kakuma camp and **10.7%** in Dagahaley camp do not consume micronutrient rich food.
- 62.5–91.2%** of children under 6 months in 5 camps are exclusively breastfed.

SENS 2018 SENS 2018

- 46.7–60.7%** of children under 5 years and **27.5–53%** of women 15–49 years in 5 camps are anaemic.
- 99.7–100%** of households in 5 camps have access to improved drinking water sources.

SENS 2018 SENS 2018

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Weather extremes Economic shocks Conflict/insecurity

- Late onset of rains, dry spells and erratic rainfall caused cereal production shortfalls.
- Pastoral and marginal agricultural areas faced high prevalence of human/animal diseases.
- Flash floods and landslides disrupted livelihoods, displaced thousands, destroyed farmlands and crops, and swept away livestock and irrigation systems, mainly in north-eastern, central and coastal regions.

- Insecurity, resource-based conflict and cattle rustling limited access to markets and resulted in loss of livestock.
- High food prices limited purchasing power of low-income households.
- The drought-related food crisis has lowered milk consumption and increased WASH-related illnesses, contributing to higher child malnutrition rates.

DISPLACEMENT

- There were nearly **490 000** refugees and asylum seekers from Somalia (54%), South Sudan (24%), the Democratic Republic of the Congo, Ethiopia, Burundi and the Sudan.

UNHCR DEC 2019



© FAO/USMO

KENYA

Young Pokot pastoralists milk a cow in the early morning. Years of inter ethnic strife, including armed cattle raids, and the effects of a rapidly changing climate have strained the tradition of resource and knowledge sharing between cross-border tribal groups in West Pokot and Turkana in Kenya and Karamoja in Uganda.

BACKGROUND

Though down from 47 percent in 2005/06, more than one in three (36 percent) Kenyans were still living on or under the international poverty line¹ in 2015/16 (WB, October 2018). The most severe conditions exist in the arid and semi-arid drought-prone north, which accounts for 80 percent of the country's land-mass and is often affected by local conflicts. Rapid population growth, climate change, stagnating agricultural production, gender inequalities and underperforming food systems pose significant challenges to food and nutrition security (WFP, August 2019).

ACUTE FOOD INSECURITY OVERVIEW

Almost 3.1 million people, representing 22 percent of the population analysed in arid and semi-arid lands (ASALs), were facing Crisis conditions or worse (IPC Phase 3 or above) from August–October 2019. This included over 2.7 million in Crisis (IPC Phase 3) and 357 000 in Emergency (IPC Phase 4) (IPC, October 2019). Some 43 percent of the population analysed had minimal adequate food consumption and were classified in Stressed (IPC Phase 2) (IPC, October 2019).

The number of acutely food-insecure people in need of emergency food assistance increased throughout 2019 from an estimated 1.1 million in February to 1.6 million in May and 2.6 million by July (GoK, 2018 and 2019).

In July 2019, most of those in Crisis or worse (IPC Phase 3 or above) were pastoralist households in Turkana, Mandera, Baringo, Wajir, Garissa, Marsabit and Tana River or marginal agricultural and agro-pastoral households in Kitui, Makueni, Kilifi and Meru North. From August–October these were still the main areas of concern, but with additional acutely food-insecure populations in Isiolo, Tharaka and Samburu (IPC, October 2019).

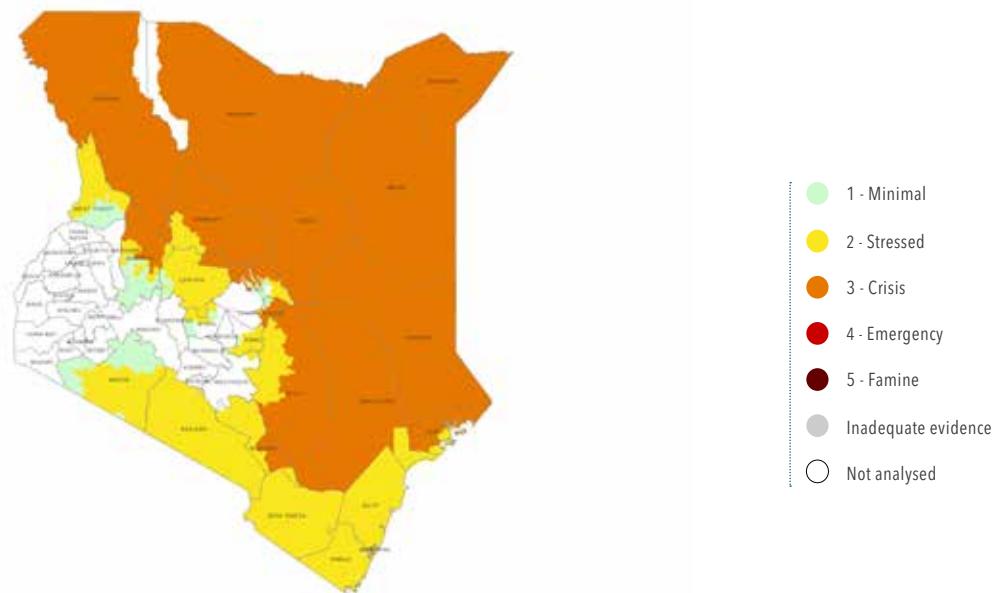
Acute food insecurity among refugees

Refugees in Dadaab and Kakuma camps and Kalobeyei settlement have not been able to diversify their incomes enough to meet their basic needs because of restrictions on animal ownership, movement and formal employment. Refugees in the camps have faced ration cuts of 15–30 percent. The results of SENS 2018 indicated that their monthly food assistance lasted from 14–19 days. Between 44 percent and 84 percent of refugees in the camps used one or more negative coping strategies.

¹ USD 1.90 per day in 2011 PPP

Map 30

Kenya, IPC Acute food insecurity situation, August–October 2019



Source: Kenya IPC Technical Working Group, October 2019.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

FACTORS DRIVING ACUTE FOOD INSECURITY

Weather extremes

The March–April 'long rains' were generally very poor. In south-eastern and coastal marginal agriculture livelihood zones maize production was an estimated 50–60 percent below average, with near failure of the harvest reported in several south-eastern areas (FAO-GIEWS, September 2019). However, in the Rift Valley and Western provinces improved rains from May resulted in average maize production (FAO-GIEWS, December 2019). Drought conditions in March and April in northern pastoral areas and prevailing moisture deficits resulted in poor livestock conditions and limited milk production, atypical migration patterns and competition over natural resources (FAO-GIEWS, June 2019).

Exceptionally abundant October–December 'short-rains' benefitted yields and induced farmers to increase areas planted, resulting in an estimated above-average cereal production (FAO-GIEWS, March 2020). These rains regenerated pasture and rangelands and improved livestock body conditions, allowing many to recover from the 2018/2019 drought (FEWS NET, 2019).

However, these rains also caused devastating flash floods and landslides disrupted livelihoods, destroyed crops and swept away livestock, irrigation systems, roads, houses, health clinics

and sanitation services, mainly in north-eastern, central and coastal regions. Up to 160 000 people in 31 counties were affected and 18 000 displaced (OCHA, November 2019).

Conflict/insecurity

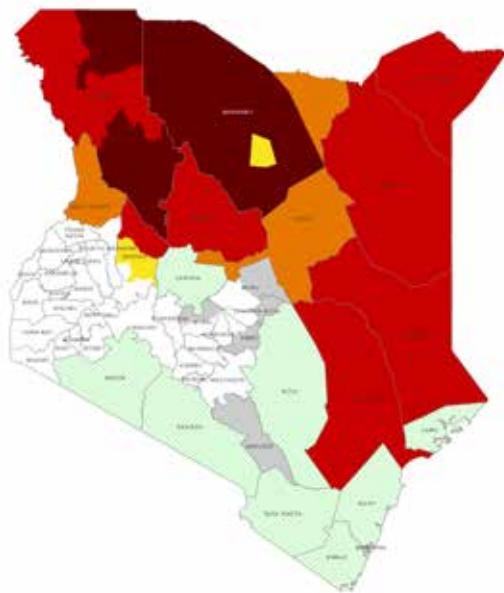
Deteriorated forage and water resources during the first half of 2019 led to atypical livestock migration resulting in increased resource-based conflicts over grazing rights and access to water resources in Meru North, Kitui, Samburu, Turkana, West Pokot, Marsabit, Tana River, Garissa, Isiolo and Nyeri counties. This subsided with the October–December rains when livestock returned to their traditional grazing lands (FEWS NET, August 2019). Periodic cattle rustling led to increased tensions, loss of livestock and limited access to markets. Sporadic terrorist attacks against civilians and state security forces by Al Shabaab affected trade and commodity movements in counties bordering Somalia (RoK, 2019).

Economic shocks

Maize prices, mostly stable at low levels in the first quarter of 2019, surged by 60–85 percent from March–June in markets located in main urban centres and in western key growing areas, as seasonal patterns were compounded by concerns over the impact of the severe dry conditions on 'long rains' crops. Subsequently, prices declined by about 30 percent from August–December, as local harvests increased supplies. However, prices in December remained 40–70 percent

Map 31

Kenya, IPC Acute malnutrition situation, August–October 2019



- 1 - Acceptable
- 2 - Alert
- 3 - Serious
- 4 - Critical
- 5 - Extremely critical
- Phase classification based on MUAC
- Areas with inadequate evidence
- Areas not analysed

Source: Kenya IPC Technical Working Group, October 2019.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

higher than 12 months earlier (FAO-GIEWS, December 2019), supported by crop production shortfalls, lower imports from Uganda and disruptions to transport infrastructure. A poor harvest due to heavy rainfall contributed to sustain the high level of prices, although the Government's stock release prevented further spikes (FAO-GIEWS, February 2020).

Livestock prices increased in late 2019 as animal body conditions improved, and in most pastoral key reference markets ranged from average to 42 percent above average in December. These increases outpaced those of cereal prices, and the goat-to-maize terms of trade were 6–23 percent above average in December, thus supporting gains in household purchasing power (FEWS NET, December 2019).

NUTRITION OVERVIEW

The nutrition situation deteriorated in several counties from February–July 2019. Laisamis, Turkana South and North were classified in Extremely Critical (IPC Phase 5). North Horr, Turkana Central and West, Mandera, Wajir, Garissa and Tiayti in Baringo county were in Critical (IPC Phase 4); Isiolo and West Pokot were in Serious (IPC Phase 3) (IPC, July 2019). See map 31. In ASAL counties over 541 300 children (6–59 months) required treatment for GAM in 2019, including 113 941 for SAM (UNICEF, March 2019).

Poor food availability (including of milk) and increasing food prices are among the drivers of this high prevalence of acute

malnutrition. Limited access to health and nutrition services following a scale-down of integrated outreaches in some areas, such as Laisamis in Marsabit, are also contributory factors. High morbidity, poor child-feeding practices, poverty, high illiteracy and poor infrastructure aggravate the problem (IPC, July 2019).

In 2014, the national prevalence of stunting was 26 percent, ranging from 'medium' in Nairobi and Central region to 'very high' in Coast and Eastern regions (DHS 2014).

By the end of the year 5 150 cholera cases had been reported with the outbreak still active in Garissa, Wajir, Turkana and Kirinyaga counties (European Centre for Disease Prevention and Control, accessed 27 January 2019). In the first half of the year, 418 measles cases were reported across Wajir, Tana River, Kilifi and Kwale counties. In September, 425 suspected cases were reported in Kajiado county and in December, a new outbreak was reported in Pokot North (WHO, January 2020).

Nutrition status of refugees in camps

The prevalence of GAM was 12.7 percent in Kakuma, 9.3 percent in Kalobeyei and 8 percent in Dadaab camps in December 2018. The prevalence of stunting averaged 22.6 percent in Kakuma and Dadaab, where a high prevalence of anaemia (>40 percent among 6–59 month-olds and non-pregnant women aged 15–49 years) was concerning. Nearly 11 percent of households were not consuming micronutrient-rich foods in Kakuma and Dagahaley (SENS, 2018).

Country profile



Lesotho

ACUTE FOOD INSECURITY

2019

Total population of country 2.3M



Population analysed 1.5M (63% of total population)

433 000 IPC Phase 3 or above in October 2019–March 2020

362 000 IPC Phase 3 Crisis **71 000** IPC Phase 4 Emergency

553 000 IPC Phase 2 Stressed

2018-19 Change



Another year of reduced harvests increased households' market reliance, while income-earning opportunities fell and prices soared, increasing levels of acute food insecurity.

2020 Forecast



Continuing dry-weather conditions could result in a poor 2020 harvest, worsening acute food insecurity.

NUTRITION INDICATORS

2.1% of children under 5 years are acutely malnourished, of whom **0.8%** are affected by SAM.
34.5% of children under 5 years are stunted.

MICS 2018

18.6% of children 6–23 months meet the minimum dietary diversity requirement.
59% of children under 6 months are exclusively breastfed.

MICS 2018

50.4% of children under 5 years and **27.4%** of women 15–49 years are anaemic.
79.4% of households have access to at least basic drinking water services.

WHO 2019
MICS 2018

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Weather extremes

- Rainfall deficits caused a decrease in staple food production for the second consecutive year.
- The poor harvests reduced households' food supplies and income-generating opportunities in a country reliant on agricultural labour.

Economic shocks

- Higher prices of staple cereal products diminished households' capacity to access food.
- Labour opportunities during the harvest were limited by the poor crop performance and construction and domestic work opportunities also decreased.

- Chronic malnutrition among under 5s is a greater concern than acute malnutrition and is mainly driven by children having diets that are severely lacking in nutritional diversity.



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LESOTHO

Unpredictable weather conditions have reduced productivity in a country where more than 70 percent of the population works in agriculture. Makhomo, a 68-year-old widow from Boleka village, has experienced the impact of drought firsthand.

BACKGROUND

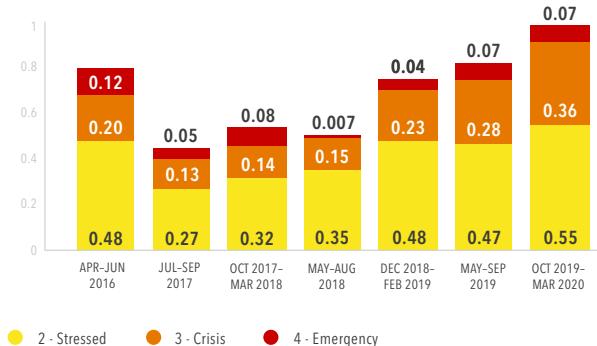
Half of the population lives in poverty, rising to 61 percent or 801 000 people in rural areas. Some 31 percent of rural Basotho live in extreme poverty.¹ Unemployment is estimated at 28 percent overall and 43 percent among youths aged 15–24. About 71 percent of the population is involved in some form of agricultural work, mainly low productivity subsistence agriculture and/or low-paying agricultural jobs. Smallholders have limited use of irrigation, improved seed, fertilizers and pesticides, contributing to low yields and widespread rural poverty. Climate change and environmental shocks are major challenges, especially frequent droughts and heavy seasonal floods (WB, December 2019).

ACUTE FOOD INSECURITY OVERVIEW

An estimated 433 000 people – representing 30 percent of the population analysed – were assessed to be in Crisis or worse (IPC Phase 3 or above) in the October 2019–March 2020 period, with all areas of the country classified in Crisis (IPC Phase 3). Out of this total number, an estimated 362 000 people were classified in Crisis (IPC Phase 3) and 71 000 in

Figure 51

Number of people (millions) in IPC Phase 2 or above in 2016–2020



Source: Lesotho IPC Technical Working Group

¹ The extreme poverty line is based on a food basket required to achieve the minimum daily calorie requirement of 2 700 kilocalories (kcal) per adult equivalent per day.

Map 32

Lesotho, IPC Acute food insecurity situation, October 2019–March 2020



Source: Lesotho IPC Technical Working Group, July 2019.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Emergency (IPC Phase 4) meaning they needed urgent action to save lives and livelihoods. Approximately 553 000 people faced Stressed (IPC Phase 2) conditions and were in need of longer-term resilience-building and livelihood protection measures (IPC, July 2019).

Compared to the previous year's acute food insecurity peak in December 2018, when 274 000 people needed urgent humanitarian food assistance, the number of people facing Crisis or worse (IPC Phase 3 or above) conditions increased by 58 percent (IPC, November 2018).

FACTORS DRIVING ACUTE FOOD INSECURITY

Weather extremes

Lesotho experienced extreme rainfall deficits between October 2018 and January 2019 (FAO-GIEWS, December 2019). The Normalized Difference Vegetation Index (NDVI) at the beginning of February was about 60–90 percent below normal (FEWS NET, February 2019).

The area planted for maize for 2018/19 dropped nationwide and was significantly lower than the past four years (LVAC, July 2019). Maize production, which accounts for the bulk of the national cereal output, was estimated at about 35 000 tonnes, over 60 percent below the previous five-year average

(FAO-GIEWS, December 2019). Compared with the previous year, 2018/19 maize production decreased by 73 percent, wheat by 61 percent and sorghum by 93 percent (LVAC, July 2019).

Although the overall availability of maize, the key food staple, remained stable as domestic supplies were buttressed by imports from South Africa, the harvest shortfalls led to food gaps for many rural households (LVAC, July 2019).

At the district level, there was a significant decrease in cereal production in southern Qacha's Nek district (LVAC, July 2019), due to extreme rainfall deficits at the start of the cropping season. As a result of the steep production decline, almost 10 percent of the district's population was classified in Emergency (IPC Phase 4) (IPC, July 2019).

Overall, 39 percent of households own livestock, rising to 60 percent in Mokhotlong, 59 percent in Thaba-Tseka and 51 percent in Mohale's Hoek. Livestock deaths increased, attributed to lack of water and pasture as well as diseases. Households sold stock to buy food, pay for education and medical expenses (LVAC, July 2019).

Economic shocks

After two consecutive years of reduced crop production, households' minimal food stocks made them more reliant on market supplies to meet their consumption needs. However, lower income levels and higher food prices adversely affected their capacity to buy food (IPC, July 2019). In 2019, 23 percent

of households allocated at least half of their income for food purchases (LVAC, July 2019).

From June–October, labour opportunities during the harvest were limited by the poor crop performance (LVAC, July 2019) and other earning opportunities, such as construction and domestic work, also decreased as many households allocated limited incomes to food rather than hiring casual labourers (FEWS NET, June 2019). Agricultural employment improved towards the end of 2019 but remained below typical levels (FEWS NET, December 2019).

Sales of livestock products decreased by 70 percent, crop sales by over 64 percent and weeding by 53 percent. On average, 5.2 percent (102 families) reported to have at least one member of the household who had migrated to South Africa, rising to 35 percent in Leribe and 14 percent in Berea (LVAC, July 2019). According to the WB, remittances are decreasing as employment in South Africa, particularly in the mining sector, has recently declined (WB, December 2019).

Food prices were 7 percent higher year-on-year in November 2019 and, specifically, the price of bread and cereals, the country's primary staple foods, were up by 11 percent (BOS, November 2019). The increase in cereal prices mostly reflected high prices in South Africa, the country's main supplier of grains, while the reduced domestic harvest exerted additional upward pressure on food prices (FAO-GIEWS, December 2019).

NUTRITION OVERVIEW

The rates for acute malnutrition were 'very low' with 2 percent of children aged 6–59 months wasted, less than 1 percent severely so (MICS, 2018). This marked an improvement from 2017 when 5 percent were wasted (LVAC 2017). Prevalence of wasting among boys (2.4 percent) was slightly higher than among girls (1.7 percent) (MICS, 2018). Chronic malnutrition remained 'very high' with 34.5 percent of children under 5 years stunted, rising to around 45 percent in the foothills and mountains ecological zones (MICS, 2018).

Only 10.4 percent of children aged 6–23 months consumed a minimum acceptable diet required for their growth and development, though the proportion rose to 19 percent among children in urban areas versus 6 percent in rural areas. Just 59 percent of infants were exclusively breastfed until 6 months (MICS, 2018).

Close to 90 percent of households used improved drinking water sources but with 9 percent of them taking more than 30 minutes for water collection. Therefore, the percentage of those with access to at least basic drinking water services fell to 79 percent, ranging from 71 percent in rural areas to 94 percent in urban areas. Seventy-three percent used improved sanitation facilities while 19 percent defecated in the open, increasing to 28 percent in rural areas (MICS, 2018).

By the end of the year the measles outbreak in Lesotho was ongoing in Qacha's Nek district. As of 15 November, a total of 59 suspected cases had been reported, with no reported associated deaths (WHO Bulletin, December 2019).

Lesotho had 340 000 people living with HIV. Among adults the prevalence was 23.6 percent. Of those with HIV, 57.6 percent were women (UNAIDS, 2018).

Country profile

Madagascar



ACUTE FOOD INSECURITY

2019

Total population of country **26.3M**Population analysed **4.6M** (18% of total population)

1.3M IPC Phase 3 or above in November 2018–March 2019

941 000 IPC Phase 3 Crisis **366 000** IPC Phase 4 Emergency

1.3M IPC Phase 2 Stressed

2018-19 Change

In 2019, cereal production – especially for rice – increased by comparison with 2018 and the five-year average, **improving** food security levels.

2020 Forecast

Food security is forecast to **improve** in 2020 due to multi-sectoral humanitarian response and good rainfall during the growing season.

NUTRITION INDICATORS

6% of children under 5 years are **acutely malnourished**, of whom **1%** are affected by SAM.

MICS 2018

42% of children under 5 years are **stunted**.

MICS 2018

25% of children 6–23 months meet the **minimum dietary diversity** requirement.

MICS 2018

51% of children under 6 months are **exclusively breastfed**.

MICS 2018

48.8% of children under 5 years and **36.8%** of women 15–49 years are **anaemic**.

WHO 2019

41% of households have access to at least basic **drinking water** services.

MICS 2018

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Weather extremes



Crop pests

Economic shocks

Economic shocks

- Rainfall deficits had a negative impact on rice and maize crops in late 2018 in south-western, eastern and extreme southern parts.
- In 2019 four cyclones – Desmond, Ekestang, Gelena and Belna – flooded maize and rice fields and displaced local populations.
- Lack of access to inputs and poor irrigation infrastructure contribute to a structural cereal deficit.

- Vulnerable households faced high food prices, low incomes and high agricultural production costs, especially in the Grand Sud.
- Droughts, floods and tropical cyclones, coupled with chronic poverty, severely limited food availability and access especially during the lean season.

- Major contributing factors to the deterioration of the nutritional situation in some areas include inadequate food intake and low dietary diversity of children.
- Low vaccination rates and poor sanitation and hygiene lead to a high prevalence of diseases (diarrhoea, Acute Respiratory Infection, malaria and measles), but people lack access to health services.



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MADAGASCAR

Travelling to market by Zebu cart: the lean season started early as rainfall deficits had a negative impact on rice and maize crops in late 2018 in south-western, eastern and extreme southern parts—by January households had already depleted their food stocks and were market reliant.

BACKGROUND

Madagascar's high exposure to natural disasters, including droughts, floods, tropical cyclones, locust invasions and epidemics, coupled with chronic poverty (75 percent of Malagasy live on less than USD 1.90 per day (WB, October 2019)), severely limit food availability and access, particularly during the lean season. Southern areas have experienced repeated drought, notably in 2015/2016 and 2017/2018 (WFP, May 2019). In January 2019, President Andry Rajoelina was inaugurated after peaceful elections in December 2018, therefore ending a decade-long period of political instability (UN, 2019).

ACUTE FOOD INSECURITY OVERVIEW

At least 1.3 million people were in Crisis or worse (IPC Phase 3 or above) during the lean season between November 2018 and March 2019 in southern and eastern districts, which included around 366 400 people in Emergency (IPC Phase 4). Most of these acutely food-insecure people were in the arid Grand Sud area.¹ In addition over 1.3 million people were

Figure 52

Number of people (millions) in IPC Phase 2 or above in 2017–2020

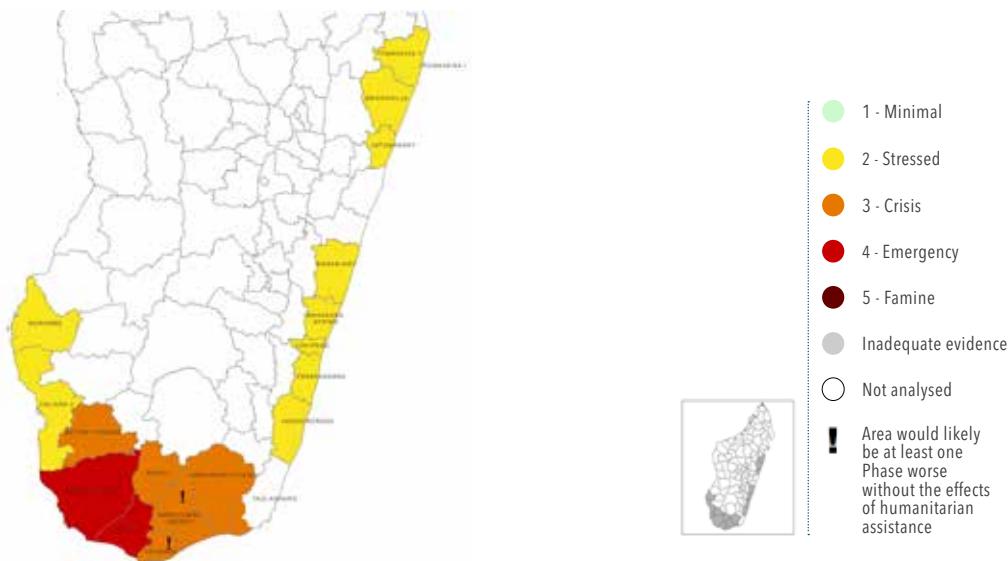


Note: These figures represent IPC numbers for common areas analysed to allow comparability
Source: Madagascar IPC Technical Working Group

¹ The 'Grand Sud' encompasses the following districts: Ambovombe, Bekily, Beloha, Tsihombe (Androy), Taolagnaro, Amboasary (Anosy), Ampanihy, Betioky, Morombe and Toliera II (Atsimo Andrefana).

Map 33

Madagascar, IPC Acute food insecurity situation, November 2018–March 2019



Source: Madagascar IPC Technical Working Group, October 2018.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

classified in Stressed (IPC Phase 2) during this period (IPC, October 2018).

Ampanihy and Beloha districts were classified in Emergency (IPC Phase 4), while Ambovombe and Tsihombe were in Crisis (IPC Phase 3!) only thanks to the provision of humanitarian assistance. Amboasary, Betioky and Bekily faced Crisis (IPC Phase 3) conditions and all the other districts analysed faced Stressed (IPC Phase 2) (IPC, October 2018).

With the beginning of the main harvest period, the food security situation improved from June when around 730 500 were classified in Crisis or worse (IPC Phase 3 or above) including 135 000 in Emergency (IPC Phase 4) in three districts of the Grand Sud. Food security further improved by July–October when no populations were classified in Emergency (IPC Phase 4) and around 500 000 were in Crisis (IPC Phase 3) (IPC, November 2019).² The number in need of urgent assistance started to increase again during the lean season from November, reaching 728 000 in Crisis or worse (IPC Phase 3 or above). (IPC, November 2019).³

FACTORS DRIVING ACUTE FOOD INSECURITY

Weather extremes

Rainfall deficits had a negative impact on rice and maize crops in late 2018 in south-western, eastern and extreme southern parts (FAO-GIEWS, January 2019). Western areas faced a decrease in local rice production because of well below-average rains, while in southern areas maize production was near zero following unevenly distributed rainfall, pest outbreaks and high costs of seeds (FEWS NET, April 2019).

Cyclones Desmond and Ekestang in early 2019 flooded maize and rice fields in south-western and middle-western areas (FEWS NET, January 2019), and cyclone Gelena brought above-average rainfalls in northern areas (FEWS NET, February 2019). Overall, the 2019 cereal production increased compared to the previous year and to the five-year average, with significant increases in rice production, which was 18 percent above 2018 levels and cassava production, which was 12 percent above.

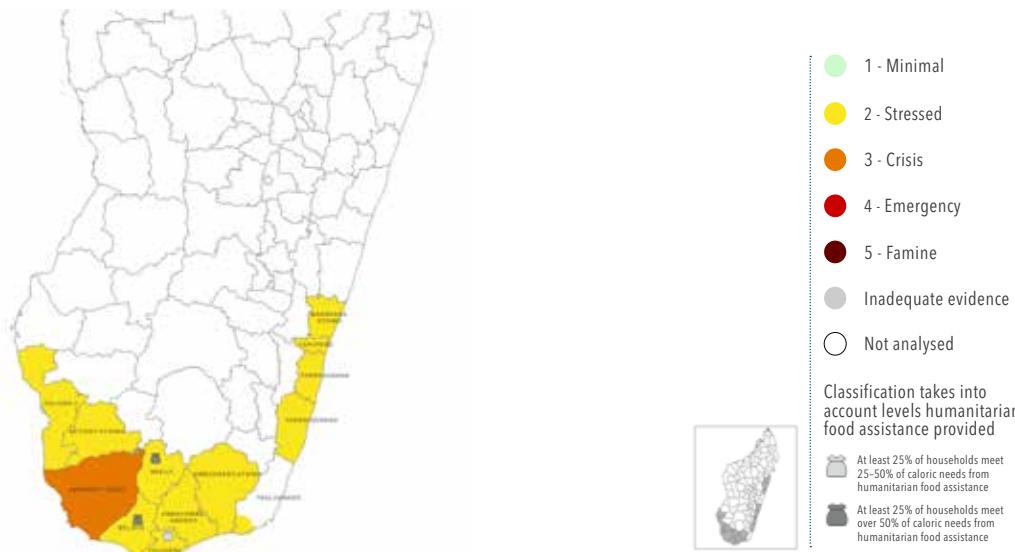
However, significant production shortfalls were reported locally, such as in the Grand Sud where the region of Androy has experienced a significant drop in rice production over the past six years. In these areas, despite favourable rainfall compared to the previous year, agricultural production remained constrained by the lack of inputs resulting from previous failed agricultural campaigns (MAEP, FAO and WFP,

² Humanitarian assistance was provided in Bekily, Beloha and to a lesser extent in Tsihombe between July and October.

³ October 2018 and November 2019 data are not comparable due to a different coverage of analysis. However, in the comparable areas, the number of acute food insecure in October 2019 – March 2020 was lower than during the 2018 lean season.

Map 34

Madagascar, IPC Acute food insecurity situation, July–October 2019



Source: Madagascar IPC Technical Working Group, November 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

2019). Localized dry spells and cyclones also affected the start of the 2019/2020 season. In late October, around 80 percent of the Grand Sud faced 'moderate' or 'severe drought' (UNICEF, November 2019). On 9 December, tropical cyclone Belna made landfall on the western coast and displaced 2 300 people (OCHA, December 2019).

Crop pests

Fall armyworm infestations also contributed to the 2018/2019 maize production being 30 percent below the five-year average, including significant shortfalls in the southern and south-western areas (FEWS NET, October 2019). According to FAO estimates, the outbreak infested half of maize crops (FAO, December 2019), which discouraged farmers from planting (FAO-GIEWS, November 2019). Locust infestations affected rice and pulse crops in southern and central-southern areas (FEWS NET, July 2019), although to a lesser extent than in the previous decade.

Economic shocks

By January, households were highly dependent on markets during the lean season because of the low 2018 cereal output and early depletion of food stocks (FEWS NET, March 2019), particularly in the southern and south-eastern areas. Heavy rains following the cyclones affected supply routes to southern markets (FEWS NET, January 2019) where around four in five communes faced shortages of cassava. Rice prices were

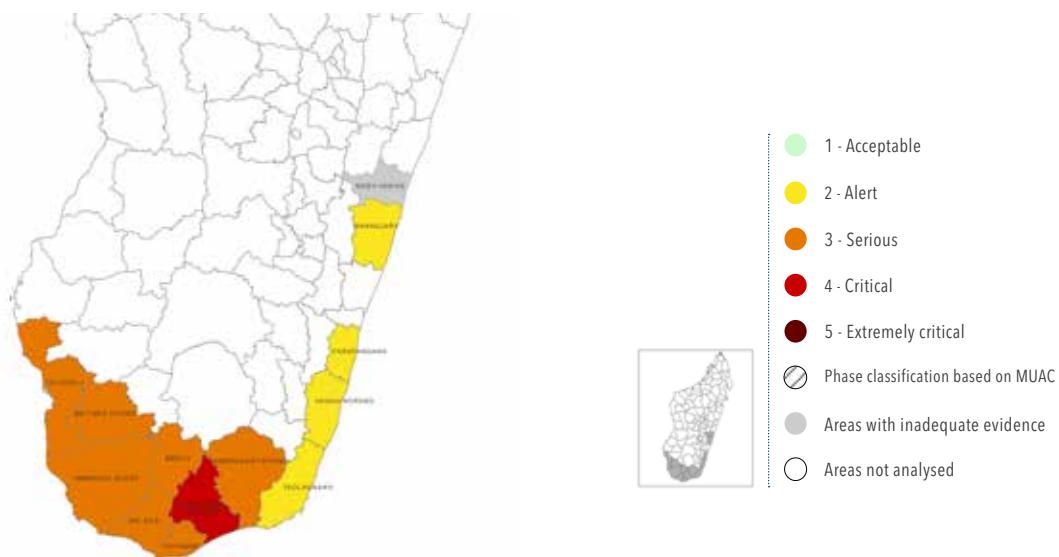
14 percent above their year-earlier levels, maize prices were 39 percent higher, and cassava 50 percent higher. Daily wages were low and decreasing due to a limited demand for labour. Four in five vulnerable households in the south, and two in three in the south-east had to reduce their number of daily meals as a coping strategy until April–May (SISAV, February and April 2019).

In the post-harvest period in July–August, rice prices were still 10 percent above their year-earlier levels in Grand Sud (SISAV, August 2019). The lean season started earlier than usual – in October instead of December – because of reduced production in these areas and early depletion of households' stocks (FEWS NET, September 2019).

More generally, a structural issue continued to constrain food security in 2019, as rice production was curtailed by lack of access to inputs and poor irrigation infrastructures (FAO-GIEWS, June 2019). For instance, poor southern farmers cropped only half of agricultural land in early 2019 because they could not afford to buy seeds and cuttings (FEWS NET, February 2019). Despite the rebound in rice production in 2019, a significant cereal deficit remained and cereal import requirements for 2019/2020 were forecast at 600 000 metric tonnes (FAO-GIEWS, November 2019). However, high prices of local and imported products affected households' purchasing power due to the 10 percent depreciation of the local currency against the USD (FEWS NET, June 2019).

Map 35

Madagascar, IPC Acute malnutrition situation, November 2019–February 2020



Source: Madagascar IPC Technical Working Group, August 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

NUTRITION OVERVIEW

At national level, in 2018 wasting affected 6 percent of 6–59 month-old children, which is considered a 'medium' prevalence. Three out of 21 regions had a 'high' prevalence – Vatovavy Fitovinany (13 percent), Menabe (11 percent), and Betsiboka (11 percent). With a 'very high' level of children stunted (42 percent), chronic malnutrition is a major public health and development concern in Madagascar, in particular in Vakinankaratra (60 percent) Amoron'i Mania (55 percent) Haute Matsiatra (54 percent), and Bolngolava (52 percent) (MICS, November 2018).

In the first quarter of 2019, nutrition surveillance in eight southern districts of Madagascar showed a proxy GAM prevalence of 13.3 percent among children under 5 years old. The GAM prevalence was 'very high' in 22 out of 146 communes (UNICEF and WFP, February 2019).

Around 188 550 children were estimated to suffer from acute malnutrition from August 2019–February 2020, with 35 393 severe cases. The district of Bekily was classified in Critical (IPC AMN Phase 4) and Toliara II was in Serious (IPC AMN Phase 3). See map 35.

In terms of drivers of acute malnutrition, high levels of acute food insecurity in several areas were major contributors.

The districts of Ambovombe, Beloha, Tsihombe, Amboasary, Ampanihy and Betsiboka were facing both Crisis (IPC Phase 3) levels of acute food insecurity and Serious (IPC Phase 3) levels of acute malnutrition (IPC, August 2019).

Child-feeding practices in 2018 were far from optimal with half (51 percent) of children under 6 months exclusively breastfed, only 21 percent of children aged 6–23 months consuming a minimum acceptable diet and 25 percent meeting the minimum dietary diversity required for their growth and development (MICS 2018).

Low use of at least basic drinking water services (40 percent) was also a major concern (UNICEF and WHO, 2017). Due to low vaccination rates and poor sanitation and hygiene, Madagascar is regularly hit by epidemics.

The country faced an unprecedented measles outbreak in 2018–2019, with more than 204 000 registered cases and over 900 measles-related deaths. While the measles epidemic was mostly under control by the end of the year, there is a high possibility that a new epidemic could begin at any time, especially during the rainy season (UNICEF, December 2019).

Country profile

Malawi



ACUTE FOOD INSECURITY

2019

Total population of country **18.1M**Population analysed **15.3M** (84% of total population)

3.3M IPC Phase 3 or above in October 2018–March 2019

2.9M IPC Phase 3 Crisis **449 000** IPC Phase 4 Emergency

5M IPC Phase 2 Stressed

2018-19 Change

The number of acutely food-insecure people remained **unchanged** between late 2018 and early 2019 as households were yet to recover stocks following the poor 2018 maize harvest and prices remained high.

2020 Forecast

An estimated increase in domestic maize production in 2019 due to conducive rainfall is likely to **improve** household level food availability and access.

NUTRITION INDICATORS

Host population

- 2.7%** of children under 5 years are **acutely malnourished**, of whom **0.6%** are affected by SAM.
- 37.1%** of children under 5 years are **stunted**.

DHS 2015-16
DHS 2015-16

- 25.1%** of children 6–23 months meet the **minimum dietary diversity** requirement.
- 60.9%** of children under 6 months are **exclusively breastfed**.

DHS 2015-16
DHS 2015-16

- 62.6%** of children under 5 years and **32.7%** of women 15–49 years are **anaemic**.
- 69%** of households have access to at least basic **drinking water** services.

DHS 2015-16
JMP 2017

Refugee population

- 1.0–1.6%** children under 5 years are **acutely malnourished** in 2 camps.
- 34.8–47.7%** of children under 5 years are **stunted** in 2 camps.

SENS/UNHCR 2016/19
SENS 2016

- 67.9–70.5%** of children under 6 months in 2 camps are **exclusively breastfed**.

SENS 2016

- 22.7–48.2%** of children under 5 years are **anaemic** in 2 camps.
- 99.4–100%** of households in 2 camps have access to improved **drinking water** sources.

SENS 2016
SENS 2016

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Weather extremes

- Rainfall deficits had caused cereal production shortfalls in 2018 and smallholders were yet to recover in early 2019.
- The poor harvests reduced households' food supplies and income-generating opportunities.

Economic shocks

- Prices of maize rose to record highs, straining economic access to food for low income households.
- Chronic malnutrition is a major problem and is mainly linked to low birth weight, poor maternal nutrition, low levels of education among mothers, child illnesses, lack of sanitation, lack of dietary diversity in under fives and poor access to healthcare.

DISPLACEMENT

53 200 Malawians were **internally displaced** because of cyclone Idai.

10/NOV
2019

There were around **45 000** refugees, from the Democratic Republic of the Congo (60%), Burundi (23%) and Rwanda (16%).

UNHCR/DEC 2019



MALAWI

In Malawi many structural issues, including insecure land tenure, lack of irrigation, low access to farm inputs, declines in soil fertility and dominance of maize, which is a thirsty crop, keep yields low and make smallholders extremely vulnerable to adverse weather events.

BACKGROUND

Approximately 83 percent of Malawians are engaged in predominantly rainfed agriculture, making food security, employment and the economy highly sensitive to weather extremes (prolonged dry spells, extremely high temperatures, drought, cyclones, floods and landslides). The effects of climate shocks are further exacerbated by an estimated national poverty rate of 52 percent, with a higher prevalence in the southern region (NSO, January 2019).

ACUTE FOOD INSECURITY OVERVIEW

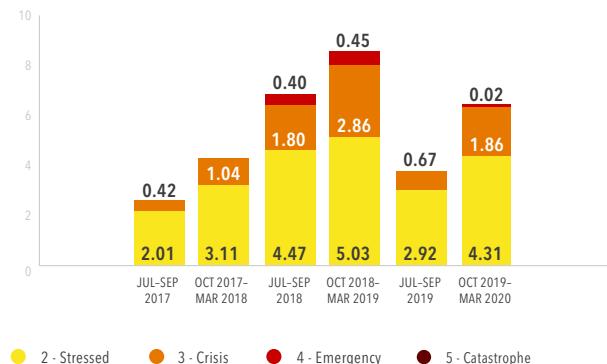
An estimated 3.3 million people were assessed to be facing Crisis or worse (IPC Phase 3 or above) levels of acute food insecurity from October 2018–March 2019, marking the peak period for 2019 (IPC, August 2018). Of this number, around 449 200 faced Emergency levels (IPC Phase 4). A very high number (over 5 million) were in Stressed (IPC Phase 2) with minimally adequate food consumption. The situation was worst in the southern part of the country, where 15 districts were classified in Crisis (IPC Phase 3).

As the year progressed, the food security situation was assessed to have improved. From July–September 2019 around 670 000 people were estimated to be in Crisis

(IPC Phase 3) and 2.9 million in Stressed (IPC Phase 2) (IPC, August 2019). But by the start of the lean season in November nearly 1.9 million people were acutely food insecure with nearly all of them classified in Crisis (IPC Phase 3) and a relatively small number (16 700) in Emergency (IPC Phase 4).

Figure 53

Number of people (millions) in IPC Phase 2 or above in 2017–2020



Note: July–Sept 2017 current and Oct 2017–March 2018 projected analyses cover only the rural population. The urban population represents around 5–6% of the population analyzed in the Jul–Sep 2018 and Oct 2018–Mar 2019 analyses.

Source: Malawi IPC Technical Working Group

Map 36

Malawi, IPC Acute food insecurity situation, October 2018–March 2019

- 1 - Minimal
- 2 - Stressed
- 3 - Crisis
- 4 - Emergency
- 5 - Famine
- Inadequate evidence
- Not analysed

Source: Malawi IPC Technical Working Group, August 2018.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

FACTORS DRIVING ACUTE FOOD INSECURITY

Weather extremes

Well below-average cereal production in 2018 principally as a result of unfavourable rains in the central and southern regions (maize production fell by 20 percent compared with 2017), and consequently low household-level food stocks, increased households' reliance on markets to meet consumption needs until the harvest in the second quarter of 2019 (FAO-GIEWS, December 2018).

In early March 2019, cyclone Idai caused severe flooding, crop losses, damage and destruction of homes in 15 districts in southern Malawi, affecting more than 922 000 people, with 59 dead and 677 injured (OCHA, February 2019). Widespread losses of food supplies, damage to standing crops and reduced access to markets aggravated acute food insecurity (IFPRI, March 2019).

From mid-2019, food security improved due to increased cereal production in central and northern districts thanks to beneficial seasonal rains. Improved household food supplies and income-generating opportunities from crop sales lessened the need for humanitarian food assistance. In the southern region prolonged periods of dry weather and the impact of Cyclone Idai caused shortfalls in cereal production that sustained high levels of acute food insecurity.

Economic shocks

Prices of maize, the country's key food staple, increased throughout 2019, only punctured by a brief seasonal decline between March and May, before reaching record highs near the end of the year. The early 2019 rise was mostly driven by domestic supply pressure, and while the larger harvest helped to alleviate this pressure in the immediate period following the April–June harvest, it was subsequently offset by heightened demand from importing countries across the sub-region (Zimbabwe, Mozambique, Zambia) leading to further price gains.

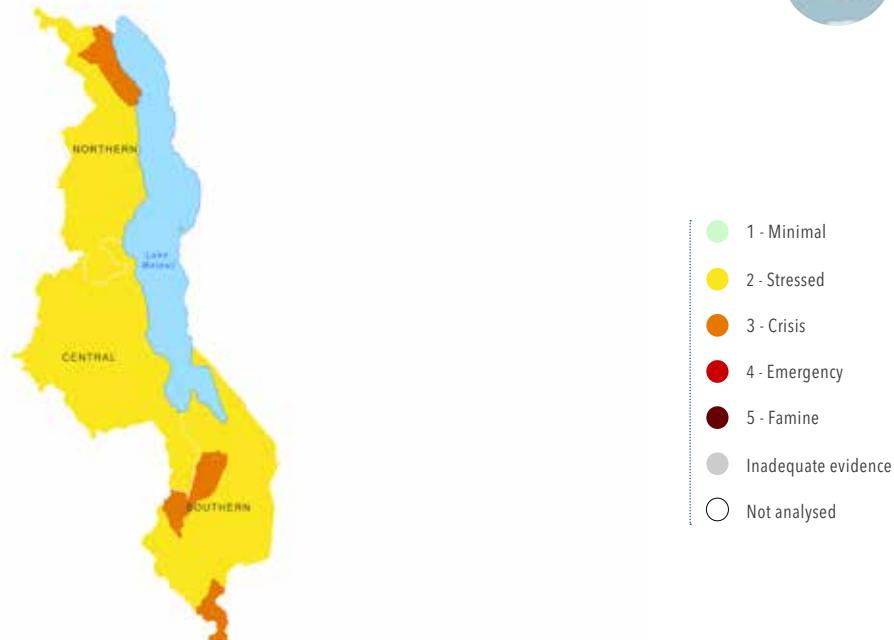
Institutional purchases, as the country sought to shore up the national strategic reserves, an upward revision to the farm gate price and a rise in petrol prices, combined to push up maize prices further at the end of the year (FAO-GIEWS, December 2019).

Purchasing power is also constrained by lack of income. Over 60 percent of all older youth and adults work in agriculture, but over a third of the working-age population is economically inactive, primarily youth aged 15–24, women and urban dwellers (IFPRI, May 2019).

Most of Malawi's 45 000 refugees and asylum seekers from the Democratic Republic of the Congo, Burundi and Rwanda live in the heavily congested Dzaleka Refugee Camp near the capital Lilongwe, which was set up in 1994 for 10 000 people. While many of these refugees have been in the country for

Map 37

Malawi, IPC Acute food insecurity situation, November 2019–March 2020



Source: Malawi IPC Technical Working Group, January 2020.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

decades, Congolese and Burundians continue to arrive at an average of 470 individuals per month (UNHCR, January 2020). The encampment policy limits refugees from accessing land, productive resources or formal employment and restricts freedom of movement. Without income-generating opportunities they are reliant on external assistance to meet their food and other basic needs.

Some 70.3 percent of refugees and asylum seekers in Dzaleka are below the ultra-poverty line (UNHCR and WFP, 2018). Faced with food assistance funding cuts and limited livelihoods opportunities, women and girls resort to harmful coping mechanisms, including transactional sex, for their survival and to support their families (UNHCR, 2018).

NUTRITION OVERVIEW

The 2015–16 Demographic and Health Survey found that the child wasting level was low at 2.7 percent. The southern region had higher wasting levels (3.5 percent) than northern (2.1 percent) and central (2 percent) regions (DHS 2015–16).

Just 8.1 percent of children aged 6–23 months consumed the minimum acceptable diet required for their growth and development. Twenty-five percent met minimum dietary diversity and 29.2 percent were fed the minimum frequency of meals. Exclusive breastfeeding rates reduced from 71.4 percent (in 2010) to 61 percent in children below 6 months of age in 2015/16. Inadequate child feeding practices

were likely one cause of high anaemia levels (63 percent) among children aged 6–59 months (DHS, 2015–16).

High rates of HIV infection also contribute to malnutrition. Almost 9 percent of adults aged 15–49 years old were HIV positive with the urban prevalence (15 percent) double that of the rural (DHS, 2015–16).

Nutrition status of refugees

Acute malnutrition rates among the refugee and asylum seeker population were very low, with the latest SENS nutrition survey in 2016 reporting a GAM prevalence of just 1 percent. However, chronic malnutrition rates were very high with 34.8 percent of children under 5 years affected by stunting. More than 22.7 percent of refugee children were anaemic. Younger children (around weaning age) were more likely to be malnourished.

Nearly 68 percent of children were exclusively breastfed in the first 6 months and 51.4 percent are introduced to complementary food at the age of 6 months. Diarrhoea incidence (27 percent) in children under 5 years in the camp was concerning (SENS 2016). All households accessed water from improved sources but quantities were low and the sources had potential to be contaminated during the rainy season (UNHCR 2017).

Country profile

Mali



ACUTE FOOD INSECURITY

2019

Total population of country **20.5M**Population analysed **20.5M** (100% of total population, including IDPs, returnees and refugees)

648 300 CH Phase 3 or above in October–December 2019

609 600 CH Phase 3 Crisis

38 800 CH Phase 4 Emergency

2.9M CH Phase 2 Stressed

NS

WB 2018
DISASTER HARMONISATION 2019

2018-19 Change

Despite a significant escalation in violence, food security **improved** as a result of above-average production and stable food prices.



2020 Forecast

Increasing insecurity is expected to **worsen** acute food insecurity in 2020, mainly through population displacement, and production and trade disruption.



NUTRITION INDICATORS

401 300 children under 5 years are acutely malnourished, of whom **166 200** are affected by SAM.
 26.6% of children under 5 years are stunted.

HNO 2020

17.3% of children 6–23 months meet the **minimum dietary diversity** requirement.
 40.3% of children under 6 months are **exclusively breastfed**.

SMART 2019

81.9% of children under 5 years and **63.4%** of women 15–49 years are anaemic.
 78% of households have access to at least basic **drinking water** services.

DHS 2018

JMP 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Conflict/insecurity Weather extremes Economic shocks

- Persisting insecurity and intercommunal conflict continued to disrupt livelihoods and humanitarian access in the centre and north.
- Despite above-average cereal production prospects, localized shortfalls occurred as insecurity forced farmers to abandon their fields.
- Unusual movements of herds were reported in central and northern areas and in neighbouring countries as well as cattle raids, and thefts.

- Localized rainfall deficits affected crop production and pasture conditions in the north and some regions of the centre and south-west.
- Traders were unable to access livestock and cereal markets in the northern and central areas.
- Malnutrition is linked with sub-optimal childcare and feeding practices and conflict-related shocks.

DISPLACEMENT

201 400 Malians were **internally displaced**, mainly as a result of insecurity in Mopti, Timbuktu, Gao, Kayes and Segou in 2018–2019.

IOM DEC 2019

There were **26 800** **refugees** and **asylum seekers** from Mauritania, Burkina Faso and the Niger.

UNHCR NOV 2019

There have been **561 600** **IDP returnees** and **74 700** **Malian refugee returnees** from 2013, mostly from Burkina Faso, the Niger, Mauritania and Algeria. Of those **5 300** refugees have returned since December 2018.

IOM DEC 2019



Conflict and violence have progressively spread from northern to central regions of Mali with the epicentre of the Malian crisis now the densely populated region of Mopti, one of the country's major food-producing areas.

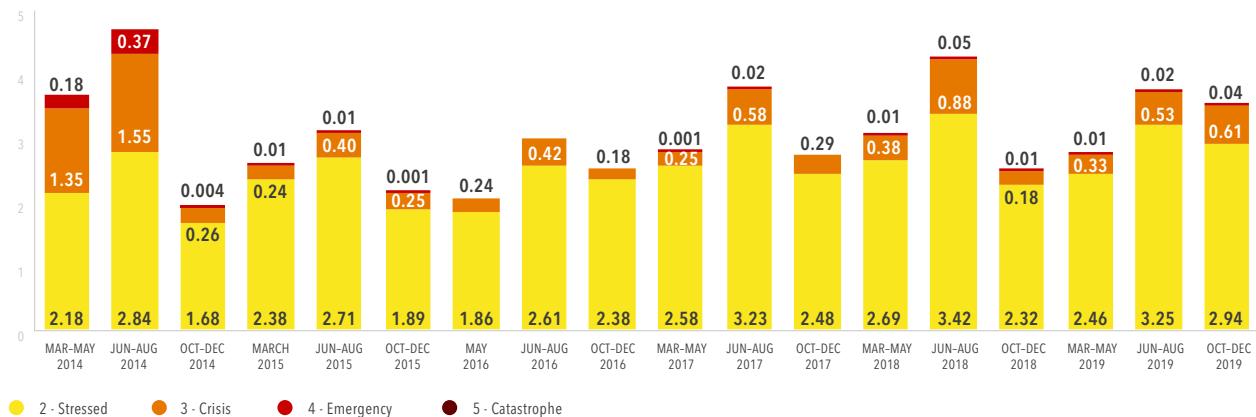
BACKGROUND

Mali has been the scene of perpetual conflict and displacement for eight years after soldiers in the capital, frustrated by the government's failure to quash a rebellion in the marginalized north, overthrew the president in 2012. Much of the 2015 Agreement of Peace and Reconciliation remains undelivered (Refugees International, December 2019). Since mid-2016 local conflicts and insecurity in central

and northern regions have multiplied, mostly targeting civilians, leading to increased vulnerability of populations and hampering humanitarian access.

Weather shocks, poverty and structural weaknesses contribute to the poor state of infrastructure, disruption of livelihoods and displacement (FAO, December 2019). Around 50 percent of the population lived under the international poverty line in 2009 (WB, 2019).

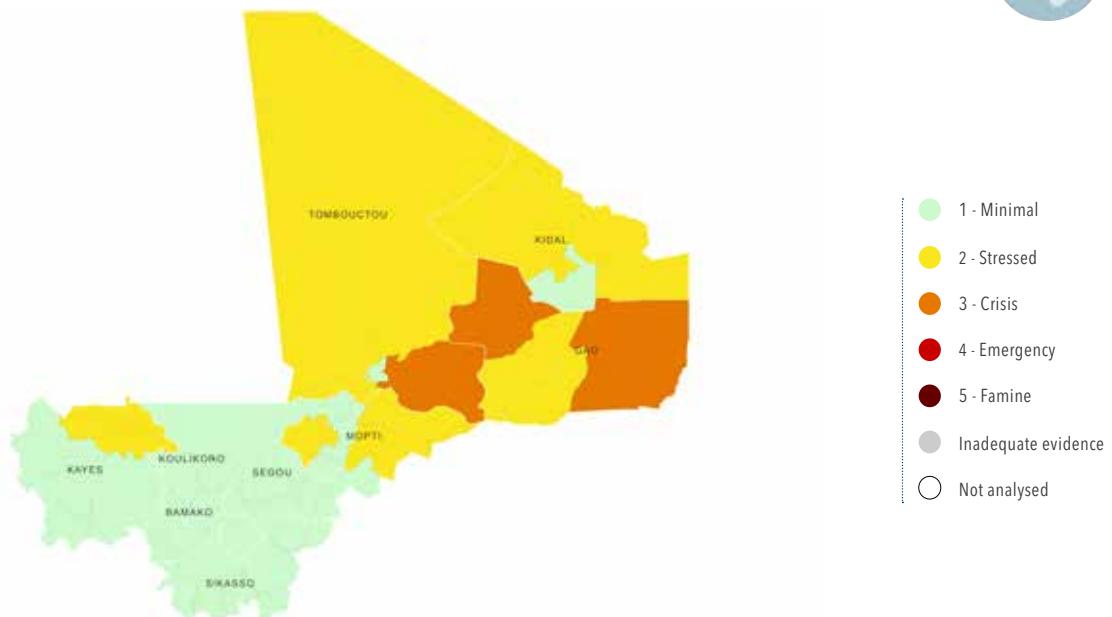
Figure 54
Number of people (millions) in CH Phase 2 or above in 2014-2019



Source: CLSS-Cadre Harmonisé

Map 38

Mali, CH Acute food insecurity situation, October–December 2019



Source: CILSS-Cadre Harmonisé, November 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

ACUTE FOOD INSECURITY OVERVIEW

Between October and December 2019, around 648 000 people were in Crisis or worse (CH Phase 3 or above), including 39 000 people in Emergency (CH Phase 4). Three out of four of these people – including all populations classified in Emergency (CH Phase 4) – were in the northern regions of Timbuktu, Kidal and Gao. In addition, 2.9 million were facing Stressed (CH Phase 2) conditions and at risk of slipping into Crisis (CH Phase 3) were they to face an additional shock or stressor. Three areas were classified in Crisis (CH Phase 3) in Gao and Timbuktu, and 15 others were in Stressed (CH Phase 2), mainly in Timbuktu, Gao, Kidal, Mopti and Kayes (CILSS-CH, 2019).

The number of food-insecure people continued increasing throughout 2019, rising from about 336 000 people in Crisis or worse (CH Phase 3 or above) in March–May to 554 000 in June–August. The number of people in Stressed (CH Phase 2) also increased overall, from around 2.5 million in March–May to 3.2 million in June–August (CILSS-CH, 2019). The central and northern regions were consistently the most affected.

FACTORS DRIVING ACUTE FOOD INSECURITY

Conflict/insecurity

Increasing insecurity was characterized by cattle raids, destruction of food stocks and abandonment of pastures, markets, villages and fields in the regions of Mopti, Timbuktu, Gao and Ségou. Despite above-average 2019 cereal production prospects, there were localized shortfalls in Kayes and Mopti. Pastoralists in these areas faced insecurity and limited access to pastures, particularly during the pastoral lean season from April–July (FEWS NET, May 2019). As a result, unusual movements of herds were reported in the centre and north and in neighbouring countries – Mauritania, Burkina Faso, the Niger and Côte d'Ivoire – as well as cattle raids and thefts (Ministry of Agriculture, November 2019). Most economic activities, including fishing, were affected by insecurity in the inner delta of the Niger River (FEWS NET, October 2019).

As of late November, around 199 000 people were internally displaced, which represents a 140 percent increase since early March 2019, mostly due to violence in Mopti, Gao and Ménaka, and in the bordering areas between Mali and Burkina Faso. In addition, the country hosted around 27 000 refugees mostly from Mauritania, Burkina Faso and the Niger. Around 562 000 IDPs and 74 000 refugees have returned to their homes since the crisis broke out in 2012, (UNHCR, December

2019). One in two IDPs depend on humanitarian aid and one in three depend on third person and host communities for their livelihoods (IOM, November 2019).

Weather extremes

Mali experienced generally favourable harvests except in areas such as western Sahel, and northern and central parts of the country that were affected by inadequate rainfall and/or insecurity. (FAO, December 2019). Although slightly below 2018 levels, overall, cereal production was 17 percent above the five-year average (FEWS NET, October 2019). Prolonged dry spells were reported in early June and in late September, which led to a reduction in maize planting (FEWS NET, August 2019).

Localized vegetation stress was detrimental to pastoralist households in western Sahel areas of Kayes, in the north and centre-south of Timbuktu, and localized areas in Gao and Kidal. Floods affected around 90 000 people from June–October mostly in the regions of Mopti, Timbuktu, Segou, Koulikoro and Bamako (Ministry of Agriculture, September 2019) and lowered crop production, particularly in rice-growing areas of the Niger River valley. Flooding also hampered transhumance, leading to livestock concentrations in certain areas (FAO, December 2019).

Economic shocks

Insecurity curtailed trade flows as traders were not able to access livestock and cereal markets in the north, in the areas bordering Burkina Faso and in the Niger Delta. Pasture deficits in western Sahel along with the disruptions to movement in conflict-affected areas, were likely to negatively affect livestock feeding conditions and pastoral households' incomes (FAO, December 2019).

As of February, insecurity, intercommunal conflicts and border closures disrupted trade flows between Mali and Algeria, Senegal, Benin and Guinea. As a result, in early 2019 prices were above their year-earlier levels in Western Sahel areas of Kayes (OMA et al, February 2019), as well as in Kidal, Ménaka and Mopti (WFP, March 2019). Seven markets – in Timbuktu, Gao, Mopti, Ségou, Kayes and Sikasso – were in Crisis because of elevated price levels and one was in Alert as of April (WFP, April 2019).

Households depleted their stocks earlier than usual in the Niger River valley in Gao and Timbuktu, and in some areas of the Niger River inner delta, and had to resort to negative coping strategies, such as buying food on credit, selling productive assets, begging or migrating – in a context of insecurity and disrupted livelihoods (FEWS NET, October 2019).

In the regions of Gao and Mopti, livestock exports decreased significantly due to insecurity, which limited traders' physical

access to markets (FEWS NET, June 2019). In October, terms of trade were favourable to livestock owners overall, except in Gao, Ménaka and in some areas of Timbuktu (Ministry of Agriculture, November 2019).

NUTRITION OVERVIEW

Preliminary results from the SMART survey in 2019 indicate unchanged acute malnutrition levels among children compared to 2018 (DHS, 2019), with 10 percent of children aged 6–59 months affected by wasting, 1.5 percent severely so (SMART, October 2019). This marks a 'high' GAM prevalence. The situation in the northern regions remained concerning with wasting at 'very high' levels exceeding 10 percent in Ménaka (15 percent), Timbuktu (13 percent), Gao (12 percent), Kidal (11 percent) and Taoudenit (11 percent). Severe acute malnutrition rates exceeded 2 percent in Ménaka (2.4 percent) and Timbuktu (2.5 percent) (SMART, October 2019). The stunting rate at national level was 'high' at 22.7 percent, rising to 'very high' in the regions of Sikasso (34.6 percent) and Mopti (31.7 percent).

Child feeding practices in 2019 were very poor with only 10.6 percent of children aged 6–23 months consuming the minimum acceptable diet required for their growth and development. Seventeen percent consumed food from four or more of the possible seven food groups, indicating they met minimum dietary diversity. Minimum meal frequency was adequate for just 37.7 percent of children. Even though breastfeeding was provided to 97 percent of children, exclusive breastfeeding until 6 months was available to only 40.3 percent (SMART, 2019).

The prevalence of anaemia among children aged 6–59 months was unchanged compared to 2001 levels, and affected 81.9 percent of children. Additionally, 63.4 percent of reproductive-age women were anaemic with the highest prevalence in Kayes region (73 percent). Nationally, anaemia is considered a severe public health problem (DHS, 2019).

Almost 1 200 cases of measles and 15 cases of yellow fever had been reported by December (WHO, December 2019).

Country profile

Mozambique**ACUTE FOOD INSECURITY**

2019

Total population of country **27.9M**

Population analysed 5M (18% of total population, not including IDPs, returnees and refugees)

1.7M IPC Phase 3 or above in October 2019–February 2020

1.4M IPC Phase 3 Crisis **265 000** IPC Phase 4 Emergency

1.6M IPC Phase 2 Stressed

2018-19 Change

Multiple and consecutive extreme weather events destroyed crops, disrupted livelihood systems and triggered food price rises, which significantly **worsened** acute food insecurity.

2020 Forecast

Acute food insecurity is expected to **persist** at similar levels in the first quarter of 2020 as household resilience has been undermined by drought and cyclone-related flooding.

NUTRITION INDICATORS**Host population**

67 500 children under 5 years are **acutely malnourished**, of whom **6 500** are affected by SAM.
42.6% of children under 5 years are **stunted**.

HPP 2018-2020
DHS 2011

28% of children 6–23 months meet the **minimum dietary diversity** requirement.
43% of children under 6 months are **exclusively breastfed**.

DHS 2011

60.2% of children under 5 years and **51%** of women 15–49 years are **anaemic**.

WHO 2016

56% of households have access to at least basic **drinking water** services.

Refugee population

18% of children under 5 years are **acutely malnourished** in 2 camps.
28.6% of children under 5 years are **stunted**.

SENS 2019
SENS 2015

68.4% of children under 6 months are **exclusively breastfed**.

SENS 2015

71.2% of children under 5 years and **56.5%** of pregnant and lactating women are **anaemic**.

SENS 2015

100% of households have access to improved **drinking water** sources.

SENS 2015

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS**Weather extremes**

- ▶ Multiple climatic shocks, beginning with poor rains at the start of 2019, caused substantial agricultural losses in the South.
- ▶ Tropical Cyclones Idai, Kenneth and Desmond in March and April brought flooding that displaced tens of thousands of people.
- ▶ The flooding destroyed crops in key central producing areas, infrastructure and livelihoods.

Economic shocks

- ▶ Abnormally high prices of staple maize grain constrained purchasing power of poor households.
- ▶ Armed violence in northern Cabo Delgado forced people to abandon their homes, crops, livelihoods and assets.
- ▶ Drought and floods exacerbated the root causes of acute malnutrition: poor child feeding and care practices, disease and poor access to safe water and sanitation.

Conflict/insecurity**DISPLACEMENT**

93 500 Mozambicans were internally displaced.

UNHCR MAY 2019

There were **4 700** refugees and **20 500** asylum-seekers from the Democratic Republic of the Congo, Burundi, Somalia and Rwanda.

UNHCR MAY 2019

There were **8 800** Mozambican refugee returnees and **8 800** IDP returnees.

UNHCR MID-YEAR 2019



MOZAMBIQUE

One month after Tropical Cyclone Idai caused catastrophic damage throughout Mozambique, Malawi and Zimbabwe in March 2019, farmer Maria Rita Charler Tome and her husband sit on the ruins of their mudbrick house.

BACKGROUND

Two decades of peace and stability since the end of the 16-year-long civil war allowed Mozambique to make progress in social and economic terms. The Peace and Reconciliation agreement was signed in July 2019.

According to a WB report, poverty fell from 59 percent of the population in 2008 to 48 percent in 2014, but these gains were accompanied by a widening gap between the better-off and the poor, hindering Mozambique's progress in achieving shared prosperity and ranking it among the most unequal countries in Sub-Saharan Africa (WB, November 2018).

The southern and central regions are prone to drought, floods frequently occur along major river basins and in poorly drained urban settlements, while coastal areas experience cyclones, storms and flash floods (WFP, January 2020).

ACUTE FOOD INSECURITY OVERVIEW

The number of people in Crisis or worse (IPC Phase 3 or above) was expected to increase from almost 1.4 million, representing 27 percent of the population analysed, in April–September 2019 to almost 1.7 million, representing 34 percent of the population analysed, in the October 2019–February 2020

lean season. Of these around 265 000 were expected to be in Emergency (IPC Phase 4).

The number in Stressed (IPC Phase 2) was expected to fall from over 1.7 million to 1.6 million as people faced higher levels of acute food insecurity (IPC, July 2019). Of the 39 districts analysed using IPC, it was estimated that from October 2019 at least 30 districts required a combination of urgent interventions such as food assistance, agricultural inputs, infrastructure reconstruction and livelihood support (IPC, July 2019).

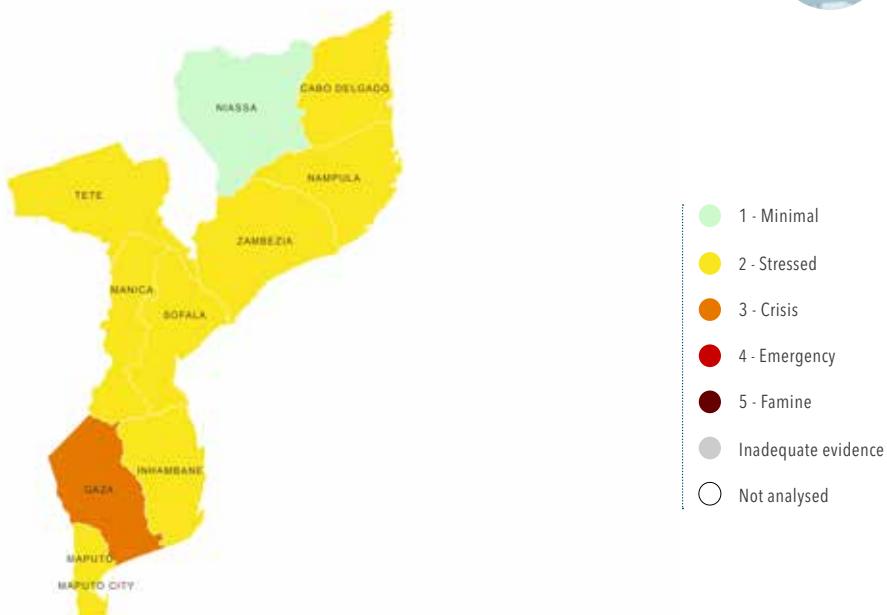
Acute food insecurity among refugees

After three years of internal political strife in Mozambique, the peace process concluded in 2018 resulted in a revision of the Constitution and the integration of the former combatants of the opposition movement into the armed forces and police. In this stabilizing political context, the majority of the Mozambican asylum-seekers in Zimbabwe were expected to return spontaneously in 2019 (UNHCR, February 2019). By the end of August 2019, there were 8 060 Mozambicans in Zimbabwe awaiting return.

Over 12 000 cases have been awaiting a refugee status determination decision by the Minister of Interior since 2011 (UNHCR, April 2019). Refugees in Maratane refugee camp have the right to work, but over 75 percent rely on food assistance as their main income, while 10 percent rely on crop

Map 39

Mozambique, IPC Acute food insecurity situation, January–March 2019



Source: Mozambique IPC Technical Working Group, October 2018.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

or animal production. Some two-thirds of in-camp refugees had acceptable food consumption, but over half (57 percent) were using high-risk coping strategies such as children contributing to family income, sale of assets and reducing adults consumption for children to eat.

An estimated 11 percent were 'vulnerable' and 18 percent 'moderately vulnerable' based on food consumption, coping and poverty (WFP, June 2019).

In the affected areas, where more than 80 percent of people are dependent on agriculture as their primary source of income, smallholders suffered major agricultural losses during the critical harvest period following an already-difficult lean season. They suffered destruction of infrastructure, assets and livelihoods. About 0.5 million hectares of crops were destroyed following Cyclone Idai's landfall (FAO, September 2019), while nearly 55 500 hectares were affected by Cyclone Kenneth (OCHA, May 2019).

Farmers in Manica and Sofala – the two provinces hardest hit by Cyclone Idai and the subsequent catastrophic flooding – produce approximately 25 percent of the national cereal output, yet all communities in Manica and 80 percent in Sofala reported harvesting less than half of their maize (OCHA, May 2019). Affected households reported having well below-average food stocks, leaving many vulnerable households without the prospect of another full harvest until March 2020 (FAO/WFP, September 2019).

Following two consecutive years of below-average production in southern semi-arid areas, most poor households were unable to keep some of their harvested grain to be used as seeds for 2019. The devastating floods caused by Cyclone Idai in the central region again reduced households' ability to retain seeds for the current season and increased their dependence on borrowing or humanitarian assistance (FEWS NET, December 2019). These repeated extremes alter households' recovery capacities and undermine resilience.

FACTORS DRIVING ACUTE FOOD INSECURITY

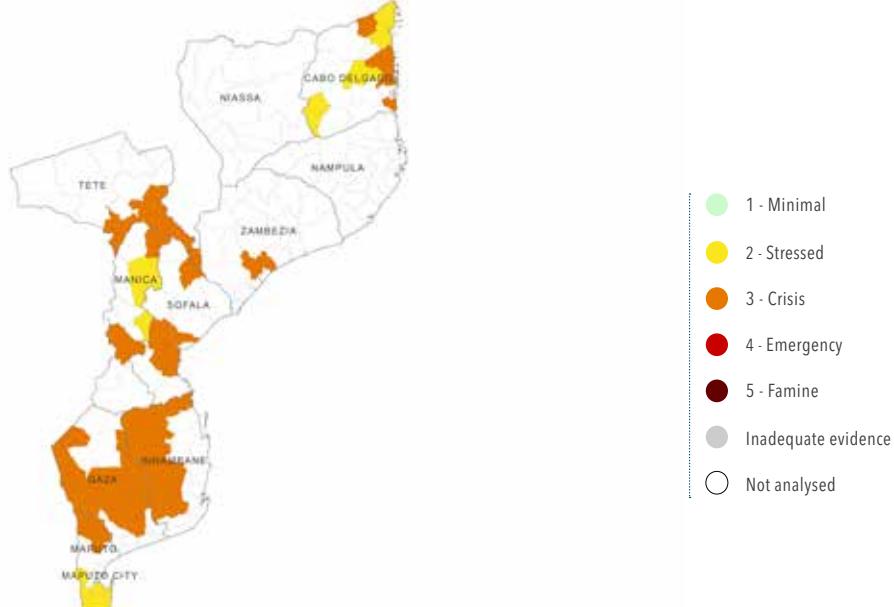
Weather extremes

At the beginning of the year a poor performance of the January–March rains in southern areas (Maputo, Gaza and Inhambane) caused substantial agricultural losses (IPC, July 2019).

Mozambique was hit by two consecutive tropical cyclones in March and April 2019, killing at least 648 people, injuring nearly 1 700 and leaving an estimated 2.2 million in need of humanitarian assistance and protection. Cyclone Idai made landfall in March 2019, bringing strong winds and torrential rains to Sofala, Zambezia, Tete and Manica provinces and Cyclone Kenneth struck the northern provinces of Cabo Delgado and Nampula six weeks later (HRP, 2019).

Map 40

Mozambique, IPC Acute food insecurity situation, October 2019–February 2020



Source: Mozambique IPC Technical Working Group, July 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Widespread fall armyworm outbreaks adversely affected crop yields, particularly maize crops. Dry weather conditions in some southern and central areas, prior to the cyclones, facilitated the spread of the pest, increasing its damage and impact on crop productivity.

As a result of the sharp decline in maize production and decrease in paddy output, 2019 cereal production was estimated at 2.8 million tonnes, about 16 percent lower than 2018, but still above the previous five-year average. Production of sorghum and millet was estimated at an above-average level thanks to the crops' greater resilience to water stress and the fact that they are normally planted in higher altitude areas that are less affected by flooding (FAO/WFP, September 2019).

Economic shocks

Economic growth in 2019 slowed due to the losses suffered in the agricultural sector, as well as the disruptive consequences of the cyclones on other sectors, such as transport, housing, industry and commerce, and energy (Government of Mozambique, May 2019).

Due to the impact of climate extremes on agricultural production and to higher year-on-year prices of maize grains in South Africa, a key supplier of maize for southern provinces of Mozambique, prices of white maize grain continued to rise in October and were about 50 percent above their year-earlier levels (FAO-GIEWS, December 2019). The abnormally high

prices of staple maize grain were expected to further constrain the purchasing power of poor households. By October, they were relying heavily on market purchase for food (FEWS NET, November 2019).

Conflict/insecurity

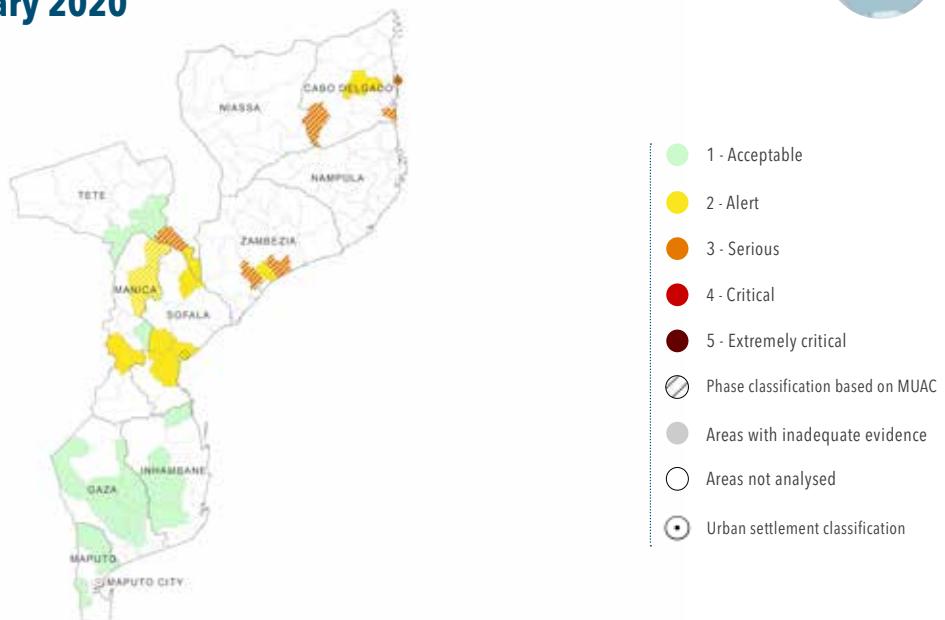
The government is grappling with a low-level so-called Islamic insurgency in parts of the gas-rich northern province of Cabo Delgado (WB, September 2019). Armed violence with attacks on civilians continued to force people to abandon their homes, crops, livelihoods and assets. Villages and health centres have been destroyed.

Recurrent since 2017, the violence has prevented humanitarian organizations from reaching those in need and local populations from accessing basic services, with displaced people and host communities particularly vulnerable. Having lost their harvest to Cyclone Kenneth, people increasingly turned to charcoal production for income because they feared being attacked if they ventured in their fields to plant crops outside Macomia town (ICRC, December 2019).

Results from the annual food security and nutrition analysis (SETSAN) prior to Cyclone Kenneth already showed a concerning food security and nutrition situation in five districts in the north of Cabo Delgado province linked to conflict and violence. Two of the districts (Macomia and Quissanga) were hardest hit by Cyclone Kenneth (OCHA, May 2019).

Map 41

Mozambique, Acute malnutrition situation, October 2019–February 2020



Source: Mozambique IPC Technical Working Group, July 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

NUTRITION OVERVIEW

The peak of acute malnutrition was expected during the lean season, from October 2019–February 2020, when an estimated 67 500 children under the age of 5 were forecast to need treatment for acute malnutrition, according to the IPC acute malnutrition analysis in 31 of the country's 128 districts in June 2019. An estimated 6 500 of them were affected by severe acute malnutrition (IPC, July 2019).

The number of districts facing a Serious (IPC Phase 3) situation increased from two in April–September, to six in October 2019–February 2020 with Nicoadala, Maganja da Costa, Balama and Doa deteriorating from Alert (IPC Phase 2) (IPC, July 2019). See map 41.

Generally, acute malnutrition increased in all analysed districts, particularly those affected by Cyclone Idai and floods (IPC, July 2019). However, the IPC analyses were conducted before Cyclone Kenneth hit Cabo Delgado. The cyclone was likely to reduce the quality and quantity of infant feeding,

further increase the occurrence of diarrhoea and malaria, and lower coverage of health and sanitation services and access to safe water sources (OCHA, May 2019).

Since the declaration of the cholera outbreak on 27 March 2019, by July 6 768 suspected cases had been reported in Sofala and 284 cases reported in Cabo Delgado province. An effective cholera vaccination campaign reached 98.6 percent of the population (WHO, July 2019).

Nutrition status of refugees

There is a lack of recent nutrition data for refugees and asylum seekers. In Maratane camp the acute malnutrition prevalence was 'low' in 2015 (SENS, 2015), but reports from health facilities suggest a 56 percent increase in the number of acutely malnourished children since 2018 (UNHCR 2019). Stunting was 'high' at 28.6 percent and anaemia levels were 'severe' with 71.2 percent of children anaemic (SENS, 2015). Sanitation was poor with 30.8 percent of households practising open defecation due to lack of latrines (SENS, 2015).

Country profile

Niger**ACUTE FOOD INSECURITY**

2019

Total population of country **21.8M**

Population analysed 21.8M (100% of total population, not including refugees)

1.4M CH Phase 3 or above in October–December 2019

1.4M CH Phase 3 Crisis **86 000** CH Phase 4 Emergency

4.5M CH Phase 2 Stressed

2018-19 Change

Conflict and insecurity, crop losses and floods drove up the number of people in Crisis or worse (IPC Phase 3 or above).

2020 Forecast

The situation is expected to worsen further next year if nothing is done to address the escalation of conflict in the central Sahel and the continuation of violence in Lake Chad. Biomass and crop production deficits will worsen the situation in localized areas.

NUTRITION INDICATORS**Host population**

1.2M children under 5 years are acutely malnourished, of whom **396 500** are affected by SAM.
45.7% of children under 5 years are stunted.

HNO 2020
SMAR 2019

6.3% of children 6–23 months meet the minimum dietary diversity requirement.
21.1% of children under 6 months are exclusively breastfed.

SMART 2019
SMART 2019

61.2% of children under 5 years and **45.1%** of women 15–49 years are anaemic.
50% of households have access to at least basic drinking water services.

SMART 2019
JMP 2017

Refugee population

12 500 children under 5 years in 5 camps are acutely malnourished, of whom **2 800** are affected by SAM.

SNS 2018

37.5–50.2% of children under 5 years in 5 camps are stunted.

SNS 2018

37% in Intikane camp, **8%** in Mangaize and **90+**% in the other three camps of children under 6 months are exclusively breastfed.

SNS 2018

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS**Conflict/insecurity****Weather extremes**

- Insecurity in Lake Chad Basin, Liptako Gourma, north Tahoua and south Maradi disrupted agricultural, pastoralist and trade activities.
- Conflict and insecurity forced large numbers of people to desert their homes, assets and livelihoods and become reliant on assistance.
- Rainfall irregularities, pest attacks and floods created cereal deficits for households in Tillabéry, Maradi, Tahoua and Zinder, prompting an early reliance on markets.

- In pastoral areas of Diffa, drought led to a sharp decline in the availability of pasture, reducing the purchasing power of livestock farmers.
- A grave malnutrition situation was exacerbated by insecurity lowering access to health services, and poor WASH services and child feeding practices, which are often worse among displaced populations.

DISPLACEMENT

Over 190 000 Nigeriens were internally displaced.

UNHCR DEC 2019

There were **217 000** refugees and **asylum seekers** from Nigeria (74%) and Mali (26%).

UNHCR DEC 2019

There were **30 000** Nigerian returnees from Nigeria.

UNHCR DEC 2019



NIGER

Farmer Al-Bashir Gamo Gamo was forced to abandon his home and livelihood in conflict-affected western Niger after an armed group killed five residents.

BACKGROUND

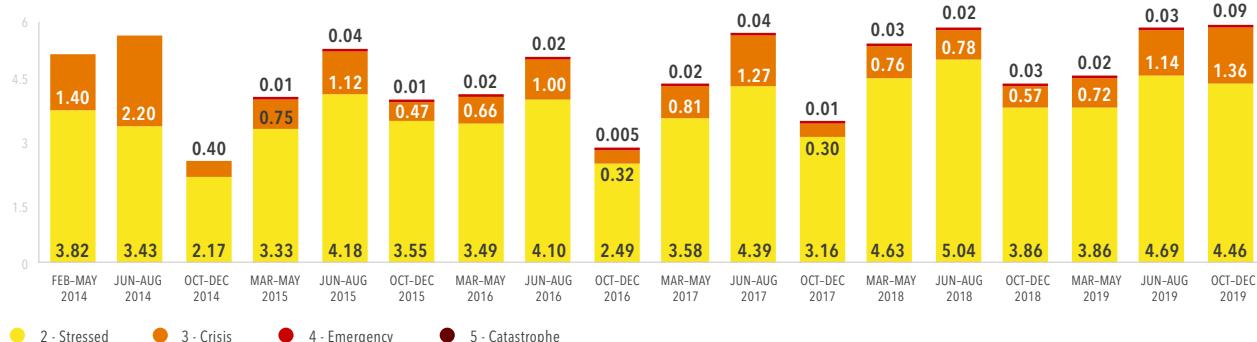
Ongoing and increasing armed group violence in areas bordering Burkina Faso, Mali and Nigeria has resulted in tens of thousands of displaced people needing access to basic services and protection and with no immediate prospect of returning home (ECHO, April 2019). In January, the government extended the state of emergency in conflict-affected Diffa, Tahoua and Tillabéri regions. Extreme poverty is estimated at 41.5 percent in 2019 (WB, October 2019). The Niger was ranked last out of 189 countries in the 2019 Humanitarian Development Index (UNDP).

ACUTE FOOD INSECURITY OVERVIEW

The number of people in Crisis or worse (CH Phase 3 or above) peaked at 1.4 million (7 percent of the population) in the October–December post-harvest period (CILSS-CH, November 2019). Of these, 89 000 were classified in Emergency (CH Phase 4). Some 4.5 million people were in Stressed (CH Phase 2). The vast majority of the acutely food-insecure people were in the four regions of Zinder (420 000), Tillabéri (355 000), Tahoua (262 000) and Maradi (214 000).

Figure 55

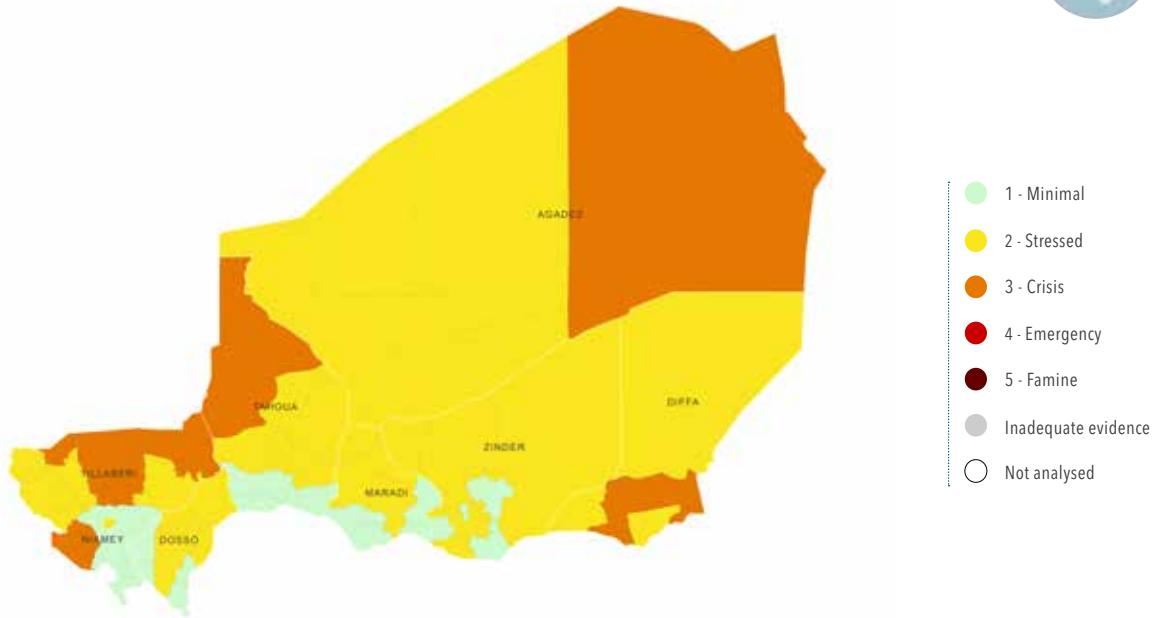
Number of people (millions) in CH Phase 2 or above in 2014-2019



Source: CILSS-Cadre Harmonisé

Map 42

Niger, CH Acute food insecurity situation, June–August 2019



Source: CILSS-Cadre Harmonisé, March 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Eight departments in those areas had more than 20 percent of their population in Crisis or worse (CH Phase 3 or above). Acute food insecurity deteriorated between 2018 and 2019 and was particularly severe for displaced people and pastoralists. In 2019, the peak number of people in need of urgent humanitarian food assistance was 82 percent higher than the 2018 peak when 0.8 million were in Crisis or worse (CH Phase 3 or above) during the lean period.

However, the situation was not as dire as the June–August 2014 lean season when 2.2 million in rural areas only were in need of urgent food assistance. Throughout 2019, the population in need of food support steadily rose from 0.7 million in Crisis or worse (CH Phase 3 or above) in March–May to around 1.2 million during the June–August lean period and peaked at the end of the year (CILSS-CH, November 2019).

Acute food insecurity among refugees

According to UNHCR, as of 31 October 2019, the Niger hosted 218 300 refugees, mostly from Nigeria and Mali. This included 161 400 Nigerians, who arrived since 2015, living in three camps and other locations along the Nigerian border and 56 500 Malians, who arrived since 2012, living in four camps and among host communities in Tillabéri and Tahoua. Around 45 000 of the Nigerian refugees arrived recently, living along the border area in Maradi.

Refugees and host communities face factors that erode food security, such as demographic pressure (including high

fertility rates), limited agricultural resources and deteriorating security, which limits already scarce economic opportunities. Refugees especially have trouble accessing fertile land.

An increasing number of Malian refugee households were moderately or severely food insecure compared to 2017 (WFP, 2017 and 2019).¹ Targeted food assistance introduced in early 2018 lowered refugees' capacity for self-sufficiency. The arrival of IDPs in the same regions further limited the prospect of the refugee population sustaining itself without food assistance. In the Lake Chad region, the situation remained as challenging as in previous years. Even with food assistance, around a quarter of the 70 000 Malian refugees in formal camps (17 500 people) were in Crisis or worse (CH Phase 3 or above) in October–December 2019.

FACTORS DRIVING ACUTE FOOD INSECURITY

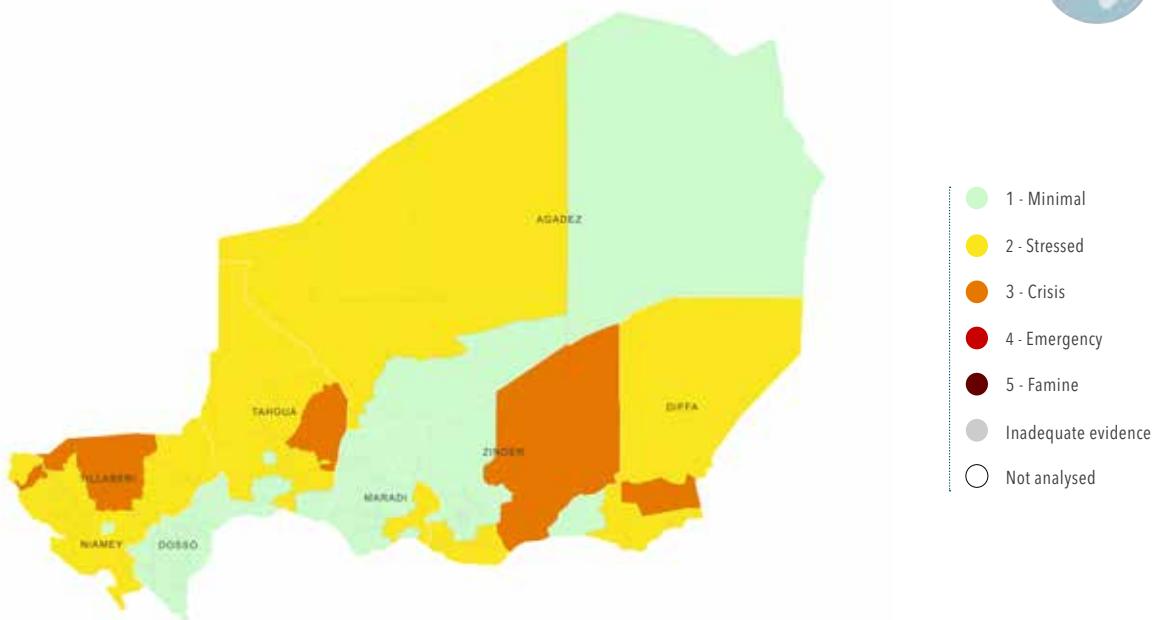
Conflict/insecurity

The Niger's Diffa region of the Lake Chad Basin has experienced violent activity by armed groups since 2014 with security incidents steadily increasing since December 2017 (OCHA, September 2019). Violence has also increased in Tahoua and Tillabéri regions over the last two years. During

¹ Based on CARI methodology.

Map 43

Niger, CH Acute food insecurity situation, October–December 2019



Source: CILSS-Cadre Harmonisé, November 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

April and May 2019, the security environment deteriorated in border areas with Burkina Faso (OCHA, May 2019). In conflict-affected areas of Diffa, Liptako Gourma, north Tahoua and to a certain extent south Maradi, crop production, trade, markets and livestock mobility were severely disrupted, decreasing food availability (FEWS NET, December 2019).

By the end of 2019, there were 109 000 IDPs in the Diffa region and 80 800 IDPs in host households in Tahoua and Tillabéri (UNHCR, December 2019) who had lost their livelihoods. In Tahoua and Tillabéri, community solidarity norms require host households to share their food with displaced persons, significantly reducing the quantities consumed in host households (FEWS NET, December 2019).

The escalating conflict in Mali and Burkina Faso since the end of 2018 led to an increase in the influx of refugees, with the number of Malians reaching 58 000 by the end of the year. There were 119 500 Nigerian refugees in Diffa and 44 800 in Maradi, the latter as a result of community tensions in Zamfara and Sokoto states in Nigeria (UNHCR, December 2019).

Weather extremes

Generally, the growing season had medium to good rainfall. However, households in Tillabéri, Maradi, Tahoua and Zinder regions faced cereal deficits caused by rainfall irregularities, pests and floods, in addition to conflict and displacement. This resulted in a gradual dwindling of cereal stocks and an early reliance on markets (FEWS NET, December 2019).

Floods caused by heavy seasonal rains, which began in June, affected over 211 000 people, destroying crops and livestock. In the last week of August, water levels of the Niger basin reached their highest levels since 2012 and overflow from dams in Burkina Faso and Mali contributed to the surging waters. The hardest hit regions were Zinder, Maradi and Agadez (OCHA, September 2019). In the Diffa region, heavy floods in October on irrigated pepper and rice crops damaged livelihoods and food availability.

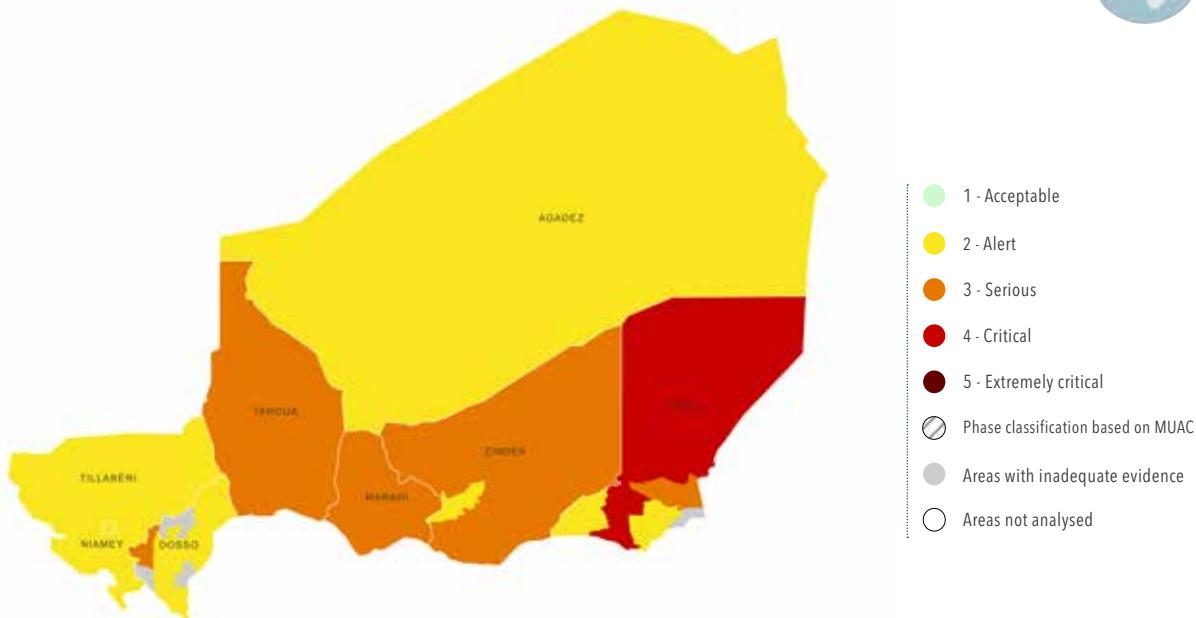
In pastoral areas, drought led to a sharp decline in the availability of pasture, which significantly reduced the purchasing power of livestock farming households (FEWS NET, December 2019). The production of biomass (defined as 'above-ground dry plant matter') decreased between 2018 and 2019, with major and recurrent deficits over the last few years in the regions of Tillabéri, Tahoua, Zinder and Diffa, which is having a grave impact on the livelihoods and food security status of pastoralists (ACF, 2019). The 2019–2020 pastoral season recorded a deficit of more than 11 million tonnes of dry matter (Ministère de l'Agriculture, 2019).

NUTRITION OVERVIEW

According to the IPC acute malnutrition analysis in December 2019, 918 360 children were acutely malnourished and in need of treatment. The analysis was conducted at the department level in five regions (Agadez, Diffa, Dosso,

Map 44

Niger, IPC Acute malnutrition situation, June–October 2019



Source: Niger IPC Technical Working Group, January 2020.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Maradi and Zinder) and at the regional level in the remaining three (Tahoua, Niamey and Tillabéri). Tahoua was classified in Serious (IPC Phase 3) and Niamey and Tillabéri in Alert (IPC Phase 2). Out of the 34 departments analysed in the other regions, two were in Critical (IPC Phase 4), 19 in Serious (IPC Phase 3) and 13 in Alert (IPC Phase 2). See map 44.

The major contributing factors to acute malnutrition varied from one unit of analysis to the other. Insecurity in the regions of Diffa, Tillabéri, Tahoua and Maradi was likely to have affected the nutritional status of children. Household acute food insecurity appeared to be a minor contributing factor in most of the areas analysed.

This grave malnutrition situation can be largely attributed to child feeding practices. Just 21.1 percent of children under six months were exclusively breastfed and only 6.3 percent of children aged 6–23 months received the minimum acceptable diet for their growth and development (SMART, 2019).

Anaemia was another major concern for malnutrition, affecting 61.2 percent of children aged 6–59 months and 45.1 percent of reproductive-age women (SMART, 2019). Poor access to safe drinking water and poor hygiene and sanitation conditions also contributed to the Niger's high levels of acute malnutrition. Only half of households had access to an improved source of drinking water within a 30-minute walk round trip from their home. The gap between rural (44 percent) and urban areas was significant (84 percent) (UNICEF and WHO, 2017).

The deteriorating security situation in bordering areas of Burkina Faso, Mali and Nigeria limited access to health services. As of 18 December 2019, four health centres and 47 health posts had closed due to insecurity in crisis-affected areas (WHO, December 2019). The high prevalence of malaria, diarrhoea and respiratory infections were also some of the major contributors to malnutrition in at least 18 out of the 34 departments analysed (IPC AMN 2019). In 2019, a total of 10 727 suspected cases of measles with 55 confirmed cases were reported in eight regions of the country, but the case incidence gradually decreased following the vaccination campaign in September (WHO, December 2019).

At 45.7 percent, stunting levels were 'very high' in children aged 6–59 months, reaching 55.4 percent in Maradi and 52.9 percent in Zinder (SMART, 2019).

Nutrition status of refugees

Nutrition surveys conducted in host and refugee populations showed a 'high' to 'very high' percentage of children affected by wasting in five refugee camps and settlements (12–16.1 percent GAM) (SENS, 2016). Four out of five of the camps and settlements documented SAM prevalence higher than 2 percent. Chronic malnutrition was also highly concerning, with stunting above critical levels (40 percent) in all camps/ settlements (SENS, 2018). In 2016, 35.5 percent of households in Sayam Forage camps and 32.6 percent in Kbalew were not consuming micronutrient-rich foods (SENS, 2016).

Country profile



Nigeria (16 states and Federal Capital Territory)

ACUTE FOOD INSECURITY

2019

Total population of country 201M



Population analysed 103.5M (51% of total population including displaced populations)

5M CH Phase 3 or above in June – August 2019

4.6M CH Phase 3 Crisis **412 000** CH Phase 4 Emergency

18.8M CH Phase 2 Stressed

NBS

WB 2018

CAADP/HARMONISE TECHNICAL WORKING GROUP MARCH 2019

2018-19 Change



Nationally, the number of people in Crisis or worse (CH Phase 3 or above) decreased by 7% since 2018, but in the north-eastern conflict-affected states the number remained constant at about 3 million.

2020 Forecast



The situation is expected to significantly worsen next year particularly in the north-eastern states affected by conflict and insecurity, if nothing is done.

NUTRITION INDICATORS

7% children under 5 years are acutely malnourished, of whom **1.5%** are affected by SAM.
32% of children under 5 years are stunted.

NNHS 2018

34.5% of children 6–23 months meet the minimum dietary diversity requirement.
27.2% of children under 6 months are exclusively breastfed.

NNHS 2018

67.9% of children under 5 years and **57.8%** of women 15–49 years are anaemic.
71% of households have access to at least basic drinking water services.

DHS 2018
JMP 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Conflict/insecurity Weather extremes

- In the north-eastern states, over 1.8 million people were internally displaced by intensified violence and insecurity.
- Insecurity prevented households from accessing land to sow crops and stopped people from engaging in livelihood activities.
- Around 800 000 displaced people were cut off from humanitarian aid in north-eastern Nigeria due to conflict.
- In north-western and north-central states, banditry, kidnappings and communal clashes damaged livelihoods and displaced over 540 000 people.
- IDPs in camps in Borno, host populations, and returnees were particularly vulnerable.

- In July, heavy rainfalls heightened the incidence of waterborne diseases especially in camps and camp-like settings with stagnant water, poor hygiene conditions and overcrowding.
- Between June and October, flooding across 32 of the 36 states and FCT affected over 210 000 people, displaced about 130 000 and damaged crops across the country.
- Factors relating to conflict, including displacement, exacerbate pre existing drivers of malnutrition including poor diets, sub-optimal childcare and feeding practices, lack of access to improved water, sanitation and health services.

DISPLACEMENT

2M Nigerians were internally displaced in six states of the north-east.

IDM 2019

540 000 Nigerians were internally displaced in the north-west and north-central areas.

There were **55 000 registered refugees and asylum-seekers** from Cameroon (96%), the Democratic Republic of the Congo (1%) and the Central African Republic (1%), a considerable increase compared to 33 000 in late 2018.

UNHCR 2019

There were **1.6M Nigerian IDP returnees** from three north-eastern states affected by the Lake Chad Basin crisis.

IDM 2019



NIGERIA

Soon after arriving in Teachers' Village Camp in Borno state in early 2019, this 20-year-old woman gave birth to a son. She had been hiding in the bush for days with no food or water following attacks by insurgents.

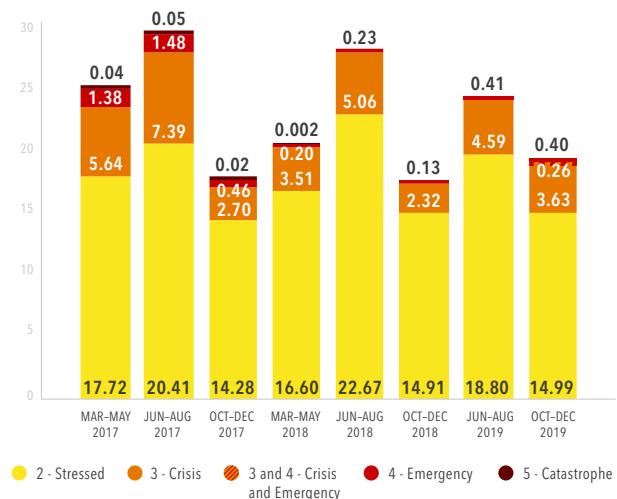
BACKGROUND

Persistent insecurity due to the 10-year-old Boko Haram insurgency is causing continuing misery and dangers for millions living in northern states. The situation appears to be getting worse as Islamic extremist groups grow stronger across the region (FEWS NET, February 2020). Climate change and a growing population is putting pressure on land, with growing tensions and violence between pastoralists and farmers leading to a lack of investment and failure to maximize the country's vast agricultural potential. Levels of poverty, especially in the north, remain stubbornly high, with half the people in Africa's most populous country estimated to be living on less than USD1.90/day (WB, April 2019).

ACUTE FOOD INSECURITY OVERVIEW

Acute food insecurity levels peaked from July–August 2019 when the number of people in Crisis or worse (CH Phase 3 or above) reached almost 5 million, representing five percent of the population analysed in the 16 states and the Federal Capital Territory (FCT). The figure included around 3 million people in the three states (known as BAY states) of north-eastern Nigeria, most of them in Borno (1.8 million), Yobe (945 000), and Adamawa (279 000). All 412 000 people

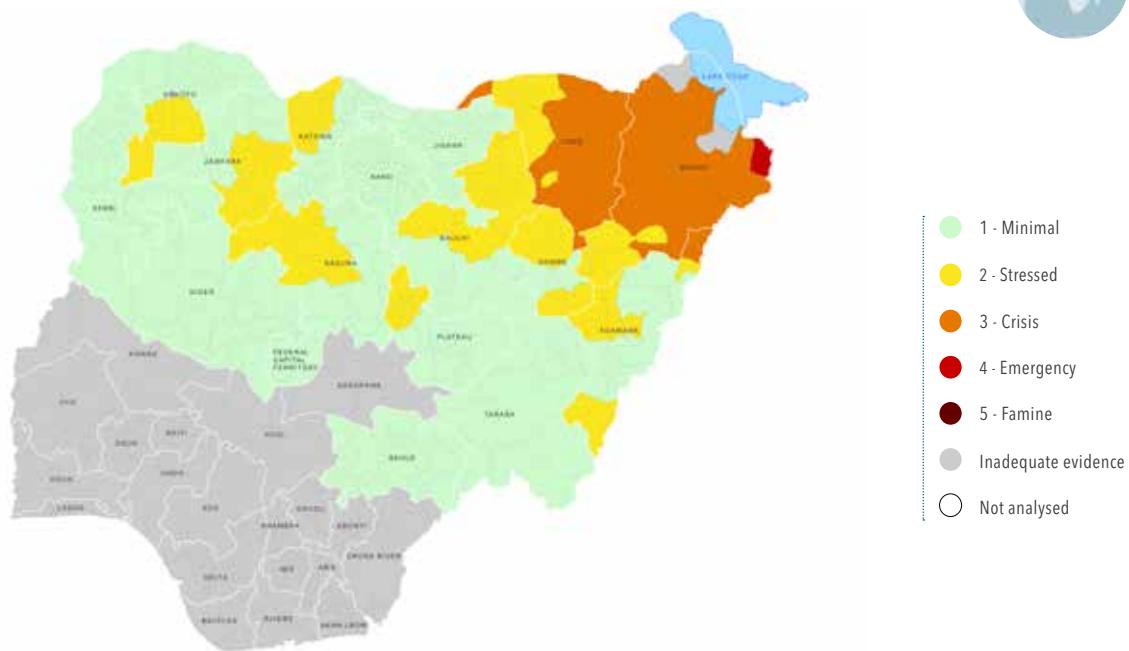
Figure 56
Number of people (millions) in CH Phase 2 or above in 2017–2019



Source: CILSS-Cadre Harmonisé

Map 45

Nigeria, CH Acute food insecurity situation, June-August 2019



Source: CILSS-Cadre Harmonisé, March 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

classified in Emergency (CH Phase 4) were in these three states (CILSS-CH, June 2019). The remaining two million who faced Crisis (CH Phase 3) conditions were mainly in Sokoto, Katsina, Zamfara, Kaduna, Plateau, Bauchi and Gombe.

Inaccessible areas in north-eastern Nigeria were also likely experiencing high levels of acute food insecurity (REACH, June 2019, ECHO, November 2019) but could not be classified within the CH protocols because they were not accessible for enumerators to gather data. Of the 61 accessible or partially accessible Local Government Areas in Adamawa, Borno and Yobe, 29 were classified in Crisis (CH Phase 3) and one – Kala Balge in Borno – in Emergency (CH Phase 4). Another 20 LGAs were classified in Stressed (CH Phase 2).

Across the 16 states analysed and FCT, 18.8 million people, or 18 percent of the population analysed, were in Stressed (CH Phase 2).

The 2019 peak figure of acutely food-insecure people for the 16 states and FCT was slightly lower than the 2018 peak of 5.3 million people in June–August 2018 and 45 percent lower than June–August 2017 (8.9 million). However, the situation showed little improvement in the north-eastern areas.

Although the number in Crisis or worse (CH Phase 3 or above) decreased by around 18 percent to 4 million in October–December 2019 in line with seasonal patterns, the situation remained dire in the north-eastern conflict-affected areas with 22 still classified in Crisis (CH Phase 3). In the rest of the

areas analysed more than 80 percent of the population was in Minimal (CH Phase 1) but still thousands were in Crisis (CH Phase 3) outside Borno, Adamawa and Yobe, with the highest number in Kano (429 000) and Kaduna (192 000).

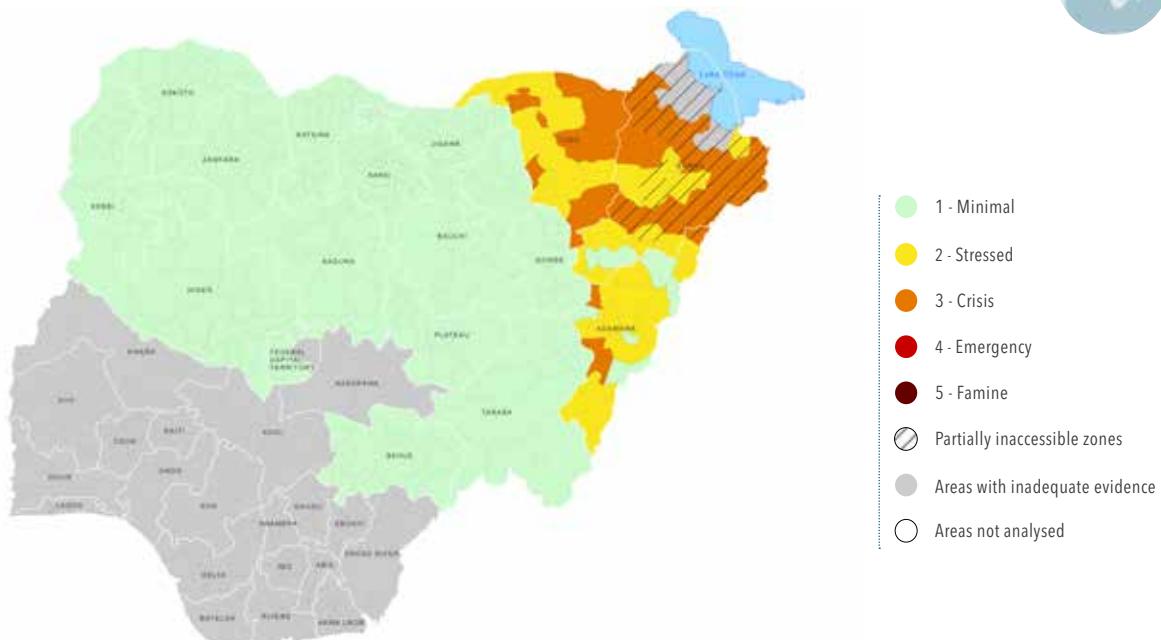
Acute food insecurity among displaced people

The number of displaced people as a result of the insurgency in the north-east is currently estimated at 2 million in six states (IOM, November 2019). The forcibly displaced populations have very limited livelihood opportunities and their food security remains precarious without humanitarian aid (CILSS-CH, 2019 and FEWS NET, October 2019). The November 2019 CH analysis in camps in Borno shows that humanitarian assistance has not met the food security needs of all households. Around 262 000 IDPs were in Crisis or worse (CH Phase 3 or above), in addition to 251 000 in Stressed (CH Phase 2) – out of a total of 680 000 IDPs analysed. Host populations also face great pressure on their livelihoods and resources, while returnees wrestle to reconstruct their livelihoods due to the destruction of their assets.

An additional 540 000 people are displaced by communal clashes and banditry in north-west and north-central areas (IOM, 2019), mainly in Benue and Plateau, while Sokoto, Katsina and Zamfara also have a large proportion of displaced populations, mainly living in host communities (IOM, 2019).

Map 44

Nigeria, CH Acute food insecurity situation, October-December 2019



Source: CILSS-Cadre Harmonisé, November 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

FACTORS DRIVING ACUTE FOOD INSECURITY

Conflict/insecurity

Although conflict occurred in fewer areas compared to previous years, north-eastern Nigeria saw an intensification of armed violence in 2019, especially in Borno state. By the end of the year there were an estimated 1.8 million IDPs in the region, the highest number since August 2016, with 92 percent of them displaced by the insurgency and 8 percent by climate events (UNHCR, accessed 24 January 2019).

Despite IDPs' high dependence on humanitarian aid (CILSS-CH 2019), humanitarian access to Boko Haram-affected areas was constrained by the volatile security situation, restrictions on movement and poor road infrastructure (ACAPS, October 2019). Some 800 000 people in north-east Nigeria could not be reached with aid as of January, and this number likely increased throughout the year (REACH 2019; FEWS NET, 2019).

With insecurity preventing them from accessing their land, only 50 percent of households in Borno and around a third in Yobe and Adamawa were able to sow crops in the 2019 season (CILSS-CH, 2019.) The conflict also limited pastoralists' access to grazing areas and veterinary services (FAO-GIEWS, September 2019).

Insecurity in Benue, Plateau, Katsina, Zamfara and Sokoto

states prevented people from engaging in normal livelihood activities. In Plateau, conflict between herders and farmers reduced the area planted, and crop production was below-average (CILSS-CH, 2019). In some areas, harvests were either looted or burned by bandits. Traders avoided affected areas due to fear of attacks, limiting trade flows and market supplies in some of the worst-affected parts of Katsina and Zamfara states. In some areas of Katsina, growing tall crops such as maize, millet, and sorghum was restricted within distances of 1-2 kilometres of settlements for fear of attacks by bandits, limiting local staple production to short crops, such as rice, cowpeas, groundnuts and sweet potatoes (FEWS NET, June 2019).

While price of coarse grains had remained mostly stable or declined in October 2019 compared to their year-earlier levels, prices of rice increased significantly, mainly as a result of lower supplies after the Government of Nigeria unilaterally closed the border with the Niger, Cameroon and Chad as a security and trade protectionist measure (In August 2019, (WFP and FEWS NET, October 2019). High prices were also reported for coarse grains, vegetables and livestock products in border markets, and more significantly in the north-east as a result of the insurgency (FAO-GIEWS, December 2019).

Weather extremes

Seasonal rainfall and subsequently high water levels in the Niger and Benue rivers caused flooding across 32 of the 36

states and FCT from June–October, affecting over 210 000 people, displacing about 130 000 and causing crop damage to varying degrees across the country (IFRC EPoA October 2019).

In the north-eastern states, especially in Borno, the torrential rainfalls and flash floods adversely affected thousands of people in IDP camps and host communities (OCHA, August 2019). In October, more than 100 000 people were affected in Adamawa by the state's worst floods in 17 years. A total of 19 000 people were displaced and the Government set up nine camps in seven LGAs to house them (OCHA, December 2019). In early November, more than 40 000 men, women and children – mostly IDPs – had little or no access to food or services in the remote conflict-affected town of Rann, Borno state, following heavy river flooding in neighbouring Cameroon. The flooding damaged an estimated 4 000 hectares of farmland, destroying crops that are the main source of food for IDPs (OCHA, November 2019).

NUTRITION OVERVIEW

Nationally, 7 percent of children aged 6–59 months suffered from wasting, which is considered a 'medium' prevalence. Of them 1.5 percent were affected by severe wasting. The wasting prevalence in the three crisis-affected states was 'high' in Borno (10.6 percent) and 'medium' in Yobe (8.9 percent) and Adamawa (7.1 percent). Elsewhere, Jigawa, bordering Yobe in the north, had the highest GAM prevalence (12.5 percent) followed by Sokoto (9.8 percent) and Bauchi (9.4 percent) (NNHS 2018).

Overall, 32 percent of children aged 6–59 months were stunted, which is considered a 'very high' prevalence. The prevalence was even higher in the BAY states, reaching an

alarming 55.8 percent in Yobe, followed by 39.4 percent in Adamawa and 37.3 percent in Borno. Out of the 37 states covered in this analysis, stunting was considered 'very high' in 16, with six of them having a prevalence of over 50 percent (NNHS 2018).

Nationally, the exclusive breastfeeding rate was low at 27.2 percent. Only 16.5 percent of children aged 6–23 months met the minimum acceptable diet for their growth and development. Minimum meal frequency was 40.2 percent and only 34.5 percent of children of this age consumed at least five out of eight food groups, which is the threshold for minimum dietary diversity (NNHS 2018). These child-feeding practices – already poor at the national level – are exacerbated in areas of protracted conflict where access to health and nutrition services are denied and food availability and access are compromised.

Anaemia was another major concern for malnutrition as more than two thirds of children aged 6–59 months (67.9 percent) and more than half of women of reproductive age (57.8 percent) were anaemic. (DHS 2018).

Around 30 percent of households were not able to use at least basic drinking water services (WHO and UNICEF 2017) and less than half of households (46.8 percent) had access to improved sanitation facilities (NNHS 2018).

In many locations in Borno state, access challenges restricted the movement of mobile medical teams, ambulances, immunisation and medical supplies (WHO, January 2020). The crisis-affected areas were at high risk of infectious disease outbreaks. In Adamawa 895 suspected cases of cholera had been reported by November 2019. By November 2019, there had been 58 916 suspected cases of measles in 36 states, including crisis-affected ones (WHO, January 2020).

Country profile



Pakistan (Balochistan and Sindh drought-affected areas)

ACUTE FOOD INSECURITY

2019

Total population of country **216.6M**Population analysed **6M** (3% of total population)

3.1M IPC Phase 3 or above in October 2018–July 2019

2.1M IPC Phase 3 Crisis **1M** IPC Phase 4 Emergency

1.4M IPC Phase 2 Stressed

UN DESA, WB 2018
PAKISTAN IPC TECHNICAL WORKING GROUP, APRIL 2019.

2018-19 Change



Acute food insecurity **worsened** in Sindh due to the effects of poor rains, inflation and currency devaluation (Balochistan province was not included in the 2018 analysis).

2020 Forecast



A severe locust infestation is likely to affect domestic food production and vulnerable agropastoral populations. In North West Pakistan (former FATA), 1.27 million people are expected to be in Crisis or worse (IPC Phase 3 or above) by August 2020.¹

NUTRITION INDICATORS

17.7% children under 5 years are **acutely malnourished**; **19%** prevalence in Balochistan and **23%** in Sindh.

40.2% of children under 5 years are **stunted**; **47%** prevalence in Balochistan and **46%** in Sindh.

NNS 2018

14.2% of children 6–23 months meet the **minimum dietary diversity** requirement; **13%** in Balochistan and **10%** in Sindh.

48.4% of children under 6 months are **exclusively breastfed**; **44%** in Balochistan, and **52%** in Sindh.

NNS 2018

53.7% of children under 5 years and **42.7%** of women 15–49 years are **anaemic**.

91% of households have access to at least basic **drinking water** services.

NNS 2018
JMP 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Weather extremes Economic shocks

- Prolonged drought/drought-like conditions have persisted since 2013 in arid south-eastern and western areas.
- Low availability of water and fodder resulted in livestock diseases, deaths and distress sales of animals.
- Subsistence farmers faced reduced food production and increased reliance on markets.
- In November 2019 food was 16% more expensive than a year earlier.

- Both acute and chronic child malnutrition rates are extremely concerning, particularly in rural drought-affected areas, where children consume poor quality diets and face poor water and sanitation conditions.
- Low vaccination coverage in Balochistan and high incidence of low birthweight in Sindh are also concerning.

DISPLACEMENT

Around **96 000** Pakistanis were **internally displaced**.

UNHCR
JUN 2019

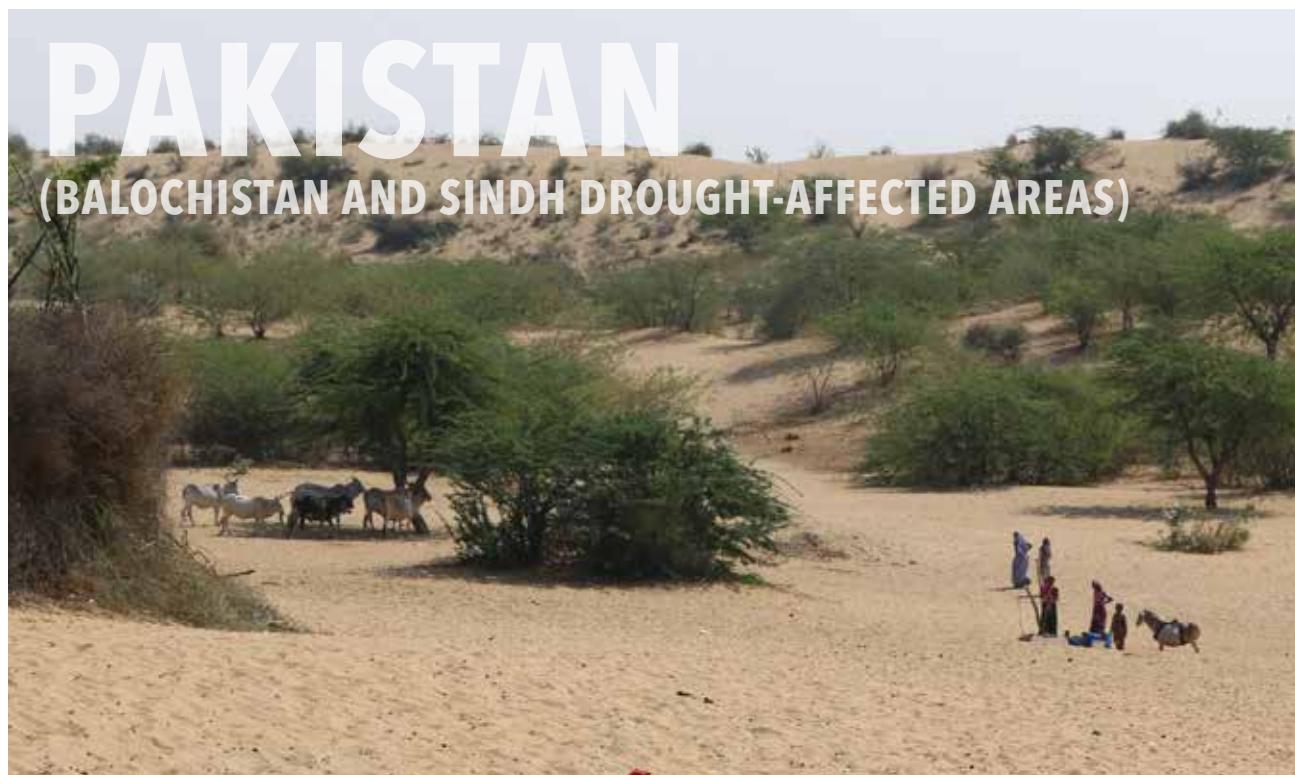
There were **1.4M** registered **refugees** from Afghanistan, **324 200** in Balochistan and **64 000** in Sindh.

UNHCR
DEC 2019

There were over **83 000** Pakistani **IDP returnees**.

UNHCR
JUN 2019

¹ Preliminary findings pending official release at country level.



WFP/SANGHAR THARPKAR

Women and children fetch water near their village in a drought-affected area of Sindh province. Since 2013, prolonged drought/drought-like conditions have persisted in south-eastern and western parts of the country.

BACKGROUND

With a rural poverty headcount close to 50 percent, Sindh and Balochistan have the highest rural poverty rates among Pakistan's provinces and the highest urban-rural poverty gaps (WB, March 2019). The provinces have experienced drought conditions since 2013 and 2016, and the situation worsened during the last quarter of 2018 with adverse effects on rural livelihoods, cereal production and livestock (IPC, July 2019).

ACUTE FOOD INSECURITY OVERVIEW

Over 3 million people – representing more than half of the population analysed in 21 rural, drought-affected districts in Balochistan and Sindh provinces – were in Crisis or worse (IPC Phase 3 or above) in October 2018–July 2019. Of these, more than 1 million people faced Emergency (IPC Phase 4) conditions. An additional 1.4 million people were in Stressed (IPC Phase 2). The food security situation was not expected to improve in the latter half of the year (IPC, July 2019).

In Balochistan, 1.79 million people (48 percent of the rural population) in 14 drought-affected districts were in Crisis or worse (IPC Phase 3 or above) in January–July 2019. Of these, around 420 000 people were in Emergency (IPC Phase 4). Rural areas of two districts (Chagai and Washuk) were in

Emergency (IPC Phase 4) and the remaining 12 districts in Crisis (IPC Phase 3). In Sindh, 1.28 million people (57 percent of the rural population) in seven districts were in Crisis or worse (IPC Phase 3 or above) from October–July 2019. Of these, almost 600 000 people were in Emergency (IPC Phase 4). Drought-affected areas of four districts were in Emergency (IPC Phase 4) (IPC, July 2019).

FACTORS DRIVING ACUTE FOOD INSECURITY

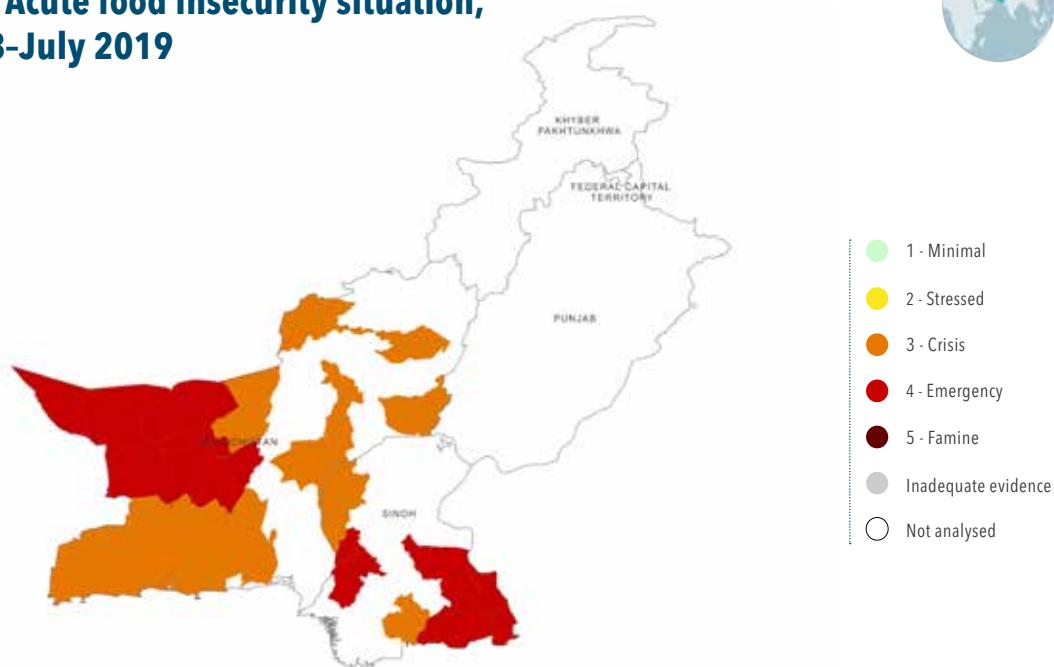
Weather extremes

Temperature rises, El Niño conditions and a decrease in monsoon rainfall have increased the frequency and severity of drought. The 2018 monsoon season rains were almost 70 percent below average in Sindh and 45 percent below average in Balochistan. This resulted in acute shortages of water, food and fodder into 2019.

In January 2019, the Government of Sindh declared some south-eastern and western districts as calamity-hit areas, while a province-wide nutrition and drought emergency was declared in Balochistan (OCHA, March 2019). Despite moderate 2019 summer monsoon rains, the effects of the drought in Balochistan were expected to persist (USAID, September 2019).

Map 47

Pakistan, IPC Acute food insecurity situation, October 2018-July 2019



Source: Pakistan IPC Technical Working Group, July 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

The vast majority (87 percent) of households in drought-affected districts in Sindh own livestock (NDS, January 2019). Since 2013, fodder production has been low and water availability limited, leading to livestock diseases, deaths and distress sales of animals (IPC, July 2019).

Heavy rains in February 2019 resulted in severe flash floods in six districts of Balochistan. Additional heavy rains in April caused floods in most districts of Balochistan and Sindh (IFRC, October 2019), while monsoon rains flooded several districts of Sindh in August (ECHO, August 2019).

Economic shocks

Half of the population of drought-affected districts are subsistence-level crop producers (NDS, January 2019), whose reliance on markets increases when they face lack of water for irrigation and decreased production of cereals and pulses (IPC, July 2019). Two-thirds were spending a high proportion of their total expenditures (65 percent or more) on food (NDS, January 2019), signifying their vulnerability if confronted with food price rises.

During the third quarter of 2019, all five WFP-monitored markets met the criteria to be categorized in crisis based on the Alert for Price Spikes (ALPS) indicator (WFP, October 2019). Between July 2018 and 2019 the market price of wheat and/or wheat flour increased by 9 percent, that of basmati rice by 12 percent and pulses by 13–40 percent (WFP, August 2019).

The food element of the Consumer Price Index increased by 2.4 percent between October and November 2019 and by 16.5 percent between November 2018 and 2019 (PBS, November 2019).

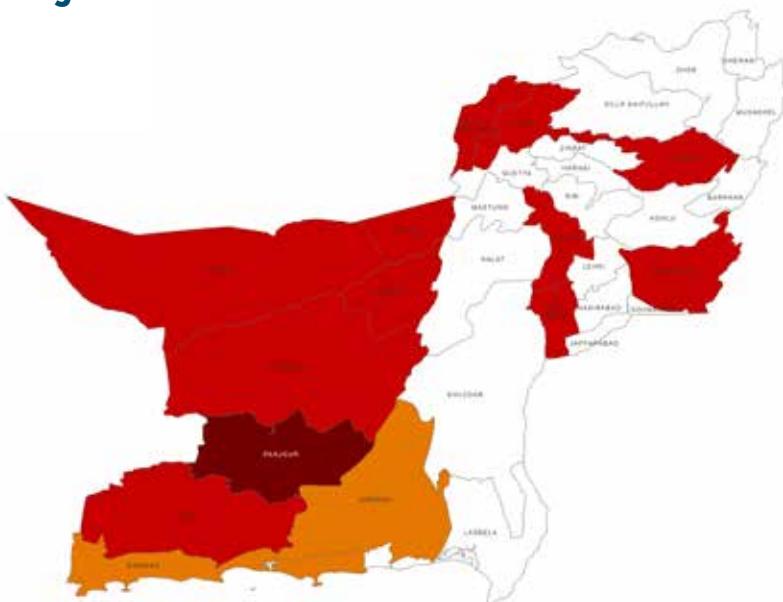
NUTRITION OVERVIEW

According to the 2018 National Nutrition Survey, child malnutrition in its different forms remains critical despite improvements in other socioeconomic indicators. Acute malnutrition rates measured by wasting were above 'very high' levels at 17.7 percent, up from 15 percent in 2011 and 8.6 percent in 1997. Rates were even higher in Balochistan and Sindh – the latter having the highest rates in Pakistan, affecting close to a quarter of children (NNS, June 2019).

According to the IPC acute malnutrition analysis, around 1.4 million children aged 6–59 months were in need of treatment for acute malnutrition in the 22 drought-affected districts from May–August 2019. In Balochistan's 14 drought-affected districts almost 400 000 children were wasted, half of them severely so. In Sindh, over 1 million were wasted, 365 200 of them severely so. Sixteen of the 22 drought-affected districts were classified as Critical (IPC AMN Phase 4), while Panjgur district in Balochistan and Umerkot and Tharparkar in Sindh were classified as Extremely Critical (IPC AMN Phase 5) (IPC, November 2019). See maps 48 and 49 on page 152.

Map 48

Pakistan (Balochistan Province), IPC Acute malnutrition situation, May-August 2019



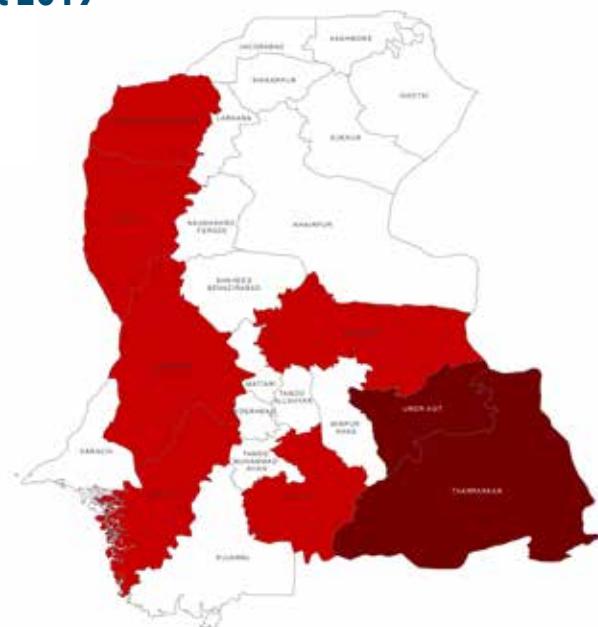
- 1 - Acceptable
- 2 - Alert
- 3 - Serious
- 4 - Critical
- 5 - Extremely critical
- Phase classification based on MUAC
- Areas with inadequate evidence
- Areas not analysed

Source: Pakistan IPC Technical Working Group, November 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Map 49

Pakistan (Sindh Province), IPC Acute malnutrition situation, May-August 2019



- 1 - Acceptable
- 2 - Alert
- 3 - Serious
- 4 - Critical
- 5 - Extremely critical
- Phase classification based on MUAC
- Areas with inadequate evidence
- Areas not analysed

Source: Pakistan IPC Technical Working Group, November 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Poor water supply, sanitation and hygiene, and high levels of waterborne diseases – reflecting the widespread contamination of water supplies – contributed to the high levels of acute malnutrition (IPC, September 2019).

Chronic malnutrition prevalence was ‘very high’ at 47 percent in Balochistan and 46 percent in Sindh. Fewer than 4 percent of 6-23 month-olds received a minimum acceptable diet (NNS, June 2019).

Country profile

Palestine



ACUTE FOOD INSECURITY

2019

Total population of country 5M
(**3M** in the West Bank and **2M** in the Gaza Strip)

 **1.7M** food-insecure people in need of assistance

 **841 000** marginally food-secure people

2018-19 Change

The number of people in need of urgent food assistance did not change as there was no progress in resolving the Israeli Palestinian conflict and the situation on the ground continued to deteriorate.

2020 Forecast

Coping strategies for households are becoming increasingly strained, as livelihoods are put under increasing strain due to political and climatic pressures.

NUTRITION INDICATORS

 **1.2%** of children under 5 years are acutely malnourished, of whom **0.4%** are affected by SAM.
MICS 2014

 **62.6%** of children 6–23 months meet the **minimum dietary diversity** requirement.
MICS 2014

 **61.5%** of households have access to improved **drinking water** sources.
MICS 2014

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Conflict/insecurity Economic shocks

- ▶ The protracted conflict and ongoing blockade on Gaza continued to restrict trade and access to resources and livelihoods.
- ▶ In Gaza, unemployment rates increased from 43% in 2018 to almost 47% in the second quarter of 2019, with youth unemployment at 64%, the highest rate in the world.
- ▶ Poor vulnerable households were falling into a cycle of indebtedness to pay for electricity, water and grocery shopping.
- ▶ By the end of November, 815 Palestinians, half of them children, had been displaced in the West Bank as a result of demolitions, almost double the equivalent figure for 2018.
- ▶ Continuous conflict, alongside sudden shocks, overwhelmed an already overburdened health system, as well as water and sanitation infrastructures.

DISPLACEMENT

 There were **5.6M** registered Palestinian **refugees** in the Gaza Strip (1.4M) and West Bank (854 000) as well as in Jordan, Lebanon and the Syrian Arab Republic.

UNRWA 2018-2019



© WFP/SAMIAH MUSA

PALESTINE

Maram, a six-year-old girl, lives with her seven siblings in Gaza City where a 12-year economic blockade, rampant poverty and high unemployment makes uninterrupted food assistance critical.

BACKGROUND

The protracted conflict between Israel and Palestine continued to have a severe humanitarian impact on Palestinians in 2019, chiefly in the Gaza Strip as well as in Area C of the West Bank and East Jerusalem (OCHA, December 2019). Palestinians in these areas face restricted movement of people and goods, limited access to land, water and basic services, recurrent expropriation of land, property and assets, settler violence, civil unrest and periodic large-scale armed hostilities (UNCTAD, July 2016). The situation is aggravated by internal political divisions between the administrations of the West Bank and Gaza (ACAPS, May 2019).

ACUTE FOOD INSECURITY OVERVIEW

Around 1.7 million Palestinians are food insecure and in need of assistance (OCHA, 2020). The majority of them live in the Gaza Strip and the remainder in the West Bank.

The most recent available food security data was gathered in September 2018. It showed that food insecurity was particularly severe and worsening in the Gaza Strip where the prevalence of food-insecure people increased from 59 percent in 2014 to 68.5 percent in 2018. Of these some 47 percent were severely food insecure and 22 percent moderately food

insecure.¹ The situation was less severe in the West Bank where around 12 percent were food insecure, an improvement since 2014 (15 percent) although it was slightly higher among refugees (14 percent) (FSC, December 2018).

The most vulnerable people include widows/widowers, female-headed households, single male-headed households, people living with disabilities, the elderly and refugees, especially those living in camps (OCHA, January 2020). Palestinians increasingly resorted to negative coping mechanisms, such as withdrawing children from school (OCHA, January 2020).

Acute food insecurity among refugees

Palestine refugees are defined as "persons whose normal place of residence was Palestine during the period 1 June 1946 to 15 May 1948, and who lost both home and means of livelihood as a result of the 1948 conflict." The descendants of Palestine refugee males, including adopted children, are also eligible for refugee registration (UNRWA, accessed January 2020). Across the region there are around 5.5 million refugees with more than 1.7 million of them living in 58 recognized Palestine refugee camps² in the Gaza Strip and the West Bank,

¹ Based on WFP CARI methodology.

² Defined as a plot of land placed at the disposal of UNRWA by the host government to accommodate Palestine refugees with facilities to cater for their needs. UNRWA also maintains schools, health centres and distribution centres in areas outside the recognized camps where Palestine refugees are concentrated, such as Yarmouk, near Damascus.

including East Jerusalem, as well as in Jordan, Lebanon and the Syrian Arab Republic (UNRWA, May 2019).

In Gaza, over 70 percent of the population (1.4 million Palestinians) are refugees. Almost 600 000 of them live in eight camps, which have some of the highest population densities in the world (UNRWA). The West Bank is home to around 850 000 Palestine refugees (UNRWA, May 2019), a quarter of whom live in camps.

The proportion of food-insecure refugees in the Gaza Strip increased between 2015 and 2018 from 57 percent to 67 percent. But at 70 percent an even higher percentage of non-refugees in Gaza were food insecure, up from 63 percent in 2014. In the West Bank, the food security of refugees improved between 2014 and 2018 – with the percentage of food insecure falling from 20 percent to 14 percent. There was a particularly significant improvement in refugee camps in the West Bank, with the percentage of food insecure falling from 21 percent in 2014 to 8 percent in 2018 (FSC, December 2018).

FACTORS DRIVING ACUTE FOOD INSECURITY

Conflict/insecurity

The prolonged occupation, blockade on Gaza and outbreaks of hostilities have eroded the resilience of Palestinians. They are increasingly less able to cope with sudden shocks, such as spikes in conflict, demolitions in the West Bank, and natural or environmental hazards, such as winter storms, the longer term effects of climate change, inadequate water and sanitation services and electricity cuts (OCHA, January 2020).

The situation in Gaza remained particularly fragile. The Great March of Return demonstrations since March 2018, calling for Israeli authorities to lift their blockade on Gaza and to allow Palestinian refugees to return to their villages and towns inside what is now Israel continued (Amnesty International, accessed January 2020).

Aid workers experience movement restrictions and difficulties in getting visas to access Gaza. The Israeli government bans the import of specific humanitarian items into Gaza, and Hamas imposes restrictions on humanitarian operations within the Gaza Strip. Confiscation of aid is common from all sides, including both Israeli and Palestinian authorities in the West Bank and Gaza (ACAPS, October 2019).

In the West Bank, settlement activity and related violence, loss of land, the demolition and threat of demolition of infrastructure, movement restrictions, and impeded access to basic services and livelihoods, including farming and grazing lands, as well as poor law enforcement on violent settlers continued (OCHA, December 2019). By the end of November,

815 Palestinians had been displaced in the West Bank as a result of demolitions, almost double the 2018 number (OCHA, December 2019).

According to FAO, in the West Bank – where the olive sector provides primary or secondary sources of income for between 80 000 and 100 000 families – the olive yield in 2019 was estimated to reach a record 27 000 tonnes, an 84 percent increase over the previous year. However, in some areas, the realization of a potential record yield was compromised by access restrictions to groves and attacks and intimidation (OCHA 2019).

Economic shocks

Despite a slight improvement in the Gazan economy in 2019 (growing by 1.8 percent, following a steep recession of almost seven percent in 2018) unemployment rates increased from 43 percent in 2018 to almost 47 percent in the second quarter of 2019, with youth unemployment at 64 percent, the highest rate in the world (WB, September 2019).

The humanitarian situation in the West Bank, including East Jerusalem, was less acute than in Gaza, but growth in 2019 was expected to slow to the lowest level of the last five years (1.2 percent), down from 3.1 percent in 2018 (WB, September 2019). Economic development is undermined by occupation, administrative and physical constraints, and by limitations on Palestinian access to land and natural resources especially in Area C, which makes up over 60 percent of the West Bank (OCHA, January 2020).

In June, a WFP survey in Gaza and the West Bank found that poor vulnerable communities were resorting to negative coping mechanisms and falling into a cycle of indebtedness to meet their most pressing needs.

In Gaza, more than 80 percent of households had debts of between USD 1 810 and USD 3 498, made up of unpaid bills for electricity and water, grocery shopping and lines of credit with friends and relatives. Nearly half (48 percent) of those interviewed reported an increased trend in purchasing food on credit compared to the previous month.

In the West Bank, 48 percent had debts ranging from USD 1 796 to USD 3 418. Around 63 percent said they were more likely to purchase food on credit compared to the previous month (WFP, June 2019).

A recent World Bank report called for a review of the Israeli application of the system for dual use goods as it limits economic diversification and sustainable growth in the Palestinian territories. In agriculture the dual use restrictions have lowered the concentration of active chemicals in fertilizers making them less effective and lowering land productivity to half of that in Jordan and only 43 percent of the yield in Israel (WB, April 2019).

Map 50

Palestine, Number of food-insecure people by governorate, 2019



Source: WFP, 2018

In April, the permissible fishing area along the southern and central parts of Gaza's coast was expanded from 6 to 15 nautical miles (NM) offshore, the furthest distance that Gaza's fishers have been permitted to access since 2000. Access to the northern areas along the coast remained at up to 6 NM, well below the 20 NM agreed under the Oslo Accords (OCHA, November 2019).

NUTRITION OVERVIEW

While the national acute malnutrition was 'low' in 2014 (MICS, 2014), it reached 14 percent in Gaza strip in 2019. In addition, 18 percent of pregnant and 14 percent of lactating women were malnourished in 2019 (UNICEF, 2019).

Just 39 percent of children were exclusively breastfed in the first 6 months of life. The relatively high levels of bottle-fed children were concerning, particularly for children in Gaza where water is likely to be contaminated (UNICEF, accessed January 2020). The lack of growth in exclusive breastfeeding over the past years is mainly due to aggressive marketing of breast milk substitutes and a lack of clarity regarding optimal infant-feeding practices. Only 14 percent of young children in Gaza received a minimum acceptable diet for their growth and development (UNICEF, 2019). A high proportion were not eating iron-rich foods, increasing the risk of iron deficiency anaemia (UNICEF, 2019).

While there has been an improvement in the daily availability of electricity, and the supply of water and waste water treatment since October 2018, the quality of basic services remained extremely poor in Gaza, particularly access to safe water and risk of winter flooding or exposure to environmental health risks along the Gaza shoreline. In the West Bank, poor service provisions and demolitions, particularly in Area C, remain a concern (OCHA, December 2019).

The protracted conflict, alongside sudden shocks, is overwhelming an already overburdened health system (OCHA, January 2020). The dual-use restrictions on medical equipment and a shortage of medical supplies are major contributors to the evolving health crisis in Gaza. The hospitals have limited capacity to manage injuries that require complex treatment including health services for women and children (UNICEF, September 2019).

Country profile

Somalia



ACUTE FOOD INSECURITY

2019

Total population of country **12.3M**

55% Rural

45% Urban

Population analysed **12.3M** (100% of total population, including IDPs, but NOT refugees)

2.1M IPC Phase 3 or above in October-December 2019

1.7M IPC Phase 3 Crisis

439 000 IPC Phase 4 Emergency

4.2M IPC Phase 2 Stressed

UNFPA
2014

WFP 2018

SOMALI IPC TECHNICAL WORKING GROUP AUGUST 2019

2018-19 Change

Despite poor rains, floods and insecurity the number of people in Crisis or worse (IPC Phase 3 or above) **decreased** since 2018 when households were still recovering from the 2016/17 drought.

2020 Forecast

Improving food security conditions are forecast due to the favourable impact of rains on crop and livestock production, although desert locust infestations are likely to have a negative impact on crop production.

NUTRITION INDICATORS

Host population

1.1M children under 5 years are acutely malnourished, of whom **178 000** are affected by SAM.
 25.3% of children under 5 years are stunted.

HNO 2020

15% of children 6-23 months meet the minimum dietary diversity requirement.
 62.7% of children under 6 months are exclusively breastfed.

SOMALI WCN 2016

55.8% of children under 5 years and **44.4%** of women 15-49 years are anaemic.

WHO 2016

52% of households have access to at least basic drinking water services.

JMP 2017

Refugee population

18% of children under 5 years are acutely malnourished, of whom **3.5%** are affected by SAM.

HNO 2019

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Weather extremes

- Two consecutive below-average rainy seasons resulted in the lowest cereal harvest since 1995 in southern Somalia.
- Many pastoral households, yet to recover from the 2016/17 drought, experienced reduced milk availability and took on large debts to cover basic needs.
- Poor harvests inflated the price of locally produced staples, while low demand for labour depressed household income.
- Continued conflict and insecurity disrupted livelihoods, markets, trade flows and humanitarian access.

Conflict/insecurity

- Widespread flooding from October-December displaced 370 000 people.
- The country's 2.6 million IDPs lacked livelihood opportunities and those in settlements with poor sanitation were vulnerable.
- Lack of nutritious diets and waterborne diseases—worsened by the floods—underlie alarming acute malnutrition rates, especially among displaced households.

DISPLACEMENT

Over **2.6M** Somalis were internally displaced.

There were around **35 600** refugees and asylum-seekers, mainly from Ethiopia (60%) and Yemen (37%). The population increased by 9% compared to November 2018.

There were **91 200** Somali IDP returnees since December 2014.

UNHCR DEC
UNHCR NOV 2019

UHCR NOV 2019



Fatuma Abdulah sits in the shade with her children in El Jalle village, Belet Weyne district, where devastating flooding by the Shabelle river prompted an estimated 273 000 people to flee their homes in October–November 2019.

BACKGROUND

Over 20 years of conflict and political instability, coupled with consecutive droughts, have driven widespread poverty, food insecurity and malnutrition. Around 69 percent of the population lives in poverty, with higher rates among rural and IDP populations (WB, April 2019). Severe drought in 2010/11 resulted in a Famine (IPC Phase 5) in parts of southern Somalia (FSNAU and FEWS NET, September 2011). The 2016/17 drought created an increased risk of Famine (IPC Phase 5) that was only brought under control by sustained, large-scale humanitarian assistance and improvements in weather conditions in 2017 (FSNAU, 2017).

ACUTE FOOD INSECURITY OVERVIEW

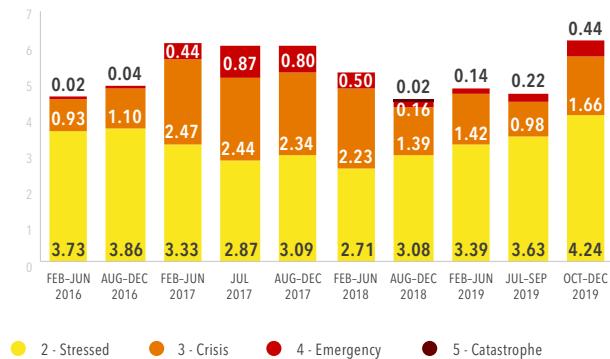
An estimated 2.1 million people faced Crisis or worse (IPC Phase 3 or above) during October–December 2019 in the absence of humanitarian assistance. This included 439 000 people in Emergency (IPC Phase 4). Areas of major concern included the Guban pastoral and Bay-Bakool low potential agropastoral livelihood zones in Emergency (IPC Phase 4) and central and northern pastoral and agropastoral zones in Crisis (IPC Phase 3). An additional 4.2 million people were classified in Stressed (IPC Phase 2).

Most urban centres faced Stressed (IPC Phase 2) or Minimal (IPC Phase 1) acute food insecurity due to stable food prices and employment opportunities. However, Crisis (IPC Phase 3) conditions were observed in Awdal, Hiraan, Sanaag and Sool regions (IPC, February 2019 and September 2019).

Acute food insecurity deteriorated over the course of 2019, reaching its peak in October–December. However, that number was lower than the 2018 peak (2.7 million people in February–June) when households were still recovering from the 2016/17 severe drought (IPC, February 2018 and 2019).

Figure 57

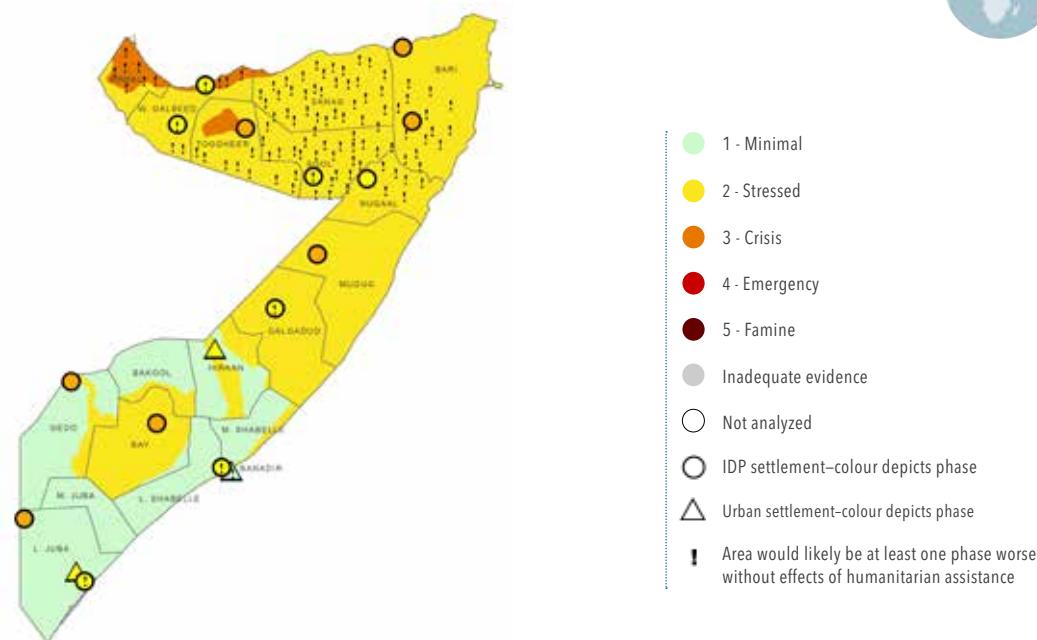
Number of people (millions) in IPC Phase 2 or above in 2016–2019



Source: Somalia IPC Technical Working Group

Map 51

Somalia, IPC Acute food insecurity situation, January 2019



Source: Somalia IPC Technical Working Group, February 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Acute food insecurity among displaced people

The IDP population remained relatively stable compared to 2018 at 2.6 million while the refugee population (from Ethiopia followed by Yemen) increased by 9 percent to 35 600. Returnee flows slowed significantly from 10 800 in 2018 and 36 700 in 2017 to 3 700 in 2019, mainly from Kenya and Yemen (UNHCR, November 2018 & 2019). Displaced people encounter difficulties in accessing labour opportunities and the poverty rate is high among them (WB, 2019). They face vulnerability to illness due to inadequate sanitation in IDP settlements (FEWS NET, October 2019). In 14 key IDP sites assessed, households in receipt of humanitarian assistance faced Stressed (IPC Phase 2) or Crisis (IPC Phase 3) conditions (IPC, September 2019).

FACTORS DRIVING ACUTE FOOD INSECURITY

Weather extremes

In late 2018, the October–December Deyr rains were late and below average with much of central Somalia, as well as parts of the north, receiving rainfall that was only 25–50 percent of average (IPC, February 2019). Subsequently, Gu (April–June) rains started in late April, after almost a month

characterized by drought conditions, which severely affected crop germination and establishment in southern key cereal-producing areas.

Abundant precipitation in May did not significantly improve crop prospects as it occurred too late during the growing season (FAO-GIEWS, July 2019) and the Gu harvest in central and southern Somalia was estimated at 60 percent below-average, the lowest since 1995 and even lower than the pre-famine Gu harvest of 2011 (FSNAU and FEWS NET, September 2019).

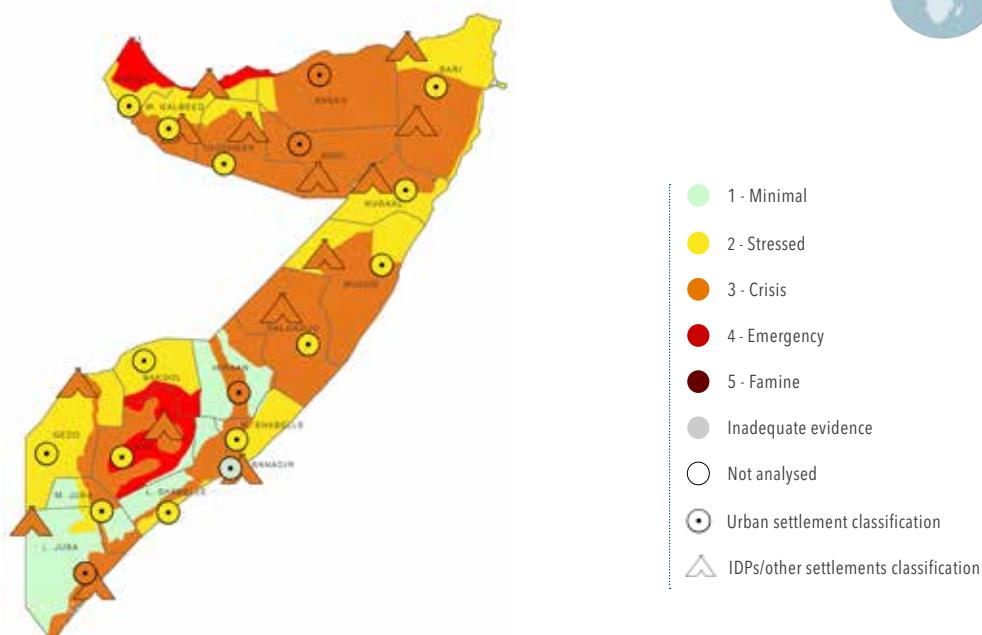
The Gu-Karan April–September rains in north-western Somalia were also characterized by early season dryness, but heavy late season rains in August and September boosted yields, and cereal production was above the average of the previous five years (FAO-GIEWS calculations based on FSNAU data).

Subsequently, central and southern Somalia received well above average 2019 October–December Deyr rains, with many areas experiencing rainfall that was more than three times the average (NOAA, October 2019).

The abundant precipitation was generally beneficial for agricultural production, and the output of the secondary Deyr harvest was estimated at about 35 percent above the average of the previous five years (FAO-GIEWS, March 2020).

However, the torrential rains also caused widespread flooding, affecting 547 000 people and displacing 370 000 (OCHA,

Map 52

Somalia, IPC Acute food insecurity situation, October-December 2019

Source: Somalia IPC Technical Working Group, September 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

November 2019). Substantial flood-induced crop losses were recorded in riverine main maize-growing areas along the Shabelle and Juba rivers, infrastructure and roads were destroyed, and livelihoods disrupted in some of the worst-hit areas (WFP, October 2019).

Overall, the aggregate 2019 cereal production was estimated at 186 000 tonnes, about 10 percent below the 2018 bumper output and 20 percent below the average of the previous five years.

Pastoral areas were also affected by a poor performance of the Gu rains, with drought conditions prevailing in April. Late season rains in May helped to partially, but not fully, replenish pastoral resources.

However, many pastoral households that had already lost much of their herds during the 2016/17 drought, faced reduced milk availability from their remaining stock and took on large debts to cover basic food and non-food needs (FSNAU and FEWS NET, September 2019). Pasture, browse and water availability markedly improved with the abundant October–December Deyr rains.

The availability of saleable animals as well as milk availability for household consumption continued to gradually improve. However, many poor households were still unable to meet their minimum food needs without selling their animals to the point of endangering the sustainability of their herds and their livelihoods (FSNAU and FEWS NET, February 2020).

Prices of sorghum declined in December in southern key markets, including the capital Mogadishu, by 5–15 percent in anticipation of the Deyr harvest, while prices of maize followed mixed trends, increasing in some markets due to the expected crop losses in main maize growing areas. Prices of coarse grains in December 2019 were about 30 percent higher than in the same month of the previous year, mainly due to a tight supply situation following the drought-reduced 2019 Gu main season harvest (FAO-GIEWS, March 2020). As of November 2019, the cost of a minimum basket (CMB) was above the five-year average in the Banadir, Juba, North-east, North-west and Sorghum Belt regions (FSNAU, November 2019).

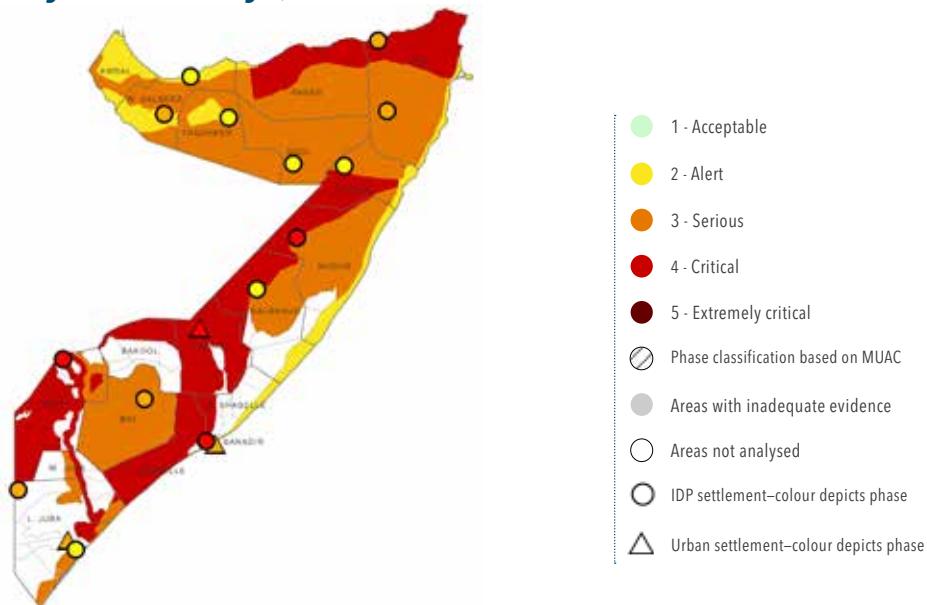
Conflict/insecurity

Clan disputes, protests, the weakness of the national forces, the gradual withdrawal of the African Union Mission in Somalia (AMISOM), Islamic State and continuing Al Shabaab attacks continued to cause insecurity and instability, disrupting livelihoods, markets, trade flows and humanitarian access and forcing Somalis to abandon fields and productive assets (ACAPS, June 2019 and FSNAU, October 2019).

ACLED data indicated that there were approximately 2 400 conflict events in Somalia in 2019, resulting in 3 800 fatalities. Though still very high, this data indicates a slight decline compared to 2018 levels with conflict events down by 15 percent and fatalities down by 26 percent (ACLED, 2019).

Map 53

Somalia, IPC Acute malnutrition situation, August 2019 (based on June-July 2019 surveys)



Source: Somalia IPC Technical Working Group, August 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

NUTRITION OVERVIEW

About 1.3 million boys, girls, pregnant and lactating women suffer from acute malnutrition, with 180 000 children under 5 years suffering from life-threatening severe malnutrition (OCHA, January 2020).

The 2019 post-Gu season nutrition assessment, conducted in June-July, showed a similar median GAM estimate (14 percent) to that of 2018 (13.8 percent), and a non-statistically significant decrease when compared to Gu 2017 (17.4 percent) (FSNAU/FEWS NET, September 2019).

The percentage of children with SAM was 2.3 percent – up from 2 percent in Gu 2018, but better than 3.2 percent in Gu 2017, which was an exceptionally difficult year characterized by severe drought in some parts of the country, particularly in the central south regions, leading to high levels of acute malnutrition. In Gu 2019 the average SAM rate was higher in rural areas (3 percent) compared to urban (2.1 percent). For IDPs the mean estimates were higher at 18 percent for GAM and 3.5 percent for SAM (FSNAU/FEWS NET, September 2019).

In the post-Deyr assessment conducted in November 2019, preliminary results of surveys conducted among IDPs and urban populations indicated a GAM prevalence of 13.1 percent, reflecting a slight increase since the 2018 Deyr (11.7 percent) and 2019 Gu (12.9 percent) for these populations. Furthermore, the acute malnutrition situation in 4 out of the 22 IDP or urban population groups surveyed

showed 'very high' levels with GAM above 15 percent, in Mogadishu, Galkayo, Boosaaso and Baidoa. This may reflect widening food consumption gaps, in light of low income and declining humanitarian food assistance levels in some settlements, as well as increased morbidity. In November, morbidity among children was high (≥ 20 percent) in 13 out of 22 population groups surveyed, with five IDP settlements showing a prevalence above 30 percent (FSNAU/FEWS NET, February 2020).

A publication analysing data from 2007–2016 showed that IDP households were consistently more likely to suffer from malnutrition and morbidity than non-displaced populations (Martin-Canavate et al, 2020). In the post-Gu analysis, the average GAM rate for IDPs was 18 percent and the SAM rate was 3.5 percent (FSNAU/FEWS NET, September 2019).

The 2019 floods raised the risk of AWD/cholera outbreaks especially in central-south Somalia. Episodes of prolonged diarrhoea are also associated with increased morbidity and mortality from other diseases, adverse neuro-development and growth stunting. The incidence of measles in this period was also very high. According to joint WHO and Somalia Federal Ministry of Health reports, nearly 1 257 measles cases were reported from January–August 2019, keeping the outbreak at epidemic levels. In the same period, 1 909 cases of AWD/cholera were reported, an increase of 48 percent since June–August 2018 (FSNAU/FEWS NET, October 2019).

Country profile



South Sudan

ACUTE FOOD INSECURITY

2019

Total population of country **11.4M**Population analysed **11.4M** (100% of total population, including IDPs, returnees and refugees)

7M IPC Phase 3 or above in May-July 2019



2018-19 Change

Despite lower levels of conflict, the number in Crisis or worse (IPC Phase 3 or above) increased to record levels.



2020 Forecast

Food security levels are forecast to improve, but conflict, poorly functioning markets, limited crop production, severe floods in certain areas, and potential impact of desert locust infestations are expected to continue driving high levels of acute food insecurity.



NUTRITION INDICATORS

Host population

- 860 000** children under 5 years are acutely malnourished, of whom **290 000** are affected by SAM.
- 15.6%** of children under 5 years are stunted.

HNO 2020
FSNMS R24
2019

- 12.8%** of children 6-23 months meet the minimum dietary diversity requirement.
- 69.4%** of children under 6 months are exclusively breastfed.

FSNMS R24
2019

58% of children under 5 years and **34%** of women 15-49 years are anaemic.

WHO 2016

38% of households have access to at least basic drinking water services.

FSNMS 2019

Refugee population

- 8 400** children under 5 years are acutely malnourished, of whom **1 000** are affected by SAM.
- 17.1-47.2%** of children under 5 years in 8 camps are stunted.

UNHCR 2018
SENS 2018

- 41.5%** of households in Ajuong Thok camp, **7.4%** in Gorom camp and **45%** in Pamir camp do not consume micronutrient-rich food.
- 88.1-94.4%** of children under 6 months in 6 camps are exclusively breastfed.

SENS 2018
SENS 2018

38-55.2% of children under 5 years and **12.9-56.9%** of women 15-49 years are anaemic.

SENS 2018

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS



Conflict/insecurity



Economic shocks



Weather extremes

- Despite a reduction in hostilities, multiple reinforcing factors relating to the six-year conflict pushed up acute food insecurity levels.
- An increase in inter- and intra-communal violence continued to displace people.
- The macroeconomic crisis and extremely high food prices weakened households' purchasing power and access to food.

- Delayed rainfall pushed back the green harvest and limited the availability of wild foods, fish and livestock products.
- Over 750 000 people needed food and nutrition assistance as a result of end-of-year floods.
- Returnees, host communities and displaced populations faced particularly high levels of food insecurity.

DISPLACEMENT

1.5M South Sudanese were internally displaced.

IOM/JUNE
2019

There were around **298 000 refugees** and **3 700 asylum seekers** from the Sudan (92%) and the Democratic Republic of the Congo (6%).

UNHCR DEC
2019

There were **1.2M** South Sudanese returnees from abroad since 2016, including **534 100** between September 2018 and March 2019.

IOM/JUNE 2019



SOUTH SUDAN

Deborah Nyakueth and her children escaped their home in Leer county across a wild wetland area for the safety of Nyal village in Unity state, where thousands of other displaced people are seeking refuge from conflict.

BACKGROUND

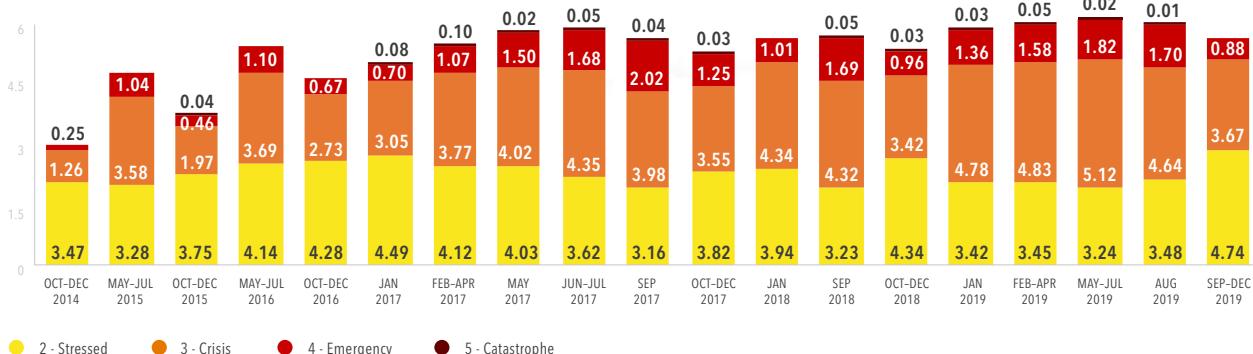
In the six years since the start of the civil war, an estimated 382 000 people have died, 2.5 million people have fled the country and 2 million have been internally displaced. The country remains in a serious humanitarian crisis due to the cumulative effects of years of conflict, which has destroyed people's livelihoods and led to alarmingly high levels of acute food insecurity and malnutrition.

In early 2017, two counties were pushed into Famine (IPC Phase 5). The percentage of the population under the national

poverty line rose from 55 percent in 2014 to 82 percent by 2016 (WB). After the signing of the Revitalized Agreement on the Resolution of the Conflict in the Republic of South Sudan (R-ARCSS) in September 2018, the country started to show tentative signs of recovery, but gains were outpaced by factors relating to severe and persisting macroeconomic crisis, the lingering impact of prolonged conflict and weather extremes so the situation remains extremely fragile. After many delays, political rivals President Salva Kiir and former Vice President Riek Machar formed a transitional unity Government on 22 February 2020.

Figure 58

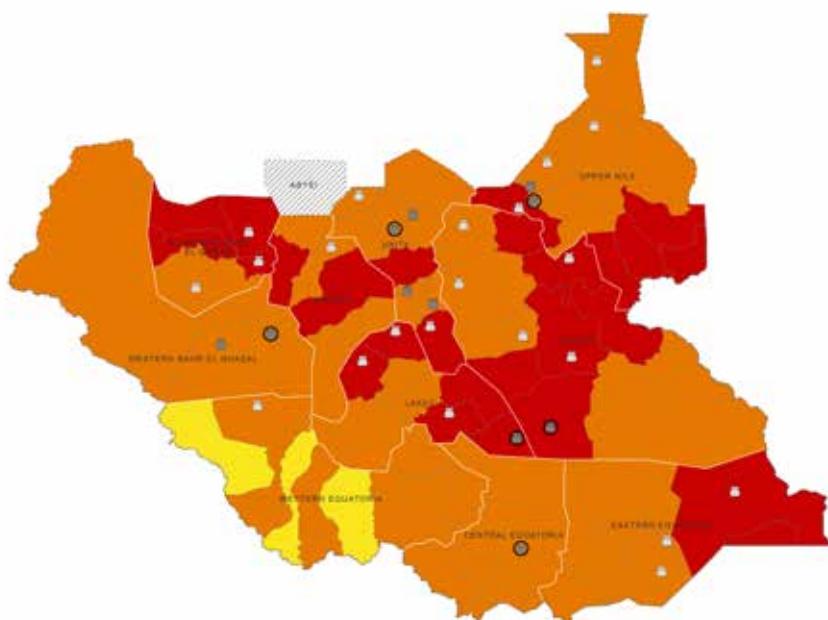
Number of people (millions) in IPC Phase 2 or above in 2014–2019



Source: South Sudan IPC Technical Working Group

Map 54

South Sudan, IPC Acute food insecurity situation, May-July 2019



- 1 - Minimal
 - 2 - Stressed
 - 3 - Crisis
 - 4 - Emergency
 - 5 - Famine
 - Inadequate evidence
 - Not analysed
 - IDP settlement – colour depicts phase
- Areas receives significant humanitarian food assistance (accounted for in Phase classification)
- At least 25% of households meet 25–50% of caloric needs from humanitarian food assistance
 - At least 25% of households meet over 50% of caloric needs from humanitarian food assistance

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. Final status of the Abyei area is not yet determined.

Source: South Sudan IPC Technical Working Group, June 2019.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

ACUTE FOOD INSECURITY OVERVIEW

In May–July 2019, almost 7 million people – representing 61 percent of the population – were facing Crisis or worse (IPC Phase 3 or above), the highest number ever recorded in South Sudan. Of these, 21 000 were facing Catastrophe (IPC Phase 5) and 1.8 million Emergency (IPC Phase 4). Additionally, 3.2 million were classified in Stressed (IPC Phase 2) and at risk of falling into worse levels of acute food insecurity classification (IPC, June 2019).

The 21 000 people facing Catastrophe (IPC Phase 5) were located in Canal/Pigi (former Jonglei state), Cueibet (former Lakes state), and Panyikang (former Upper Nile State) and were the greatest source of concern in 2019 (IPC, June 2019).

According to the August 2019 IPC analysis conducted before the floods, the acute food insecurity situation was expected to improve in the course of the year as farmers began to harvest, with 6.35 million people in Crisis or worse (IPC Phase 3 or above) in August, reducing to 4.54 million (39 percent of the population) in September–December (IPC, September 2019).

Compared with 2018 (IPC, September 2018), the 2019 acute food insecurity peak increased by 15 percent with 894 000 more people classified in Crisis or worse (IPC Phase 3 or above) in 2019 (IPC, June 2019).

South Sudan has 1.46 million IDPs, 13 percent of them living in six UNMISS Protection of Civilians sites (UNHCR, October 2019). It also hosts 290 000 refugees and asylum seekers, chiefly from the Sudan (92 percent) followed by the Democratic Republic of the Congo (6 percent).

Poor dietary diversity and a high prevalence of negative coping strategies have been observed among refugee populations. Some 71–80 percent of refugee households reported using one or more negative coping strategies¹ to fulfil their food needs. Most of the refugees rely on food assistance and approximately 60 percent of refugee households employ emergency livelihood coping strategies (FSNMS Round 24, September 2019).

FACTORS DRIVING ACUTE FOOD INSECURITY

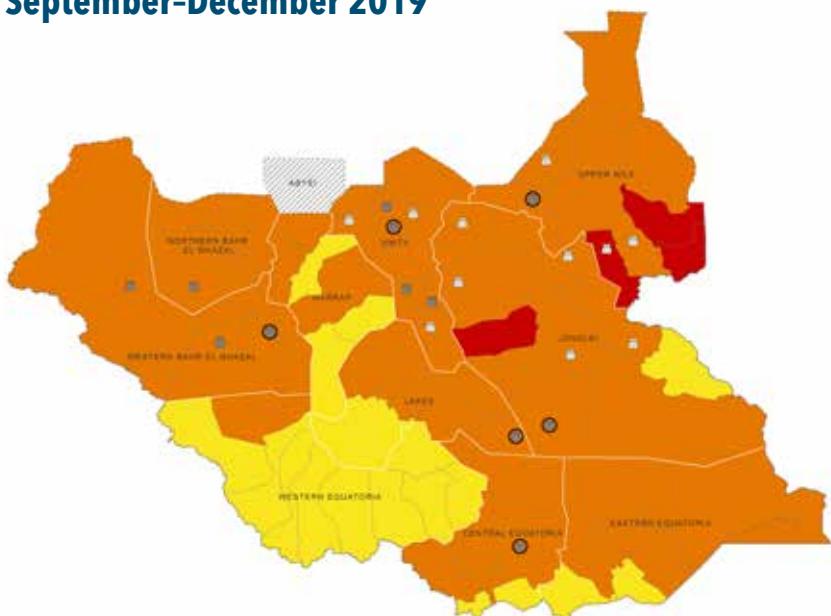
Conflict/insecurity

Following the beginning of peace talks in mid-2018, and the signing in September 2018 of the R-ARCSS, the number of security incidents, which had already declined by about 30 percent in 2018, further decreased by about 40 percent in 2019 (ACLED, accessed February 2020). Improvements were

¹ Negative coping strategies (missing or reducing meals; selling assets; taking loans with interest; begging, child labour; and involvement in risky and harmful activities).

Map 55

South Sudan, IPC Acute food insecurity situation, September–December 2019



- 1 - Minimal
 - 2 - Stressed
 - 3 - Crisis
 - 4 - Emergency
 - 5 - Famine
 - Inadequate evidence
 - Not analysed
 - IDP settlement—colour depicts phase
- Areas receives significant humanitarian food assistance (accounted for in Phase classification)
- At least 25% of households meet 25–50% of caloric needs from humanitarian food assistance
 - At least 25% of households meet over 50% of caloric needs from humanitarian food assistance

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Source: South Sudan IPC Technical Working Group, September 2019.

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notable in areas of Greater Upper Nile, Greater Bahr el Ghazal and some parts of Greater Equatoria (FEWS NET, June 2019).

Despite UNHCR's non-return advisory, in the first 11 months over 92 000 refugees and IDPs returned home (UNHCR, November 2019), encouraged by the perception of improved security, to cultivate their land and increase food production.

Poor rule of law and easy access to arms resulted in an increase in violence that continued to displace people (UNHCR, September 2019). In the first six months of 2019, 135 000 people were newly displaced as a result of conflict (IDMC, September 2019).

Cattle raids were a common source of tension, particularly between agropastoralist communities (ACAPS, December 2019). Intercommunal conflict in former Lakes state as well as Kapoeta East, Pibor, Twic and Yei counties, resulted in loss of lives, displacement, disruptions to livelihoods and trade routes (IPC, FEWS NET June 2019). Cattle raiding in Tonj North county in former Warrap and between communities of Rumbek East and Yirol East counties in former Lakes State also led to the loss of lives and livestock (FEWS NET, April 2019).

While a more stable political environment allowed for improved delivery of humanitarian assistance to the most vulnerable populations in 2019 (WFP, UNICEF, FAO, September 2019), movement restrictions, bureaucratic impediments and security threats to humanitarian workers persisted (ACAPS, May 2019).

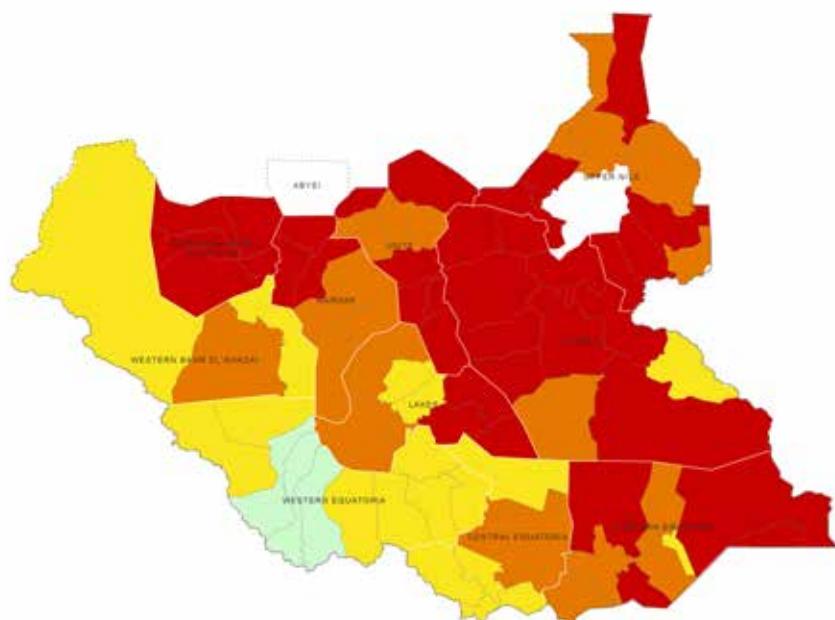
Economic shocks

The country is facing a protracted macroeconomic crisis. Gross Domestic Product increased in 2019 for the first time since 2014, mainly due to increased oil revenues, but the South Sudanese pound continued to depreciate on the parallel market, and by December the average exchange rate was about 315 SSP/USD, compared to about 240 SSP/USD in December 2018. The difference between the official and the parallel market exchange rates further widened, increasing from about 60 percent in December 2018 to almost 100 percent in December 2019. Inflation, already at high levels owing to insufficient food supplies, high fuel costs and a weak local currency, surged from August–October mainly as a result of trade and market disruptions caused by the widespread floods, and the year-on-year inflation rate was estimated in October 2019 at 170 percent (FAO and WFP, forthcoming).

Real income declined by 70 percent between 2011 and 2019 and food prices have been soaring since 2015, leaving large segments of the population with daunting constraints in accessing food and other basic services. Limited cereal supplies and the lingering impact of conflict on trade and agricultural activities contributed to sorghum, maize and wheat prices being 45–90 percent higher in December 2019 than 2018 in Juba (FAO & WFP, 2020). Based on The Alert for Price Spikes (ALPS) indicator, 4 out of the 12 monitored markets reached crisis level in Q3 2019 (WFP, October 2019).

Map 56

South Sudan, IPC Acute malnutrition situation, May-August 2019



- 1 - Acceptable
- 2 - Alert
- 3 - Serious
- 4 - Critical
- 5 - Extremely critical
- Phase classification based on MUAC
- Areas with inadequate evidence
- Areas not analysed

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Source: South Sudan IPC Technical Working Group, June 2019.
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Weather extremes

Abnormally heavy seasonal rains since July caused severe flooding in large parts of the country, including areas already experiencing high levels of conflict-related vulnerability.

In late October, the Government of South Sudan declared a state of emergency in 30 counties after the flooding submerged entire communities and destroyed livelihoods or rendered them inaccessible, and cut off basic services and markets (OCHA, November 2019). By early November, an estimated 908 000 people had been affected, of whom around 420 000 were displaced (OCHA, November 2019).

Humanitarian needs were very high in the east and north-east, especially in the counties of Pibor and Maban, home to over 150 000 refugees (OCHA, October 2019). According to WFP, 755 500 people were in need of food and nutrition assistance as a result of the floods (WFP, November 2019).

According to the preliminary findings of the 2019 FAO/WFP Crop and Food Security Assessment Mission, 2019 aggregate cereal production was estimated at about 818 500 tonnes, 10 percent above the record low 2018 output and 4 percent below the average of the previous five years. Cereal production benefitted from a bigger harvested area than 2018 due to security improvements and from abundant seasonal rains, but the widespread floods resulted in significant crop losses, especially in former Jonglei, Northern Bahr el Ghazal, Unity, Upper Nile and Warrap states (FAO-GIEWS, March 2020).

NUTRITION OVERVIEW

The national prevalence of GAM increased from 13.3 percent in 2018 to 16.2 percent in 2019, which is considered 'very high' (FSNMS, July 2019).

Based on IPC acute malnutrition protocols, 58 counties had a GAM of 10 percent and above. Some 43 counties were classified as Critical (GAM of 15.0–29.9 percent, IPC Phase 4) and 14 counties as Serious (GAM of 10.0–14.9 percent, IPC Phase 3). Most counties in Unity, Upper Nile, Jonglei and Warrap and parts of Eastern Equatoria and Lakes had Critical levels (IPC Phase 4) (IPC, September 2019).

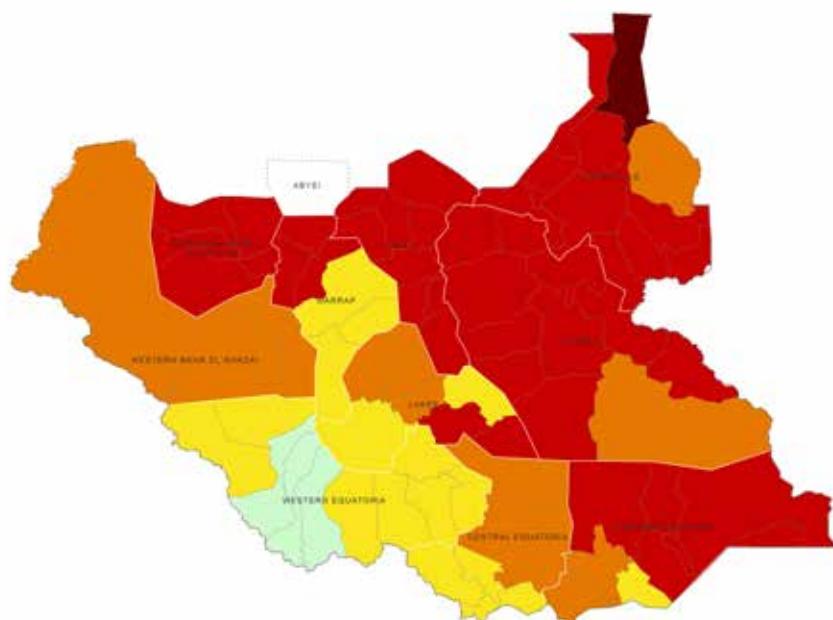
The drivers of malnutrition are mainly sub-optimal childcare and feeding practices, food insecurity, illness, poor water quality and sanitation practices. Just 6.9 percent of children aged 6–23 months received minimally adequate diets.

The prevalence of GAM in seven of the eight refugee camps in South Sudan was serious (5–9 percent), while the remaining camp faced acceptable levels (GAM <5 percent). The prevalence of stunting was 'very high' in four camps and 'high' in three camps.

Anaemia among children aged 6–59 months was at severe levels (≥ 40 percent) in six of the camps. The prevalence of anaemia among non-pregnant women aged 15–49 years was severe (≥ 40 percent) in one camp and of 'medium' public health significance (20–39 percent) in four camps.

Map 57

South Sudan, IPC Acute malnutrition situation, August 2019



- 1 - Acceptable
- 2 - Alert
- 3 - Serious
- 4 - Critical
- 5 - Extremely critical
- Phase classification based on MUAC
- Areas with inadequate evidence
- Areas not analysed

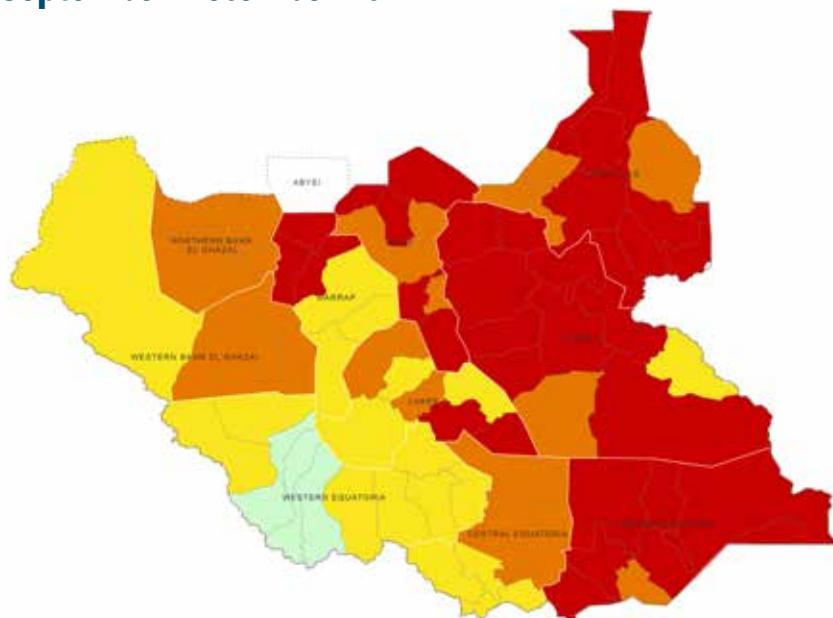
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Source: South Sudan IPC Technical Working Group, September 2019.

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Map 58

South Sudan, IPC Acute malnutrition situation, September–December 2019



- 1 - Acceptable
- 2 - Alert
- 3 - Serious
- 4 - Critical
- 5 - Extremely critical
- Phase classification based on MUAC
- Areas with inadequate evidence
- Areas not analysed

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Source: South Sudan IPC Technical Working Group, September 2019.

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The remaining camps had acceptable levels (SENS, 2018). Rates of early initiation of breastfeeding (84–93 percent), exclusive breastfeeding (88–94 percent), and continuing breastfeeding at one year (94–100 percent) were encouraging.

Timely introduction of solid foods was less encouraging at 66–75 percent. Around 7–32 percent of children aged 6–59 months reportedly had diarrhoea. Younger children were more likely to be acutely malnourished and anaemic (SENS, 2018).

Country profile

Sudan



ACUTE FOOD INSECURITY

2019

Total population of country **42.8M**Population analysed **41.9M** (98% of total population, including IDPs, returnees and refugees)

5.85M IPC Phase 3 or above in June–August 2019



11.8M IPC Phase 2 Stressed

2018-19 Change

A marginal **decrease** in numbers of people in Crisis or worse (IPC Phase 3 or above) can be attributed to security improvements and a bumper 2018 harvest in Greater Darfur. The 2019 analysis excluded West Darfur region.

2020 Forecast

A bleak macro-economic outlook, high food prices, reduced 2019 harvest and potential impact of desert locusts will maintain high levels of acute food insecurity.

NUTRITION INDICATORS

Host population

	2.7M children under 5 years are acutely malnourished , of whom 522 000 are affected by SAM.	HNO 2020
	36.8% of children under 5 years are stunted .	SIM II 2019

24.1% of children 6–23 months meet the **minimum dietary diversity** requirement.

61.5% of children under 6 months are **exclusively breastfed**.

38.8% of children under 5 years and **30.7%** of women 15–49 years are **anaemic**.

65.6% of households have access to at least basic **drinking water** services.

Refugee population

	23 000 children under 5 years are acutely malnourished in 16 camps, of whom 4 500 are affected by SAM.	UNHCR 2019
	4.6–58.8% of children under 5 years in 15 camps are stunted .	SENS 2018/19

24.8% of households in Kharasan camp and **36.5%** in Meiram camp do not consume micro-nutrient rich food.

29.4–90.9% of children under 6 months in 15 camps are **exclusively breastfed**.

23–56.8% of children under 5 years and **17.4–42.1%** of women 15–49 years in 15 camps are **anaemic**.

68.8–100% of households in 15 camps have access to improved **drinking water** sources.

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Economic shocks Weather extremes Conflict/insecurity

- The economic crisis worsened. Contracting output and currency depreciation lowered work opportunities, while reduced imports of fuel and agricultural inputs pushed up food prices to exceptionally high levels.
- Extremely erratic weather (dry conditions followed by torrential rains and floods) damaged livelihoods and destroyed crops.
- Pest infestations further constrained the 2019 cereal output, which was well below average.

- Civil unrest and ensuing security measures by the Government disrupted livelihood activities for several months.
- While conflict has declined considerably in recent years in Greater Darfur, South Kordofan and Blue Nile, the country still hosts 2.1 million IDPs and 1.1 million refugees and asylum seekers requiring humanitarian assistance.

DISPLACEMENT

2.1M Sudanese were **internally displaced**.

There were **1.1M** **refugees** and **asylum-seekers** mainly from South Sudan (78%).

There were **543 000** **IDP returnees**.

20 000 Sudanese refugees from neighbouring countries voluntarily **returned** from January–September 2019.



SUDAN

In the Nuba mountain region of South Kordofan, vulnerable populations in non-government controlled areas have faced severely limited access to humanitarian assistance in recent years. Ongoing conflict is continuing to cause some new population displacements to government-controlled areas.

BACKGROUND

Since late 2017, the Sudan's severe economic crisis has degraded already-weak basic services. The country has experienced civil unrest since December 2018 when then President Bashir's government imposed emergency austerity measures to try to stave off economic collapse. The Sudan has external debt of over USD 50 billion, estimated at 88 percent of GDP, and has limited access to debt relief.

With close to 50 percent of the population estimated to be living below the poverty line, persisting macroeconomic challenges are resulting in daunting food access constraints for large segments of the population (OCHA, January 2020).

ACUTE FOOD INSECURITY OVERVIEW

From June–August 2019, over 5.85 million individuals were estimated to be in Crisis or worse (IPC Phase 3 or above) and in need of urgent humanitarian assistance to mitigate acute food insecurity. This figure included around 1 million people in Emergency (IPC Phase 4). Nearly 11.8 million people were classified in Stressed (IPC Phase 2) (IPC, September 2019).

Key areas of concern included Halaib, East Jebel Marra and Bileil with area classifications in Emergency (IPC Phase 4) and

South Kordofan, Red Sea and the three Darfur States (Central, North and South) classified in Crisis (IPC Phase 3) (IPC, September 2019).

Compared to the peak of 6.2 million in May–July 2018 (IPC, April 2019), the acutely food-insecure population (IPC Phase 3 and above) in the Sudan was relatively stable in 2019 mainly due to lower numbers in the Greater Darfur region. However, this improvement was mostly offset by a sharp deterioration in the acute food insecurity situation in Khartoum state, where

Figure 59

Number of people (millions) in IPC Phase 2 or above in 2016–2019

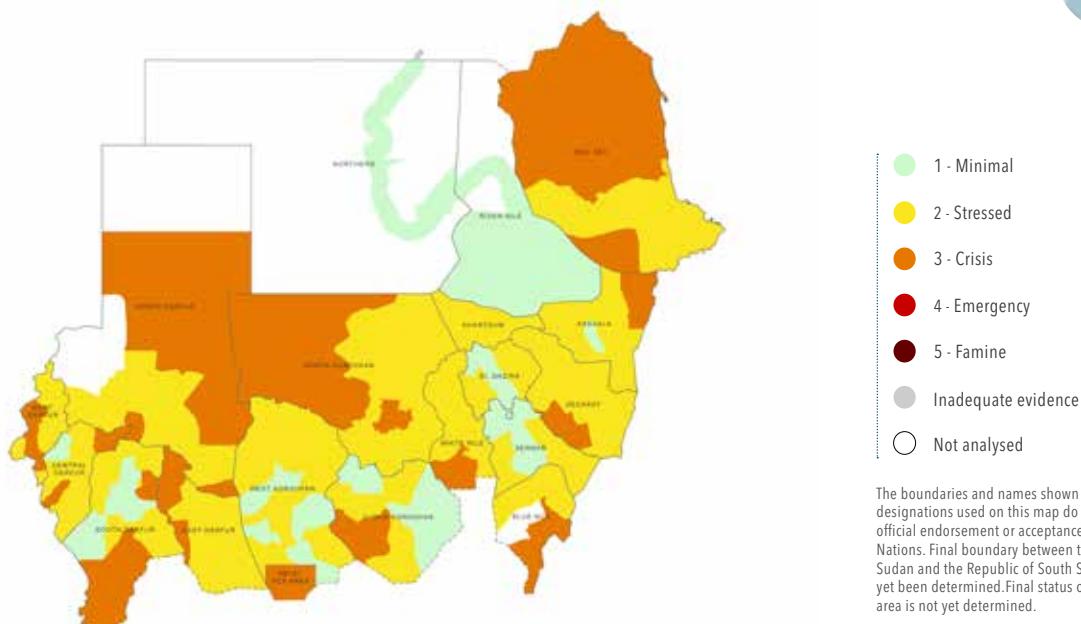


Note: For comparability purposes, all numbers presented exclude West Darfur since it was not included in the 2019 IPC exercise.

Source: Sudan IPC Technical Working Group

Map 59

Sudan, IPC Acute food insecurity situation, January–March 2019



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Source: Sudan IPC Technical Working Group, January 2019.

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the number facing acute food insecurity (IPC Phase 3 or above) almost doubled, indicating increasingly severe food access constraints for market-dependent urban households.

Some 58 percent of households were estimated to be unable to afford the local food basket (WFP, 2019). Increasing food prices were the immediate cause of demonstrations that started in December 2018 (WB, April 2019).

FACTORS DRIVING ACUTE FOOD INSECURITY

Economic shocks

The economic crisis worsened in 2019 despite the efforts of the transitional government and its cooperation with the International Monetary Fund (IMF) in implementing reforms to foster a recovery.

With expenditure remaining high on social and military spending, and oil export earnings stagnating, the Government faced limited scope for new borrowing, so monetized the deficit by printing money (EIU, January 2020). Year-on-year inflation increased from 43.6 percent in January to 60.7 percent in November (Central Bank of Sudan, November 2019).

As a result of these macroeconomic factors, and with traders reportedly hoarding their agricultural produce, regarded as a more reliable form of savings compared to the weakening local currency, food prices reached exceptionally high levels (IPC, September 2019 and OCHA, January 2020).

Weather extremes

The June–September rains were erratically distributed with early onset of seasonal rains in May and adequate precipitation in June benefitting planting, but prolonged dry spells in July resulted in crop wilting, requiring multiple replanting. Exceptionally abundant late season rains from August–October, benefitted crop development, but triggered floods in 15 out of 18 states (OCHA, January 2020), affecting about 420 000 people (OCHA, November 2019), increasing the prevalence of human and livestock waterborne diseases and causing substantial crop losses.

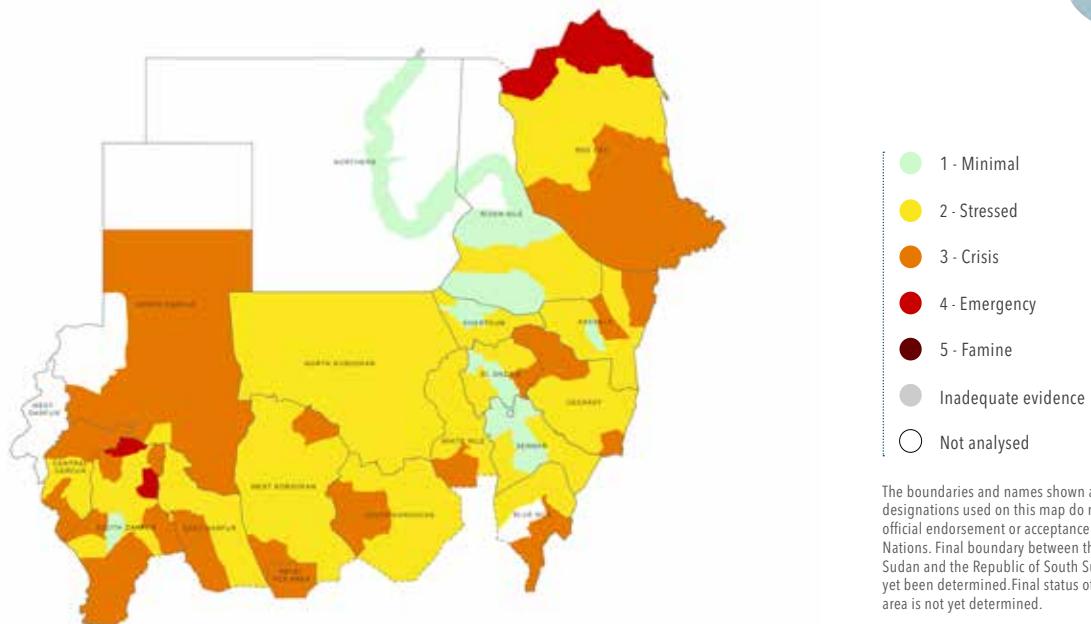
Severe infestations of birds, rodents and insects (sorghum midge and locusts) further affected crop yields. Production of cereals in 2019 is estimated at about 5.9 million tons, 33 percent down from the 2018 bumper output and 14 percent below the average of the previous five years.

Conflict/insecurity

Security forces attempted to repress the widespread protests that resulted in more than 100 people killed, and several hundred injured (OCHA, January 2020). The Government

Map 60

Sudan, IPC Acute food insecurity situation, June-August 2019



Source: Sudan IPC Technical Working Group, September 2019.

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declared a state of emergency in several areas, restricting movement, access to markets and livelihood activities (IPC, June 2019).

In the Greater Darfur region, security improvements in 2018 allowed substantial numbers of IDPs to return home and engage in agricultural activities, pushing up millet production in this key producing area to record levels (FAO-GIEWS, March 2019) and lowering household market dependence. This lessened the impact of soaring food prices during the 2019 lean season. Incidents of fighting had also declined in South Kordofan and Blue Nile States. However, 1.9 million IDPs who could not afford the basic food basket and 1.1 million refugees and asylum seekers displaced by conflict continued to need humanitarian assistance, both in camps and within host communities. Intercommunal tensions escalated in some areas in Darfur, Abyei and Eastern Sudan, with about 12 700 people newly displaced, mainly due to conflict in areas of Jebel Marra (Darfur) (OCHA, January 2020).

NUTRITION OVERVIEW

The Sudan has the fourth highest GAM rates in the world (UNICEF, 2019) with 14.1 percent of children under 5 years acutely malnourished. Eight of the country's 18 states recorded 'very high' GAM rates, peaking at 19.5 percent in North Darfur (S3M-II, 2019). Around 2.7 million children under 5 years were acutely malnourished, 522 000 severely so.

Increasing food prices, deteriorating health care, poor sanitation and water (with sources contaminated by flooding) and food insecurity aggravate persistently high levels of malnutrition (OCHA 2020). Just 24.1 percent of children receive an adequately diverse diet. One third of the population continues to practise open defecation (S3M-II 2019).

The Sudan experienced increased morbidity with disease outbreaks including cholera, chikungunya, dengue, malaria, measles and Rift Valley fever in 2019. Malaria cases were at epidemic levels in several states, with the Ministry of Health (MoH) recording over 1.7 million cases, the majority in North Darfur, double the number of 2018. There were 3 813 cases of measles as of August 2019 (OCHA, January 2020).

Nutrition status of refugees

GAM among refugee populations was also above the 'very high' threshold in 13 of the 23 camps and was 'high' in seven camps. The prevalence of stunting was greater than the 30 percent 'very high' threshold in 10 out of 23 camps, 'high' in 2 camps, and 'medium' in 11 camps.

In more than half of the camps anaemia prevalence among children aged 6–59 months was at critical levels (≥ 40 percent). The prevalence of anaemia among non-pregnant women aged 15–49 years was at critical levels (≥ 40 percent) in four camps and acceptable in only one (SENS, 2018).

Country profile



Syrian Arab Republic

ACUTE FOOD INSECURITY

2019

Total population of country **18.3M**



Population analysed **18.3M** (100% of total population, including displaced populations)

6.6M food-insecure people in need of assistance
Jan-May 2019

2.6M marginally food-insecure people

2018-19 Change

Acute food insecurity has persisted at similar levels, mainly related to escalated conflict in the north-west, displacements, limited livelihood opportunities and increasing prices.

2020 Forecast

Weakening local currency and unemployment, combined with continuing hostilities, displacements and returns are expected to thwart any potential improvements in the food security situation.

NUTRITION INDICATORS

91 800 children under 5 years are acutely malnourished, of whom **19 300** are affected by SAM.
 27.5% of children under 5 years are stunted.

HNO 2019
PAHO 2009

57.3% of children 6-23 months in 3 governorates meet the minimum dietary diversity requirement.
 24% of children under 6 months in 11 governorates are exclusively breastfed.

KAP/WCF 2017
HNO 2019

34.9% of children under 5 years and **33.6%** of women 15-49 years are anaemic.
 97% of households have access to at least basic drinking water services.

WHO 2016
JMP 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Conflict/insecurity Economic shocks Weather extremes

- An escalation of hostilities particularly in north-west Syria continued to displace people inside the country, while almost 5.6 million registered refugees remained outside the country.
- Syrians' purchasing power was limited by high unemployment rates, low salaries and high competition for labour opportunities.
- Food prices increased by up to 30% during the last quarter of 2019, and market supply routes continued to be affected by insecurity in some areas.
- The nominal exchange rate for the Syrian pound against the USD depreciated by 18.4% between January 2019 and 2020.

- Agricultural production was slowly improving, but remained well below pre-conflict levels for all crops but barley.
- Despite the increased area for cereal cultivation and ample rains, flooding damaged agricultural land and high temperatures and strong winds led to fires that destroyed over 85 000 hectares just before the harvest.
- Malnutrition is linked with poor child care and feeding practices, limited access to basic services and conflict-related shocks.

DISPLACEMENT

6.1M Syrians were internally displaced. **950 700** Syrians were newly displaced in January–September 2019, the majority from Idlib governorate.

The Syrian Arab Republic hosts **27 800** refugees and asylum-seekers and around **438 000** Palestinian refugees.

There were **5.6M** Syrian refugees in neighbouring countries: Turkey (3.6M), Lebanon (900 000), Jordan (655 000), Iraq (246 000) and Egypt (129 400).

There were **467 000** spontaneous Syrian IDP returnees and **96 000** refugee returnees.

OCHA 2019

UNHCR MID 2019 AND UNRWA DEC 2019

UNHCR DEC 2019



In 2016, these four children fled to Lebanon with their mother when armed groups overran their hometown of Souran, north of Hama in west-central Syria. Having struggled to make a living there they have come back to reclaim their former home, now reduced to rubble, in a town ravaged by conflict.

BACKGROUND

The Syrian Arab Republic has entered its ninth year of conflict (OCHA, October 2019). The conflict has caused almost 225 000 civilian deaths since 2011 (SNHR, 2020), and resulted in millions of people being internally displaced and millions seeking refuge in other countries (ACAPS, December 2019). By the end of 2019, almost 5.6 million Syrian refugees were hosted in countries in the region, chiefly in Turkey followed by Lebanon and Jordan, and a smaller number in Iraq and Egypt (UNHCR, December 2019).

ACUTE FOOD INSECURITY OVERVIEW

The Humanitarian Response Plan (HRP) Monitoring Report 2019 estimates that 6.6 million Syrians are food insecure and need food and livelihood assistance. This marks a 2 percent increase compared to the previous year. Similarly, the number of people at risk of food insecurity has increased by 4 percent to 2.6 million people (OCHA, October 2019).

The increase in numbers of food insecure is related to large displacements following an escalation of hostilities in north-west Syria and increasing returns and displacements across the country. Of particular concern were the north-eastern, north-western and western governorates where they were large-scale displacements (OCHA, October 2019).

FACTORS DRIVING FOOD INSECURITY

Conflict/insecurity

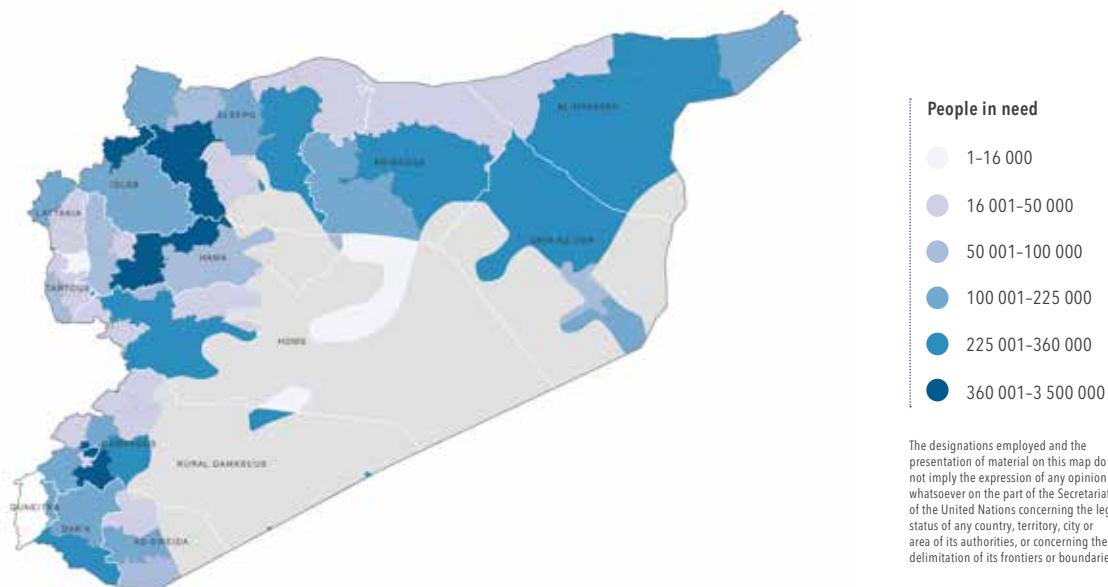
Despite improvements compared to earlier years of conflict, the security situation in the Syrian Arab Republic remained fragile. There was an increase in hostilities from February 2019 onwards in parts of southern Idlib, northern Hama and western Aleppo (OCHA, October 2019). Attacks in the north-west caused some 400 000 new internal displacements from May–August before the security situation further escalated in December, with around 284 000 people, mainly from southern Idlib, leaving their homes to head north (OCHA, December 2019).

In the north-east, since Turkey announced the start of military operations on 9 October (OCHA, October 2019) clashes between the Syrian Democratic Forces, the Syrian Arab Army and Turkish-backed forces led to the displacement of over 75 400 people and disruption of water services (OCHA, November 2019). Between mid-October and December 2019, 19 000 Syrians crossed the border to Iraq (IOM, January 2020).

In the south-east, increased hostilities since November 2018 stressed IDP camps to capacity. Many, particularly young children, did not survive the harsh journey to camps (OCHA, February 2019). By March, the population of Al Hol camp exceeded 62 000 – over 90 percent women and children (OCHA, March 2019).

Map 61

Syrian Arab Republic, distribution of people in need of food security and agriculture assistance, 2019



Source: OCHA, October 2019.

In southern Syria, insecurity increased in the first few months of 2019, particularly in Dara'a governorate, where violence resulted in deaths, looting and other security incidents, displacing unknown numbers of people. Access to basic services, including health facilities, electricity and WASH, was difficult. The agricultural sector was highly affected (OCHA, August 2019).

Mass displacement of rural Syrians has had a particularly negative impact on the agricultural industry with equipment losses and damages to irrigation, roads and energy infrastructure, which is particularly troubling since the sector contributes to a substantial share of the country's GDP (FAO, 2019).

Regardless of insecurity, almost 91 000 former refugees returned home during 2019, an increase of 60 percent compared to 2018 (ZRP, January 2020).

Economic shocks

Around 80 percent of Syrians depend on markets for food (CFSAM, September 2019). The relative improvements in security opened up some important trade routes that had been unusable since 2013. However, the economy remains troubled and around 70 percent of Syrians mentioned unemployment as their main problem (WFP, 2019).

Post-harvest losses, increased fuel prices and the depreciated Syrian pound (down by 18.4 percent against the USD between January 2019 and 2020 (WFP, January 2020) led to higher food prices across all 14 governorates (CFSAM, September 2019).

By November, the reference food basket price had increased by 11 percent compared to the previous month and by 21 percent compared to November 2018. The increase was highest in Al-Hasakeh governorate at 51 percent (WFP, November 2019).

Even though more land was cultivated than in 2018, wheat harvested areas were still 25 percent below the pre-crisis average. Farmers continued to face challenges with high production and transportation costs, as well as limited quality inputs. Fruit and vegetable production was challenged by low purchasing power of consumers, the inability to export produce and shortage of domestic processing (FAO-GIEWS, September 2019).

For the 2018/19 season, agricultural prospects were positive as a result of favourable weather conditions and displaced farming households returning home. Wheat and barley planted areas increased by 23 percent in one year and 93 percent of the planted areas were harvested, compared to 59 percent the previous year. Barley production exceeded pre-crisis levels, but wheat production was still far below and import requirements were almost 1.8 million tonnes (CFSAM, September 2019).

Weather extremes

Hasakeh governorate faced the worst flooding in a decade following heavy rains in March, affecting around 118 000 people, including IDPs (IFRC, April 2019). The rains increased yields, but high temperatures and strong winds caused fires on standing crops before the May/June harvest (CFSAM, September 2019).

NUTRITION OVERVIEW

Acute malnutrition among children was within acceptable levels, affecting around 91 800 children. Another 865 300 were expected to have micronutrient deficiencies. Chronic malnutrition was a concern, even before the crisis (HNO, March 2019). Stunting among children aged 0–59 months was above 30 percent in Eastern Ghouta and Tel Abyed, based on SMART surveys conducted during 2019 (NC, August 2019).

In 2017, fewer than a third (31.9 percent) of children aged 6–23 months in Aleppo, Idlib and Hama governorates received a minimum acceptable diet (NC, April 2017).

Infant feeding was also concerning with only 24 percent of children under 6 months exclusively breastfed in 11 governorates in 2018 (HNO, March 2019) while nutrition surveillance data from 2019 suggests that in pockets, such as in north-western areas, exclusive breastfeeding was provided to only 10 percent of babies (NC, August 2019).

SYRIAN REFUGEES IN THE REGION

While almost 5.6 million Syrians are registered as refugees in the region the figure is estimated at 7.3 million when non-registered refugees are included (3RP, January 2020). While Turkey hosts the highest number, Lebanon and Jordan have more Syrian refugees per capita, at over 13 percent of the population in Lebanon and 6 percent in Jordan. When including the estimated numbers of unregistered refugees, the proportion rises to 22 percent in Lebanon and 13 percent in Jordan¹ (UNHCR, March 2019).

Food insecurity among Syrian refugees in Turkey worsened slightly compared to 2018, with around 23 percent classified as food insecure – a slight rise from above 18 percent in 2018. Adoption of consumption-based coping strategies to bridge food access gaps increased (WFP, September 2019).²

Conversely, in Lebanon, refugee household level food consumption continued to improve for a third consecutive year with 29 percent considered food insecure compared with 34 percent in 2018. The worst areas were North and Mount Lebanon governorates. However, more households were resorting to crisis livelihood-related coping strategies to cope with a lack of food and/or the means to buy it, such as reducing expenditure on health, education and selling productive assets (VASyr, December 2019).

WFP programme monitoring indicates that in Egypt, during the first half of 2019, 70–90 percent of refugees had acceptable food consumption. Around 30–50 percent of households reduced the number of daily meals and/or meal sizes (WFP M&E, 2019). WFP monitoring in Iraq indicates that around 90 percent of Syrian refugee households had acceptable food consumption and 10–15 percent were reducing the number of daily meals or meal sizes (WFP M&E, 2019). In Jordan, an overall trend of increased consumption of nutritious foods was observed among Syrian refugee households during the first quarter of 2019. Around 20–30 percent of non-camp refugee households reduced the number of daily meals and meal sizes (WFP M&E, 2019).³

FACTORS DRIVING ACUTE FOOD INSECURITY

Economic shocks

Lebanon is experiencing a macroeconomic crisis marked by very high levels of public debt. The cost of living has ballooned, salaries have stagnated and unemployment rates have risen, prompting a significant proportion of the country's well-educated youth to emigrate. A planned tax on free phone calls over social media applications, announced in October along with other austerity measures, prompted mass demonstrations bringing most of the country to a standstill (ICG, October 2019).

Cereal prices increased by around 10–30 percent between October and December 2019 (WFP, January 2020). The proportion of Syrian refugees living below the poverty line increased from 68 percent in 2018 to 73 percent in 2019. More than half live in extreme poverty. Around 66 percent of men and just 11 percent of women had a regular job, but the two main sources of income were WFP assistance (24 percent), and informal debt from friends and shops (22 percent). Nine out of 10 households were in debt with the average level per household increasing by USD 100 from 2018 to USD 1 115 in 2019. The main reason for borrowing was to buy food (75 percent) (VASyr, December 2019).

Triggered by a sharp depreciation of the Turkish Lira and a fall in investor confidence and domestic demand, by the end of 2018 Turkey had entered a recession, with inflation running at 20 percent (WB, April 2019). However, by August 2019, its headline inflation rate had dropped to its lowest level since May 2018 (TSI, August 2019). Both assisted and non-assisted Syrian refugees accumulated higher levels of debt than during 2017–2018. Around two-thirds of refugee families were borrowing money from non-relatives and buying food on credit (WFP, September 2019). Nearly half (46 percent) or 1.6 million Syrian refugees in Turkey were living in poverty and 10 percent or 215 000 were living in extreme poverty (WFP, May 2019).

¹ Comparison of country population in 2019 (UN DESA) against refugee numbers

² WFP. 2019. Emergency Social Safety Net Post Distribution Monitoring Summary, Round 8 (Cross-Section 4). September 2019.

³ WFP. 2019. Jordan Food Security Outcome Monitoring (January–March 2019). April 2019.; WFP. 2019. Jordan Food Security Outcome Monitoring (July–September 2019). October 2019.

Country profile

Uganda**ACUTE FOOD INSECURITY**

2019

Total population of country 40.0M

Population analysed 40.0M (100% of total population, including displaced people)

1.5M IPC Phase 3 or above in April-July 2020**IPC Phase 2 data not available****2018-19 Change**

The food-insecure population increased by 27 percent due to continued arrivals of refugees and asylum seekers from neighbouring countries and a particularly severe February–July 2019 lean season in Karamoja.

2020 Forecast

Food security conditions are expected to remain precarious due to floods, severe crop damage, and below-average crop production, as well as the potential impact of desert locust infestations on food security.

NUTRITION INDICATORS**Host population**

	3.5% children under 5 years are acutely malnourished, of whom 1.3% are affected by SAM.	DHS 2016
	28.9% of children under 5 years are stunted.	DHS 2016

	30.3% of children 6–23 months meet the minimum dietary diversity requirement.	DHS 2016
	65.5% of children under 6 months are exclusively breastfed.	DHS 2016

	52.8% of children under 5 years and 31.7% of women 15–49 years are anaemic.	DHS 2016
	49% of households have access to at least basic drinking water services.	JMP 2017

Refugee population

	50 800 children under 5 years in 12 camps are acutely malnourished, of whom 1 800 are affected by SAM.	UNHCR 2017
	8.4–32.6% of children under 5 years in 12 camps are stunted.	SENS 2017

	21.7–70.1% of households in 12 camps did not consume micronutrient-rich food.	SENS 2017
	55.6–87.5% of children under 6 months in 12 camps are exclusively breastfed.	SENS 2017

	24.7–56.6% of children under 5 years and 24.5–38.8% of women 15–49 years in 12 camps are anaemic.	SENS 2017
	61.0–100% have access to protected drinking water.	SENS 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS**Conflict/insecurity****Weather extremes****Economic shocks**

- ▶ The majority of food-insecure populations were refugees and asylum-seekers fleeing conflict and insecurity, ethnic clashes and lack of basic social services in their countries of origin.
- ▶ A failed sorghum harvest in 2018 in Karamoja resulted in an early, severe lean season in February–July 2019, significantly constraining poor and very poor households' food access.

- ▶ Staple food scarcity, late onset of early 2019 rains and poor terms of trade further constrained food access in Karamoja and parts of Teso.
- ▶ Production was around 30% below average in bimodal areas due to accumulated rainfall deficits.

DISPLACEMENT

There were 1.4M refugees and asylum seekers from South Sudan (62%), the Democratic Republic of the Congo (29%) and Burundi (3%).

UNHCR DEC 2019

190 200 refugees and asylum seekers arrived in the year to December 2019.



UGANDA

Clashes in north-eastern Democratic Republic of the Congo forced thousands into Uganda in 2019, fleeing extreme brutality. Nearly two in three were children.

BACKGROUND

In 2019, Uganda hosted the third largest number of refugees globally, and the highest number in the Greater Horn of Africa (UNHCR, accessed January 2020). Agriculture provides 70 percent of employment and 25 percent of GDP (WB, November 2018). With favourable year-round climatic conditions, it is self-sufficient in staple food production and plays a major role in regional food supply, though most production takes place at the smallholder level, under rainfed conditions. Many of the northern districts are prone to drought and rely on supplies from surplus-producing areas (FEWS NET, January 2017). Around 8 million Ugandans (21.4 percent of the population) live in poverty (Uganda Bureau of Statistics, 2019).

ACUTE FOOD INSECURITY OVERVIEW

FEWS NET estimates that 1.5 million people were in Crisis or worse (IPC Phase 3 or above) in April–July in the absence of food assistance. Most of them were refugees and asylum seekers, as well as poor households in Karamoja affected by a poor 2018 rainy season severely constraining crop and livestock production. Acute food insecurity deteriorated since the early part of the year in the Eastern region and parts of Northern and Central regions, resulting in Stressed

(IPC Phase 2) conditions (FEWS NET, April 2019). Refugee populations in Uganda rely heavily on food assistance to meet their needs. According to WFP, approximately 62 percent of refugees experienced borderline or poor food consumption scores in May 2019, up from 28 percent at the same time in 2018 (WFP, May 2019).

During an atypically severe 2019 lean season (FEWS NET, December 2018), many households in Karamoja were consuming one meal per day, instead of a typical three (FEWS NET, June 2019), and in May 2019, 85 percent of households in the region had poor and borderline food consumption scores (WFP, May 2019).

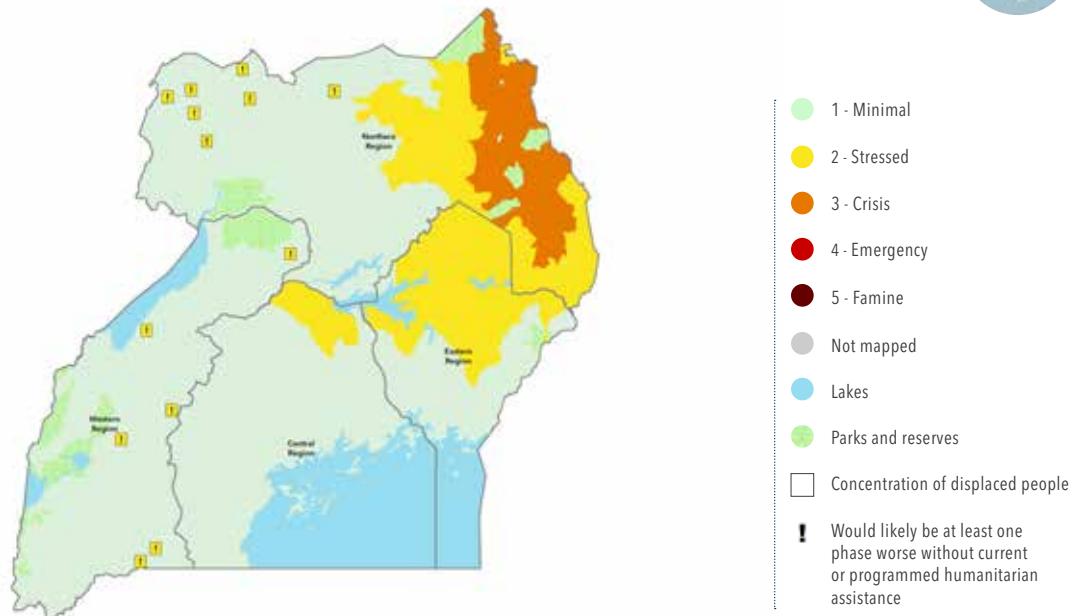
FACTORS DRIVING ACUTE FOOD INSECURITY

Conflict/insecurity

In 2019, persistent armed conflict, inter-ethnic violence and limited access to basic social services drove over 190 000 additional refugees and asylum seekers to seek refuge in Uganda, mainly from the Democratic Republic of the Congo, South Sudan and Burundi, increasing the overall refugee population to 1.38 million by the end of December 2019 (UNHCR, accessed January 2020). Though Uganda has one of the most progressive refugee management policies in

Map 62

Uganda, Acute food insecurity situation, April-June 2019



Source: FEWS NET, April 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

the world (WB, 2016 and Konrad-Adenauer-Stiftung, 2017), refugees in the settlements experience a number of obstacles that hinder their efforts to attain self-reliance and food security (FSNA, 2018). For example, despite WFP reaching approximately 85 percent of refugees with food or cash assistance, their typical monthly food ration sometimes only lasts 13–23 days, leaving a 7–18 days food gap (FSNA, 2018).

Additionally, refugee households assessed by UNHCR reported a reliance on a variety of negative consumption and livelihood-based coping strategies (e.g. reliance on less preferred or less expensive food, reduced number of meals consumed per day, reduced portion size, reduced consumption among adults to prioritize children, borrowing and begging). On a more positive note, however, a very low proportion of households across the settlements reported engaging in potentially risky or harmful coping strategies (SENS, 2017).

Weather extremes

In the north-eastern Karamoja region, the 2019 April–September rainy season did not fully establish until mid-May, substantially delaying planting. Torrential rains in June offset the moisture deficits, but hindered ploughing and sowing activities in some areas. Households were only able to retain limited amounts of cereal seeds from the poor 2018 harvest, which contributed to a decline in planted areas to below average levels. Average to above-average rains from

June–September 2019 benefitted yields, but unseasonal precipitations in October and November disrupted cereal harvesting, drying and storage (FAO-GIEWS, January 2020). The harvest of sorghum, the main cereal grown in the area, was concluded in several areas in December with about two months of delay and production was estimated by FEWS NET at 20–30 percent below average. Late harvests, as well as a scarcity of seasonal income-generating opportunities, caused the lean season to be prolonged and more severe than usual, worsening food insecurity (FEWS NET, October 2019).

In bi-modal rainfall areas covering most of the country, the first half of the March–June rainy season was characterized by exceptional dryness, among the worst on record since 1982. The drought conditions, with cumulative rains between early March and the second dekad of April estimated at up to 80 percent below average, delayed planting and resulted in widespread germination failures and crop wilting.

Improved rains in late April allowed replanting of failed crops, but the planted area was below average as several farmers did not have enough seeds for replanting or opted to not plant as the rainy season was already too advanced. Above-average rains in May and June benefitted the establishment and development of late-planted and re-planted crops and allowed a partial crop recovery (FAO-GIEWS, August 2019).

The output of the first season harvest was 10–15 percent below average, according to FEWS NET. Subsequently, the October–December rainy season was characterized by

abundant precipitations throughout the cropping period, with cumulative seasonal rains estimated at 40–80 percent above the long-term average over most cropping areas.

The heavy rains had a positive impact on crop establishment and development, and an above-average second season harvest was forecast. However, the torrential rains triggered flooding and landslides in eastern Mount Elgon subregion and in south-western Bundibugyo, Kalungu, Kisoro and Ntoroko districts, affecting about 300 000 people and causing localized crop losses and damage to infrastructure (FAO-GIEWS, January 2020).

Economic shocks

High and volatile food prices during 2019 severely constrained food access for poor households. According to FAO-GIEWS, prices of maize started to increase from early 2019 in several markets including the capital Kampala, with seasonal patterns compounded by an earlier-than-usual depletion of stocks from the below-average 2018 second harvest.

Prices accelerated sharply due to concerns over the impact of early season dryness on the performance of the 2019 first season harvest, surging by almost 50 percent between March–June.

After having declined by about 30 percent from June–September as the first season harvest increased market availabilities, maize prices surged again by up to 50 percent from September–December, with seasonal patterns compounded by increased transport costs and trade disruptions caused by torrential rains. December prices were at very high levels, up to twice their year-earlier values, mainly due to a tight domestic supply situation following the below-average first season harvest coupled with sustained export demand from Kenya and South Sudan (FAO-GIEWS, December 2019).

In the Karamoja region, according to WFP's mVAM, prices of beans, maize grain and sorghum slightly began to decline in September with the start of the 2019 harvest, but remained 38–71 percent above the 2018 average levels due to an early depletion of stocks of the poor 2018 harvest and unfavourable prospects for 2019 crops (WFP, September 2019).

NUTRITION OVERVIEW

National prevalence of stunting among children under 5 years slightly reduced from 33 percent in 2011 to 28.9 percent in 2016 (DHS, 2016). However, the absolute number of stunted children has stagnated at about 2.1 million because of rapid population growth. A relatively low prevalence of wasting in children under 5 years (4 percent in 2016) masks significant regional inequities with Karamoja and West Nile recording particularly high wasting levels (≥ 10 percent) (DHS, 2016).

Nationally only 14.6 percent of children aged 6–23 months received a minimum acceptable diet (in the Acholi region this percentage fell to 2.8 percent), and just 30.3 percent received the minimum recommended dietary diversity (dropping to 7.3 percent in Acholi region) (DHS, 2016).

Following national reductions in anaemia in children under 5 years and women of reproductive age between 2006 and 2011, there was an increase between 2011 and 2016. Anaemia remained a 'severe' public health issue for children under 5 years (52.8 percent) and a 'moderate' public health issue for adolescent girls and women; 72 percent of children aged 6–8 months were anaemic, indicating insufficient iron stores at birth as a result of poor maternal nutrition (DHS, 2016).

Nutrition status of refugees

According to the 2017 food security and nutrition assessment in West Nile settlements, refugee populations in Palabek had the highest GAM prevalence at 12.3 percent (FSNA, 2018). Other settlements with concerning GAM were Adjumani (11.8 percent), Bidibidi (11.8 percent), Palorinya (11.1 percent) and Arua (10.3 percent). In South West settlements, the GAM rate was below 5 percent. The prevalence of SAM was below 1 percent in the refugee settlements (SENS, 2017).

Recent improvements in food security among the refugees following the resumption of full rations since 2018, coupled with increased income opportunities in most settlements, have significantly improved nutrition outcomes of refugees. However, nutritional vulnerability remained in refugee-hosting districts and in Karamoja in northern Uganda where 56 percent of refugees reportedly had poor and/or borderline food consumption (WFP, 2018 and 2019).

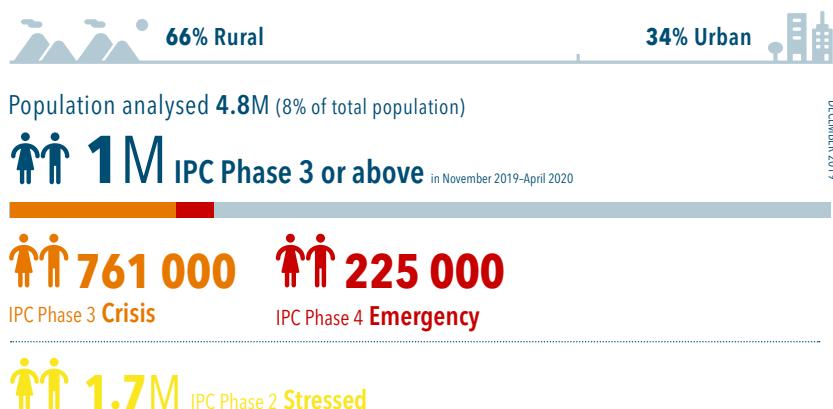
Country profile



United Republic of Tanzania

ACUTE FOOD INSECURITY

2019

Total population of country **58M**

2018-19 Change

No data was available for 2018. However, acute food insecurity deteriorated as a result of weather extremes and pest infestations on food availability as well as the refugee influx.

2020 Forecast

Acute food insecurity is expected to remain at similar levels during the lean season in early 2020. Subsequent improvements are expected mainly driven by favourable rainfall, a good harvest and decreasing food prices.

NUTRITION INDICATORS

Host population

	4.5% children under 5 years are acutely malnourished, of whom 1.2% are affected by SAM.	DHS 2015-16
	34.4% of children under 5 years are stunted.	DHS 2015-16

	39.9% of children 6-23 months meet the minimum dietary diversity requirement.	DHS 2015-16
	59.2% of children under 6 months are exclusively breastfed.	DHS 2015-16

	57.9% of children under 5 years and 44.8% of women 15-49 years are anaemic.	DHS 2015-16
	57% of households have access to at least basic drinking water services.	JMP 2017

Refugee population

	5 500 children under 5 years in 4 camps are acutely malnourished, of whom 800 are affected by SAM.	SERS 2019
	32.9-52.1% of children under 5 years in 4 camps are stunted.	SERS 2019

	13.5-7.3% of children 6-23 months in 4 camps did not consume iron-rich or iron-fortified foods.	SERS 2019
	44.2-89.2% of children under 6 months in 4 camps are exclusively breastfed.	SERS 2019

	19.2-32.9% of children under 5 years and 8.2-26.0% of women 15-49 years are anaemic.	SERS 2019
	100% have access to improved drinking water sources.	SERS 2019

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Weather extremes and crop pests

- The 2019 aggregate cereal production was estimated to be 3 percent lower than that of 2018 and the average of the previous five years.
- Prolonged dry spells and erratic rainfalls resulted in low food availability and reduced income opportunities for vulnerable households.

Economic shocks

- Maize prices increased throughout 2019 due to sustained exports, reduced output and heavy rains that disrupted trade flows and inflated transport costs.
- Fall armyworm infestation levels were estimated at more than 50 percent in several regions.
- Poor child feeding practices were among the drivers of extremely concerning rates of chronic malnutrition.

DISPLACEMENT

There were over **285 000** refugees and asylum-seekers from neighbouring Burundi (74%) and the Democratic Republic of the Congo (26%) as a result of crises in those countries.

UNHCR DEC 2019



UNITED REPUBLIC OF TANZANIA

Velarie Ntahonicaye and her four grandchildren live in Kigoma refugee camp after fleeing Burundi because they were no longer able to pay bribes to armed groups. Tanzania hosts over 200 000 Burundian refugees.

BACKGROUND

The United Republic of Tanzania is generally a food-secure and self-sufficient crop producer, and one of the largest maize exporters of the sub-region (WFP, July 2019). However, weather shocks, such as drought and floods, frequently affect the country by disrupting livelihoods and damaging infrastructure (Erman et al, 2019).

Such shocks have particularly severe consequences for almost half (49 percent) of the population who are under the international poverty line and are less able to cope and recover (2011) (WB, accessed January 2020). Agriculture is central to the economy and local livelihoods, as it represents 30 percent of GDP, supports about 80 percent of livelihoods in rural areas and meets 95 percent of the national food needs, but is characterized by limited use of modern farming techniques, including irrigation (FAO, 2019).

ACUTE FOOD INSECURITY OVERVIEW

During the 2019/2020 lean season from November 2019–April 2020, around one million people were in Crisis or worse (IPC Phase 3 or above), representing over 20 percent of the population surveyed across 16 districts. The figure included 225 000 in Emergency (IPC Phase 4). In addition, close to

1.7 million people were in Stressed (IPC Phase 2) conditions in these districts and required livelihood protection (IPC February 2020).

Ten districts were classified in Crisis (IPC Phase 3) – including Kishapu, Longido and Musoma with more than 30 percent of their population in Crisis or worse (IPC Phase 3 or above). The other six districts analysed were in Stressed (IPC Phase 2) (IPC, February 2020).

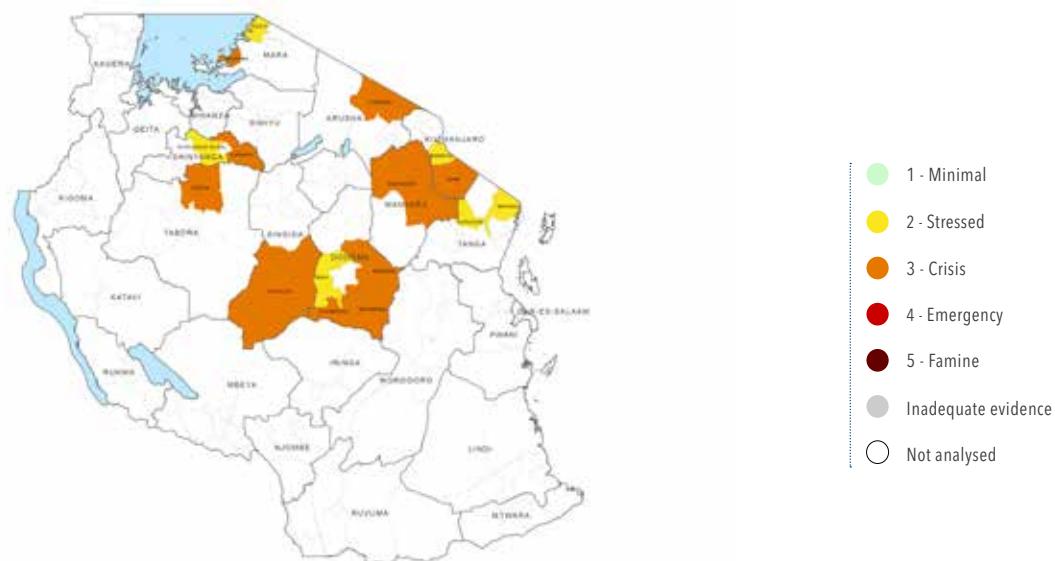
Acute food insecurity among refugees

The country has been hosting refugees and asylum seekers since 1994. By the end of 2019, 285 400 refugees were settled in the country, mostly from Burundi (73 percent) and the Democratic Republic of the Congo (27 percent) (UNHCR, December 2019). Close to 85 percent of them lived in camps – mainly in the Nyarugusu, Nduta and Mtendeli camps located in the Kigoma region – while over 8 percent were living among host communities in villages and urban areas, and 6 percent in informal settlements.

While the latest arrivals occurred in 2018, around 79 000 Burundian refugees and over 8 000 Congolese refugees returned to their home country between 2017 and 2019. In 2019, 20 900 Burundian refugees were assisted to voluntarily return up until November (UNHCR, November 2019). Refugees in the four camps mostly rely on in-kind food assistance from WFP. They can buy food and basic items from

Map 63

United Republic of Tanzania, IPC Acute food insecurity situation, November 2019-April 2020



Source: The United Republic of Tanzania IPC Technical Working Group, February 2020.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

small shops across the camps and markets are operational in Nduta and Mtendeli camps. They can also go to the community markets for a wider selection of items (SENS, 2019).

More than 80 percent of refugee households had acceptable food consumption in 2019, climbing from 81 percent in March to 84 percent in June and 86 percent in August. However, over the same time period, refugees increasingly resorted to consumption-based strategies to cover their food needs. The proportion reducing the number of daily meals increased from 40 percent to 61 percent (WFP, November 2019).

FACTORS DRIVING ACUTE FOOD INSECURITY

Weather extremes and crop pests

The 2019 Msimu harvest, completed in June in western, central and southern unimodal rainfall areas, was estimated to be above average thanks to adequate and well-distributed rainfall. However, in northern, north-eastern and coastal bimodal rainfall areas, the Masika main season harvest in August was well below average, due to erratic rains in the March-May long rainy season and fall armyworm outbreaks, which were estimated at more than 50 percent in Manyara, Geita, Kagera, Simiyu and Kilimanjaro regions (FAO-GIEWS). A needs assessment carried out by FAO in Iringa, Manyara

and Morogoro – which account for 11 percent of the national maize production – found that in the three regions 64 percent of farmers suffered yield losses due to the pest and that on average they lost 11 percent of the total maize crop (Turot et al, forthcoming).

The 2019 aggregate cereal production was estimated at about 10 million tonnes, 3 percent down from the output obtained in 2018 and the average of the previous five years (FAO-GIEWS).

Exceptionally abundant rains during the October–December 2019 short rainy season boosted crop yields, but also triggered flooding, causing localized crop losses and damage to infrastructure. Mara was one of the most affected regions at the end of October with homes and infrastructure, including roads and bridges, either destroyed or damaged. Some 370 acres of crop farms were washed away (IFRC, November 2019).

Economic shocks

As a result of poor weather conditions and lower agricultural production, reduced labour opportunities in farming and above-average staple prices contributed to reducing households' purchasing power in 2019. Prices of maize followed a sustained, albeit irregular, increasing trend throughout 2019, as a result of sustained exports to Kenya, Rwanda and particularly Zimbabwe as well as the reduced Masika harvest and the heavy rains that disrupted trade flows and inflated transport costs (FAO-GIEWS).

At the national level wholesale rice prices started increasing in August and by November they were around 20 percent above year-earlier levels. Maize prices were increasing since April and by December they were almost double year-earlier levels (WFP, November 2019). In November wholesale beans prices were 33 percent higher than in November 2018 (FEWS NET, December 2019). As a result, vulnerable households had to resort to negative coping strategies such as begging and selling productive assets (IPC, February 2020).

NUTRITION OVERVIEW

The acute malnutrition rate among children aged 6–59 months was 'low' at 4.5 percent, reaching 'medium' levels of 9 percent in Kusini Pemba and 8.7 percent in Kaskazini Pemba regions. Stunting at the national level was 'very high' at 34.4 percent (DHS 2015–2016), affecting around 3.6 million¹ children.

Among the main drivers of these extremely concerning rates of chronic malnutrition were child feeding practices: only 8.7 percent of children aged 6–23 months consumed a minimum acceptable diet and 59.2 percent of infants were exclusively breastfed (DHS 2015–16).

In 2018 around 142 000 people were affected by tuberculosis (WHO, accessed January 2020) and 1.6 million people were living with HIV with 4.6 percent of the adult population affected (UNAIDS, accessed January 2020). HIV/AIDS was the third most common reported cause of death (CDC, May 2019). The country faced the continued risk of importing Ebola virus disease from the neighbouring Democratic Republic of the Congo with the alert of a suspected case in September 2019 (UNICEF, 2019).

Nutrition status of refugees

The overall acute malnutrition status in refugees in the United Republic of Tanzania is acceptable. The latest SENS nutrition survey in 2019 reported that the GAM prevalence in the four major camps was under 5 percent and the SAM rate was below 0.2 percent. However, the chronic malnutrition status was over the 'very high' threshold in all camps (30 percent).

Refugees living in camps have access to health facilities within the camps. No major disease outbreaks occurred in 2019, but the malaria prevalence is generally high in the region, and the diarrhoea incidence in children under 5 is concerning (22.7–27.0 percent). All refugee households accessed water from an improved source (SENS, 2019).

¹ Country population*18% of population under 5*34.4%

Country profile



Venezuela (Bolivarian Republic of)

ACUTE FOOD INSECURITY

2019

Total population of country **28.5M**Population analysed **28.5M** (100% of total population)
 9.3M

Acutely food-insecure people in need of assistance in July-September 2019

7M

Moderately food-insecure people

2.3M

Severely food-insecure people

1.7M

Marginally food-insecure people

2018-19 Change

Acute food insecurity levels rose as the Venezuelans remaining in the country felt the acute impact of hyperinflation and were unable to meet their essential needs.

2020 Forecast

Economic hardship is expected to intensify for the Venezuelans left in the country, as well as for the increasing numbers migrating to Colombia and Ecuador.

NUTRITION INDICATORS



6.3% of children under 5 years are **acutely malnourished**.

UNICEF
2019

13.4% of children under 5 years are **stunted**.



30% of children under 5 years and **23.9%** of women 15–49 years are **anaemic**.

JME 2009



96% of households have access to at least basic **drinking water** services.

JMP 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS



Economic shocks

- Deep economic recession has persisted for five consecutive years with monthly inflation reaching 200% in January 2019.
- More than a third of the population have experienced total loss of income.
- The minimum monthly wage (USD 7) covered less than 5% of the basic food basket.

- Food shortages became more prevalent as the harvest was below average and dwindling foreign exchange earnings limited imports.
- The disintegration of health services and mass exodus of health workers disproportionately affected the most vulnerable, and threatened their nutrition status.

DISPLACEMENT



There were around **3.8M** Venezuelan **refugees** and **migrants** in Latin America and the Caribbean including: 1.6M in Colombia, 862 000 in Peru and 385 000 in Ecuador.

RAW DECEMBER 2019

Driven out by food shortages, high prices, lack of work and insecurity, the number of Venezuelans emigrating rose from 3 million to 4.6 million between 2018 and 2019.



VENEZUELA (BOLIVARIAN REPUBLIC OF)

Since the start of the socioeconomic crisis, nearly 5 million Venezuelans have been driven out of their country as refugees and migrants, making it the second largest refugee crisis in the world. The majority are families with children, pregnant women, elderly people and people with disabilities.

BACKGROUND

Despite possessing the world's largest oil reserves, the Bolivarian Republic of Venezuela is currently one of the world's most concerning acute food insecurity hotspots. The catalyst for the crisis was the sharp decline in global oil prices from 2013, prompting national oil production to almost half and the economy to contract by 45 percent between 2013 and 2018, according to the International Monetary Fund (IMF). The loss of income-earning opportunities, hyperinflation and general collapse of the country's public infrastructure and services, have made daily life a struggle for survival for most Venezuelans (Wilson Centre, September 2019).

ACUTE FOOD INSECURITY OVERVIEW

Around 9.3 million Venezuelans – a third (32 percent) of the total population – were food insecure and in need of assistance according to WFP's Emergency Food Security Assessment carried out in July–September 2019.¹ Of these, 2.3 million were considered severely food insecure and

7 million were moderately food insecure (WFP, February 2020). The majority of Venezuelans (60 percent) were marginally food secure, meaning they had acceptable food consumption by engaging in irreversible coping strategies and were unable to afford some essential non-food expenditures. These households were in danger of becoming food insecure if they faced any additional shocks.

The analysis shows that acute food insecurity is countrywide. Even in the states with the lowest rates of acute food insecurity, including Lara, Cojedes and Merida, approximately one in five people were estimated to be moderately food insecure. Eleven states had rates of severe food insecurity that were higher than the national prevalence, peaking at 21 percent in Delta Amacuro, followed by Amazonas (15 percent), Falcón (13 percent), Zulia and Bolívar (both 11 percent).

FACTORS DRIVING ACUTE FOOD INSECURITY

Economic shocks

The year 2019 marked the fifth consecutive year of deep economic recession. GDP per capita (valued in USD) declined by 76 percent between 2015 and 2020 (IMF, January 2020). Food prices soared, and inflation peaked in January 2019 at

¹ At the end of the assessment 8 375 valid questionnaires were collected, ensuring statistical representation at state level. The prevalence of acute food insecurity was obtained by analysing food consumption patterns, food and livelihood coping strategies and economic vulnerability. For more information on the FCS and the CARI approach please see chapter 1. The Government of the Bolivarian Republic of Venezuela does not endorse the results of this survey.

Map 64

Venezuela (Bolivarian Republic of), prevalence of severe food insecurity by state, 2019



Source: WFP, February 2020.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

over 200 percent per month. Although the pace of inflation decelerated to 33 percent in December after the government allowed transactions in US dollars, Venezuelans' purchasing power to buy food eroded by more than 8 000 percent in 2019 (Banco Central de Venezuela, 2019).

In April 2019, the minimum wage was estimated at USD 7 per month and only covered 4.7 percent of the basic food basket (OHCHR, July 2019). An assessment concluded in December 2019 found that an average family required 55 minimum daily wages to cover the cost of a monthly basic food basket (CENDA, December 2019). The impact of the economic crisis has been magnified by the collapse of the country's public infrastructure and services (IMC, February 2020).

More than a third of respondents in WFP's 2019 EFSA (37 percent) said they had experienced a total loss of income, such as losing their only job or losing their business and half (51 percent) had suffered a partial loss, such as reduced salaries or the loss of one of two jobs. Results showed that 18 percent of households relied on government assistance and social protection systems (WFP, February 2020).

The 2019 maize harvest was expected to be below average following a significant reduction in the planted area because of high costs of and a general lack of agricultural inputs, reflecting the significant depreciation of the currency and import difficulties (OCHA, November 2019). Consequently, reliance on imported food increased, but with dwindling

foreign exchange earnings,² food shortages became increasingly pressing.

NUTRITION OVERVIEW

The Venezuelan Government has not published nutrition data since 2007. UNICEF collected nutrition status data from 100 000 children under 5 years and pregnant and lactating women in 16 states in 2019. It found 6.3 percent of children within this group were wasted, considered a 'medium' GAM prevalence (UNICEF, December 2019).

In 2019, four major national blackouts left the majority of the country without electricity for several days. The power disruptions, coupled with medicine and equipment shortages, and mass exodus of healthcare workers and specialists, have pushed the healthcare system to the brink of collapse. Hospital patients – many of whom are already critically ill – have a higher risk of acquiring new infections while in the hospital, due to a lack of basic cleaning supplies. The disintegration of services disproportionately affects the most vulnerable, including indigenous populations, children under the age of 5 years, pregnant and lactating women, adolescents, those with chronic and non-communicable diseases, and the elderly (IMC, December 2019).

² The decline foreign exchange earnings was mainly caused by the drop in oil production as the management of the state oil company went into disarray. Economic sanctions imposed on Venezuela further limited export earnings and access to external finance.

VENEZUELAN MIGRANTS IN THE REGION

The Venezuelan crisis has sparked the biggest mass migration movement in the region, and globally it is second after the Syrian refugee crisis. Food shortages, high food prices, lack of work, insecurity and violence have driven an estimated 4.8 million or 15 percent of the total population of the Bolivarian Republic of Venezuela to abandon their homes and livelihoods and migrate since the outbreak of the crisis (R4V, February 2020). Most have remained in Latin America and the Caribbean (3.9 million), with over 40 percent or 1.6 million Venezuelans in Colombia (R4V, December 2019).

In Colombia, approximately 891 000 (55 percent of the analysed migrant population), were severely or moderately food insecure and in need of food assistance in 2019. Of them around 345 000 (21 percent) were severely food insecure and 546 000 were moderately food insecure (34 percent). An estimated 673 000 were marginally food secure (EFSA, November 2019).

In Ecuador, approximately 292 600 Venezuelan migrants (76 percent of the analysed population) were severely or moderately food insecure and in need of food assistance in 2019. Of them 100 000 (26 percent) were severely food insecure and 192 500 were moderately food insecure (50 percent). An estimated 92 000 were marginally food secure (EFSA, March 2019).

FACTORS DRIVING FOOD INSECURITY

While Colombia has increased migrants' access to employment since 2018 (RMRP 2020), for most their main source of income was irregular daily wage labour (59 percent), making them highly vulnerable to any potential shocks. As many as 75 percent of Venezuelan migrants in Colombia were living below the poverty line. Most of their expenses were spent on food (42 percent) and shelter (23 percent). One in three were in debt, primarily to buy food. Living conditions provide an indicator of economic vulnerability. One in three

migrants in Colombia lived in unacceptable accommodation, informal shelters or on the street and nearly half (45 percent) lived in crowded conditions. Most had to use emergency coping strategies, such as begging, to meet their basic food needs. (EFSA, November 2019).

In Ecuador, 37 percent of Venezuelan migrants were living in poverty. Around 29 percent were living in critically crowded conditions, and 41 percent were homeless (EFSA, March 2019). Visa restrictions placed on Venezuelans entering Ecuador in 2019 have affected their ability to generate an income. More than half (55 percent) were not able to earn enough money to cover their basic needs (RMRP, 2020).

NUTRITION OVERVIEW

There is a lack of nutrition data on refugees and migrants from the Bolivarian Republic of Venezuela. But malnutrition and food insecurity are of particular concern in rural and remote areas (RMRP 2020). Most Venezuelan migrants in Colombia were highly reliant on key food staples, which were consumed more frequently than more nutritious and diversified food groups (dairy, vegetables and fruit) (EFSA, November 2019).

Access to safe water and solid waste management is challenging in several areas both for hosts and migrants, particularly when essential infrastructure is lacking or overwhelmed (RMRP 2020). Four in 10 migrants did not have access to safe drinking water in their accommodation (EFSA, November 2019).

Although Colombia has increased health care coverage for Venezuelan migrants since 2018 (RMRP 2020) 58 percent of migrants assessed did not have access to medical services, and 28 percent of migrant children were in need of basic vaccinations (EFSA, November 2019).

An estimated 27 000 Venezuelan migrants in Ecuador were in need of nutrition support in 2019. Almost half (45 percent) of Venezuelan children suffer from anaemia, one in five (20 percent) from chronic malnutrition and 2 percent from acute malnutrition (RMRP 2020). One in three children under 2 years old were not breastfed. Around 40 percent of pregnant or breastfeeding Venezuelan migrant woman did not receive prenatal care.

Country profile

Yemen



ACUTE FOOD INSECURITY

2019

Total population of country **29.9M**Population analysed **29.9M** (100% of total population including displaced populations)

15.9M IPC Phase 3 or above in December 2018–January 2019



8.9M IPC Phase 2 Stressed

2018-19 Change

Despite massive humanitarian assistance, acute food insecurity remained alarmingly high due to persistent conflict, economic decline and disrupted livelihoods, affecting over half of the population.

2020 Forecast

The combined effects of conflict, macroeconomic crisis, climate-related shocks and crop pests, including fall armyworm and desert locusts, are likely to lead to increasing levels of acute food insecurity in 2020.

NUTRITION INDICATORS

	2M children under 5 years are acutely malnourished, of whom 0.4M are affected by SAM.
	46.5% of children under 5 years are stunted.

HHS 2019

	26.6% of children 6–23 months meet the minimum dietary diversity requirement.
	10% of children under 6 months are exclusively breastfed.

DHS 2013

	83.5% of children under 5 years and 69.6% of women 15–49 years are anaemic.
	63% of households have access to at least basic drinking water services.

WHO 2016

JMP 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Conflict/insecurity Economic shocks Weather extremes

- Insecurity continued to deny people access to livelihoods, markets and other basic services.
- Lack of foreign currency kept exchange rates high and informal rates even higher, disrupting essential imports and payment of public sector salaries.
- Food prices in the third quarter of 2019 were well above the five-year average – rice by 83% and wheat by 50%.
- Acute fuel shortages increased prices from mid-September.

- Over 40% of Yemeni households have lost their primary income source and labour opportunities are scarce.
- Total cereal production in 2019 was forecast at about 12% below the previous year.
- Conflict and economic collapse have exacerbated poor health care and inadequate child care and feeding practices.

DISPLACEMENT

Over **3.6M** Yemenis were internally displaced. **390 500** people were displaced at least once in 2019.

IOM DEC 2019

There were around **277 300** refugees and asylum seekers, mainly from Somalia followed by Ethiopia.

UNHCR OCT 2019

There were around **1.3M** IDP returnees and **44 800** Yemeni returnees from Saudi Arabia.

UNHCR AUG 2019



Amina fled Hodeidah governorate with her parents and six siblings for a makeshift camp in Aden after mortars hit their neighbourhood.

BACKGROUND

In 2019, Yemen was still the worst humanitarian crisis in the world (United Nations, February 2019). The escalation of the decade-long conflict between the government and Houthi movement since 2015 exacerbated chronic poverty, weak governance, corruption, over-dependence on imports, dwindling oil revenues and water scarcity (ACAPS, December 2019). Poverty affects over 70 percent of Yemenis (WB, October 2019). A United Nations-brokered ceasefire in December 2018 reduced violence in Hodeidah, but fighting continued in 2019 on numerous active frontlines (ACAPS, December 2019).

ACUTE FOOD INSECURITY OVERVIEW

An estimated 15.9 million people or over half (53 percent) of the country's population were in Crisis or worse (IPC Phase 3 or above) from December 2018–January 2019, despite ongoing humanitarian food assistance. Of these, about 5 million faced Emergency (IPC Phase 4) and 64 000 Catastrophe (IPC Phase 5).

The districts with active fighting (Hodeidah, Hajjah, Saadah, Taiz, Al Dhale, Al Baidha and Al Jawf) were the worst off, while IDPs, host families, marginalized groups and landless wage labourers were the most vulnerable groups (IPC, December 2018).

A hotspot IPC analysis conducted in 29 worst-off districts in 12 governorates in July¹ found the number in Crisis or worse (IPC Phase 3 or above) in these areas fell from 1.55 million in January 2019, when 44 000 were classified in Catastrophe (IPC Phase 5), to 1.25 million, with no populations in Catastrophe (IPC Phase 5), thanks to increased humanitarian assistance and seasonal food production (IPC, July 2019).

Based on FEWS NET, Famine (IPC Phase 5) risk persists, particularly if conflict disrupts port operations for a prolonged period of time, significantly limiting food imports and trade to markets inland (FEWS NET, December 2019). Emergency (IPC Phase 4) outcomes were expected in Hajjah and Sa'adah while Crisis (IPC Phase 3) outcomes were widespread.

FACTORS DRIVING ACUTE FOOD INSECURITY

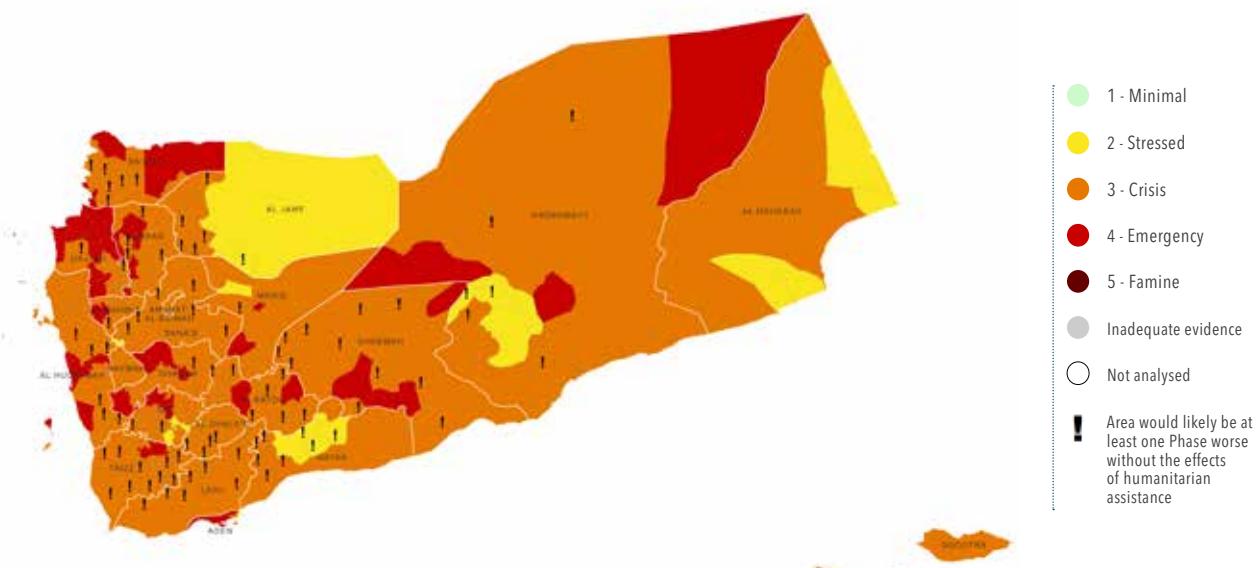
Conflict/insecurity

In April 2019, the United Nations Security Council members expressed grave concern that the 2018 Stockholm peace agreement had not been implemented and that the humanitarian situation was deteriorating. The escalation in violence in Hajjah and on the Yemeni-Saudi border risked undermining the ceasefire in Hodeidah (UNSC, April 2019).

¹ Logistical challenges prevented the analysis from being carried out in another 16 districts.

Map 65

Yemen, IPC Acute food insecurity situation, December 2018-January 2019



Source: Yemen IPC Technical Working Group, December 2018.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

In 2019, the conflict continued to disrupt economic activity and hydrocarbon exports, damage infrastructure and destroy basic public services (WB, October 2019). It continued to restrict people's access to markets and services, particularly in Aden, Hodeidah, Ad Dhali' and Hajjah (ACAPS, October 2019). September was one of the worst months for civilian casualties with an average of 13 killed or injured daily (OCHA, November 2019).

Some 3.6 million people are internally displaced, with over 390 000 displaced during 2019 (IOM, 2019).

Humanitarian access continued to be very challenging. Over 6 million people live in 75 hard-to-reach districts, with bureaucracy and conflict the main impediments to meeting their humanitarian needs (ACAPS, October 2019). June-July saw the highest number of violent incidents against humanitarian workers and assets, particularly in northern areas (OCHA, November 2019) and WFP suspended food distribution in Sana'a for over a month due to Houthi restrictions on beneficiary selection and monitoring (ACAPS, October 2019).

Economic shocks

The acute shortages of foreign exchange and fall in government revenues have interrupted the purchase of essential imports and payment of public sector salaries and pensions (WB, October 2019).

An estimated 40 percent of Yemeni households have lost their primary source of income and find it difficult to buy the minimum amount of food (WB, October 2019). Limited employment and depressed wages and salaries further increased reliance on humanitarian assistance (IPC, July 2019). Food prices in the third quarter were well above the five-year average – rice by 83 percent and wheat by 50 percent (WFP, October 2019). Sorghum, millet and maize prices were 140–170 percent higher than pre-crisis levels (FAO and FSTS, October 2019).

Fuel and gas shortages disrupted electricity, water, sanitation and health services and raised the cost of basic goods. In October, black market fuel prices were nearly three times higher than the official price (NRC, October 2019). Petrol prices were around 22 percent higher in the third quarter of 2019 compared with the same period in 2018 (WFP, October 2019).

Weather extremes and crop pests

In June, rains and flash flooding affected close to 70 000 people, including IDPs, in over 10 governorates (OCHA, June 2019). Rains further intensified across the country and affected mostly western governorates, while Hodeidah and Al Mahwit suffered the most damage with housing, livestock and livelihoods washed away and IDP sites damaged (OCHA, August 2019). In September and October, further heavy rains, thunderstorms and flooding hit southern areas, including IDP sites and some central areas (OCHA, October 2019).

Map 66

Yemen (29 worst-affected districts), IPC Acute food insecurity situation, July-September 2019



Source: Yemen IPC Technical Working Group, July 2019

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Fall armyworm reportedly damaged maize crops (FAO-GIEWS, September 2019) and swarms of locusts formed on the western coast and moved northward (FAO, December 2019), damaging crops, livestock pastures and beehives, reducing food quantities for own consumption and sale (FEWS NET, December 2019). Total cereal production in 2019 was forecast at 385 000 tonnes, about 12 percent below the previous year's harvest (FAO-GIEWS, September 2019).

NUTRITION OVERVIEW

An estimated 7.4 million people required malnutrition treatment or prevention intervention, including 3.2 million children aged 6–59 months and over 1 million pregnant and lactating women in 2019 (OCHA, February 2019).

Several districts in Taizz, Abyan, Hajjah and Lahj governorates had a 'very high' GAM prevalence (above 20 percent), according to SMART surveys and Emergency Food and Nutrition Assessments (EFSNA) conducted between 2016 and 2019 in 74 districts of seven governorates (EFSNA/SMART, 2016–2019).

Nutrition surveillance in 42 districts also showed that 25 percent of children aged 6–59 months were affected by wasting and 52 percent by stunting from January–October. Results in Hodeidah have consistently shown a wasting prevalence above 30 percent since June (WHO, October 2019).

Women's dietary diversity was extremely poor with around 70 percent having a diet based on just two or three food groups (WFP, October 2019). Even before the escalation of conflict, child-feeding practices were poor with only 15 percent of 6–23 month-olds consuming the minimum acceptable diet required for growth and development (DHS, July 2015).

Prevalence of anemia was a 'severe' public health concern for children aged 6–59 months (83.5 percent) and for reproductive-age women (69.6 percent) (WHO, 2016).

Drinking water quality was another concern for malnutrition: 37 percent of households did not have access to 'at least basic' drinking water services (UNICEF and WHO, 2017).

Yemen's health care system has been devastated by conflict with almost half (49 percent) of the health facilities not or only partially functioning due to lack of staff, supplies, inability to meet operational costs or because of access constraints. Equipment at hospitals is non-functioning or obsolete, and many health personnel have not received regular salaries for two years (OCHA, December 2019). As a consequence, approximately 19.7 million people lack adequate healthcare, of whom 14 million are in acute need of assistance (ACAPS, December 2019).

Over 2.2 million suspected cholera cases were reported in Yemen from October 2016–November 2019 with 3 886 related deaths (WHO, January 2020).

Country profile

Zambia



ACUTE FOOD INSECURITY

2019

Total population of country **17.9M**Population analysed **9.5M** (53% of total population)

2.3M IPC Phase 3 or above in October 2019–March 2020

1.9M IPC Phase 3 Crisis **412 000** IPC Phase 4 Emergency

3.1M IPC Phase 2 Stressed

UN DESA WFP 2018
ZAMBIA IPC TECHNICAL WORKING GROUP, MAY 2019

2018-19 Change

Acute food insecurity increased due to poor rainfall which resulted in crop failure and record high staple food prices.

2020 Forecast

Continued dry-weather in areas that suffered shortfalls in crop production in 2019 is expected to sustain high humanitarian needs, but a foreseen upturn in the national agricultural output could alleviate overall acute food insecurity.

NUTRITION INDICATORS

Host population

4.2% children under 5 years are acutely malnourished, of whom 1.5% are affected by SAM.	DHS 2018	12% of children 6–23 months meet the minimum dietary diversity requirement.	DHS 2018	58.1% of children under 5 years and 31.1% of women 15–49 years are anaemic.	DHS 2018
34.6% of children under 5 years are stunted.	DHS 2018	69.9% of children under 6 months are exclusively breastfed.	DHS 2018	60% of households have access to at least basic drinking water services.	JMP 2017

Refugee population

950 children under 5 years are acutely malnourished, of whom 82 are affected by SAM.	SENS 2017 & UNICEF 2017	0.9% of households in Mayukwayuka camp and 6.4% in Meheba camp did not consume micronutrient-rich food.	SENS 2017	42.4–45.8% of children under 5 years and 23.7–29.1% of women 15–49 years are anaemic in Mayukwayukw and Meheba.	SENS 2017
34.6–66.2% of children under 5 years are stunted in 3 camps.	SENS 2017 & UNICEF 2017	61.8% of children under 6 months in Mayukwayukw and 28.9% in Meheba are exclusively breastfed.	WFP 2019	99.7–100% of households in Meheba and Mayukwayukwa camps have access to improved drinking water sources.	SENS 2017

ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Weather extremes	Economic shocks
<ul style="list-style-type: none"> Adverse weather led to a sharp reduction in the 2019 cereal harvest. Well below-average harvests curbed households' food supplies and limited income-generating opportunities. 	<ul style="list-style-type: none"> Tight domestic supplies triggered hikes in the price of key food staples, which reached record highs and diminished households' financial capacity to access food. Malnutrition is linked with poor child care and feeding practices as well as morbidity.

DISPLACEMENT

There were 62 300 refugees and asylum-seekers from the Democratic Republic of the Congo (83%), Burundi (9%) and Somalia (6%).	UNHCR OCT 2019
There were 23 300 Zambian returnees.	UNHCR OCT 2019



ZAMBIA

Katemba Chulu, a 33-year-old refugee who fled fighting in the Democratic Republic of the Congo, sells tomatoes in a bustling market in Mantapala in Zambia, which hosts around 46 000 refugees from its neighbour. The prices of key food staples reached record highs in Zambia in 2019.

BACKGROUND

Despite robust economic growth from 2004–2014 and progress in health and child malnutrition, poverty levels have remained stubbornly high at 76.6 percent in rural areas (CSO and WB, 2015).

Almost two-thirds of the population gains their livelihood from agriculture, yet the sector only contributes around 10 percent of GDP (RoZ, December 2018). Most farmers remain locked into low-productivity subsistence agriculture characterized by lack of access to key inputs, extension services, poor road and market infrastructure, lack of access to financial services and over-reliance on rain-fed agriculture. As a result, smallholders are very vulnerable to increased incidences of extreme and unpredictable weather events (WB, March 2018).

ACUTE FOOD INSECURITY OVERVIEW

An estimated 2.3 million people, representing 24 percent of the population analysed, were in Crisis or worse (IPC Phase 3 or above) in October 2019–March 2020. Of these, an estimated 412 000 were classified in Emergency (IPC Phase 4).

Southern and western areas of the country faced the highest prevalence of people in Crisis or worse (IPC Phase 3 or above).

In addition, 3.1 million people were classified in Stressed (IPC Phase 2) (IPC, August 2019). Acute food insecurity conditions deteriorated compared to the 2018 peak, when an estimated 17 percent of the analysed population – almost 1.2 million people – were in Crisis or worse (IPC Phase 3 or above) (IPC, July 2018). The increase is also related to a 14 percent increase in the population size analysed between 2018 and 2019 (IPC, August 2019).

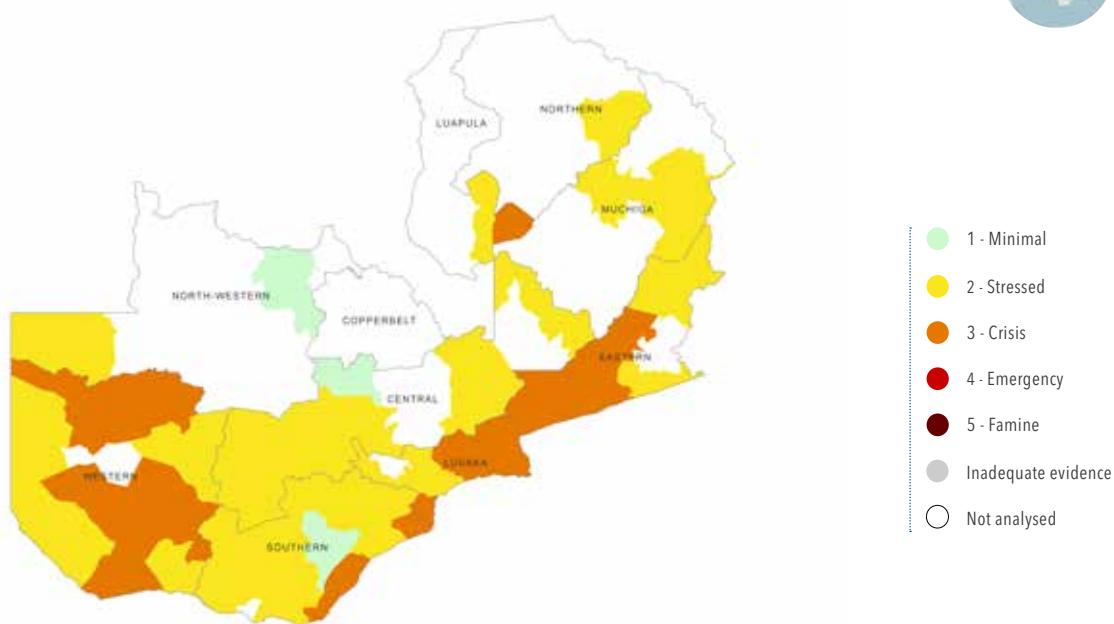
Acute food insecurity among refugees

The number of refugees and asylum-seekers, mainly from the Democratic Republic of the Congo has been increasing since 2016 at an average rate of about 10 percent per year (UNHCR, September 2019). Refugees in Zambia's camps, except Mantapala, are expected to work and earn their daily living since general food distribution was phased out in June 2013 (WFP, July 2019). In Mantapala, humanitarian assistance is provided to meet food and other basic needs.

Refugee food security improved in 2019 compared to 2018 but deteriorated between January and September 2019. Households with inadequate (i.e. poor or borderline) food consumption increased from 32 percent in January to 68 percent in September 2019 with an increase in the use of negative consumption-based coping strategies to bridge food access gap (WFP monitoring database, extracted 18 February 2020).

Map 67

Zambia, IPC Acute food insecurity situation, October 2018–March 2019



Source: Zambia IPC Technical Working Group, July 2018.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

FACTORS DRIVING ACUTE FOOD INSECURITY

Weather extremes

In 2019, southern parts of Zambia experienced the poorest rainfall season since 1981, which sharply reduced cereal crop production. Estimated at 2.3 million tonnes, the 2019 cereal output was about 1 million tonnes lower than the five-year average, leading to an increase in food import requirements (FAO-GIEWS, September 2019). The largest shortfalls in cereal production were in southern, western, some part of Lusaka and central provinces, which also had some of the highest rates of acute food insecurity. These areas also experienced poor harvests in 2018, which meant that households had already faced food availability constraints since late 2018 (IPC, August 2019), a situation that compounded the impact of shocks in 2019.

The crop failures in 2019 resulted in regional food deficits across southern Africa and led to a decrease in food availability at the household and market levels (IAPRI, 2019). As a consequence, many households resorted to employing negative coping strategies, including cutting the number of meals per day.

A secondary impact of the lower harvests was that income-earning opportunities for rural households were curbed, on account of reduced crop surpluses for sale and limited

seasonal labour needs (FAO-GIEWS, September 2019). In parallel with the downturn in cereal production, body conditions of livestock deteriorated, reflecting the inadequate pasture and water availability. An increase in disease outbreaks among animals led to movement restrictions (IAPRI, 2019). Both these factors further curbed food availability and lowered potential earnings (IAPRI, 2019).

Economic shocks

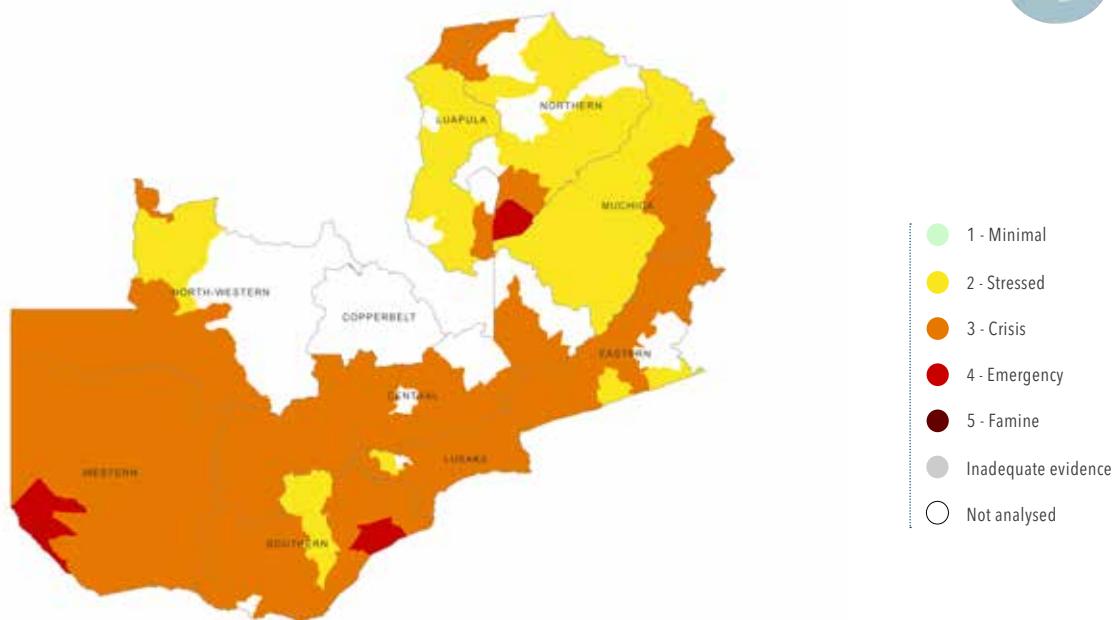
In the last decade, Zambia had become a key maize exporter in the region, but the decrease in maize production in 2019 led to the implementation of an export ban, as the country sought to stabilize domestic supplies and ease pressure on prices from export-driven demand (FEWS NET, September 2019).

The lower food stocks from own production also made rural households more reliant on markets to meet their consumption needs. As a result of these supply shortages and increased demand, prices of the main food staples increased sharply. The retail price of maize products rose by 50–70 percent between 2018 and 2019 (FAO-GIEWS, January 2020 and WFP, 2019).

To prevent further rises and ease access to food, the government, in agreement with millers, retailers and grain traders, introduced a ceiling on maize grain prices in August 2019 (FAO-GIEWS, September 2019). The depreciation of the national currency and higher import costs exerted further upward pressure on food prices (WB, October 2019).

Map 68

Zambia, IPC Acute food insecurity situation, October 2019–March 2020



Source: Zambia IPC Technical Working Group, August 2019

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

NUTRITION OVERVIEW

Child malnutrition has improved since DHS 2014/15. In 2018, acute malnutrition was down by two percentage points to 4.2 percent of children aged 6–59 months, considered a 'low' prevalence, with 1.5 percent severely wasted. Muchinga province recorded the highest rate (8.2 percent, 'medium'), followed by Luapula (6.2 percent), Lusaka (5.5 percent) and Copperbelt (5.4 percent).

However, at 34.6 percent, the national prevalence of stunting was considered 'very high' – though down from 40 percent in 2014/15 (DHS, 2018). Rates ranged from 46 percent in the northern province to 29 percent in western and southern provinces (DHS, 2018).

High levels of chronic malnutrition can be at least partly attributed to inadequate infant and young child-feeding practices. Only 42.1 percent of infants below 6 months were exclusively breastfed and 12 percent of children aged 6–23 months received a minimum acceptable diet. These factors also likely contribute to the 'very high' (58.1 percent) anaemia levels among 6–59 month-old children. Anaemia among women was a 'moderate' public health concern at 31.1 percent, reaching 41.1 percent ('severe') among pregnant women (DHS, 2018).

A cholera outbreak was declared on 17 October 2019 (ZNPHI, October 2019) with over 1 500 cases reported during 2019 across the country (WHO, December 2019). An estimated

1.2 million Zambians are living with HIV even though the prevalence has declined since 2001–2002. (UNAIDS, 2018).

The failure of two rainy seasons resulted in more than 20 000 drought-affected people lacking access to clean and safe water in November (OCHA, December 2019).

Nutrition status of refugees

The nutrition and health status of the refugees in the three settlements has been stable over the past few years. The 2017 SENS nutrition survey found 'medium' acute malnutrition prevalence in Mayukwayukwa (6.2 percent) and Meheba (5.7 percent) (SENS, 2017). The 2019 nutrition survey in Mantapala settlement found 'low' levels of acute malnutrition (2.9 percent) (UNICEF 2019). The prevalence of stunting was 'very high' in all three camps, at 34.6 percent in Mayukwayukwa and Meheba, rising to 66.2 percent in Mantapala (SENS, 2017 and UNICEF 2019).

Child-feeding practices in Meheba and Mayukwayukwa showed a diverse result. While 61.8 percent of children were exclusively breastfed for 6 months in Mayukwayukwa, the prevalence fell to 28.9 percent in Meheba (SENS, 2017). Both camps failed to meet the 95 percent UNHCR target for measles vaccination. As for the WASH situation, only 25.3 percent of households in Mayukwayukwa and 12.4 percent in Meheba reported using an improved toilet, which indicates an urgent need for better hygiene (SENS, 2017).

Country profile

Zimbabwe



ACUTE FOOD INSECURITY

2019

Total population of country **14.6M**Population analysed **9.4M** (64% of total population)

3.6M IPC Phase 3 or above in October–December 2019



2.7M IPC Phase 2 Stressed

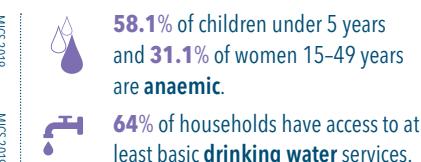
2018-19 Change

In 2019, Zimbabwe experienced its worst drought in decades, which, in tandem with the impacts of Cyclone Idai and a severe economic crisis that sent food prices spiraling created the country's worst acute food insecurity crisis in 10 years.

2020 Forecast

A major deterioration in food insecurity is expected as a result of persisting economic difficulties, eroded household resilience, rainfall deficits and forecast low harvests.

NUTRITION INDICATORS



ACUTE FOOD INSECURITY AND MALNUTRITION DRIVERS

Economic shocks Weather extremes

- ▶ Spiraling inflation and a dire shortage of local currency severely cut purchasing power.
- ▶ High prices of cereal products severely constrained access to food for low-income households.
- ▶ Low foreign currency supplies reduced Zimbabwe's capacity to access food imports.
- ▶ Severe drought and below-average rains

- ▶ sharply reduced the 2019 harvest.
- ▶ Cyclone Idai caused severe damages with around 270 000 people affected in March.
- ▶ Deteriorating food insecurity and health conditions (inflation of the prices of medicines, cholera outbreak at the end of 2018 and progressive increase in the rates of diarrhoeal disease) contributed to increasing levels of child malnutrition.

DISPLACEMENT

51 000 Zimbabweans were internally displaced by cyclone Idai.

There were **21 400** refugees from the Democratic Republic of the Congo (52%) and Mozambique (38%).

JUN/MAY 2019

UNHCR/RCDE 2019



ZIMBABWE

Drought and economic crisis have severely affected smallholder farmers like Elias Shamba. Following two failed rounds of planting and a very early start to the lean season he has borrowed money in order to get his land tilled.

BACKGROUND

Zimbabwe has only experienced normal rainfall in two of the last five growing seasons. It is also experiencing an economic crisis characterized by a significant shortage of currency, hyperinflation, lack of fuel and prolonged power outages that have crippled industry and work opportunities (WFP, December 2019).

Widespread poverty, high levels of HIV/AIDS and low crop productivity also undermine food security (WFP, 2019). As a result, Zimbabwe is experiencing one of its worst acute food insecurity crises in a decade, with atypically high humanitarian food assistance needs (FEWS NET, November 2019 and United Nations, December 2019).

ACUTE FOOD INSECURITY OVERVIEW

From October–December 2019, an estimated 3.6 million rural inhabitants were classified in Crisis or worse (IPC Phase 3 or above). This includes over 1.1 million facing Emergency (IPC Phase 4) conditions. This was a marked deterioration compared with the 2018 end-of-year peak (IPC, August 2019).

An additional 2.7 million rural inhabitants classified in Stressed (IPC Phase 2) were at risk of slipping into Crisis (IPC

Phase 3) if their livelihoods were not supported. Of particular concern were the nine districts classified in Emergency (IPC Phase 4), where the results of the ZimVAC IPC analysis demonstrated an increase in the number of people facing food consumption gaps and forced to employ emergency strategies, thus jeopardizing their future (IPC, August 2019). The deepening hardship forced families to eat less, skip meals, take children out of school, sell off livestock and fall into a vicious cycle of debt.

Little respite is expected for the most vulnerable, including subsistence farmers, who grow most of Zimbabwe's food and depend on a single, increasingly erratic rainy season (WFP, December 2019).

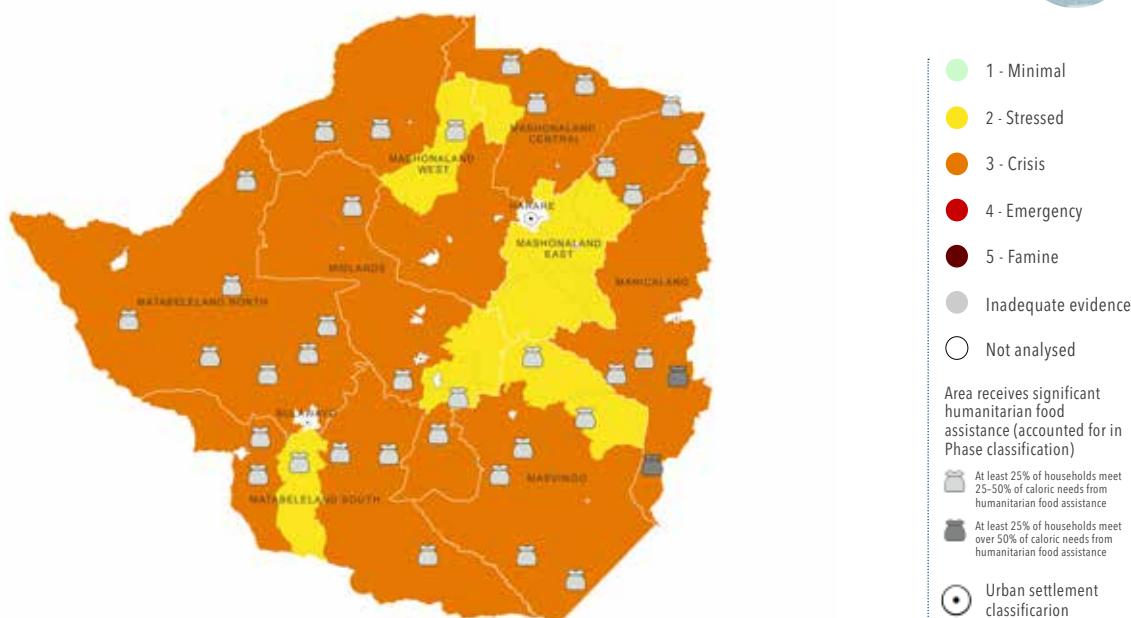
FACTORS DRIVING ACUTE FOOD INSECURITY

Economic shocks

The persisting poor macroeconomic environment, marked by hyperinflation, continued to drive the appalling acute food insecurity situation (IPC, August 2019). In July, annual inflation reached 230 percent. Extreme poverty was estimated to have risen from 29 percent in 2018 to 34 percent in 2019, meaning that 5.7 million Zimbabweans were living in extreme poverty in 2019 (WB, October 2019).

Map 69

Zimbabwe, IPC Acute food insecurity situation, June–September 2019



Source: Zimbabwe IPC Technical Working Group, August 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

The Zimbabwe dollar (ZWL) depreciated by 520 percent between February and late October, mostly due to continued critical foreign currency shortages (FEWS NET, October 2019). The government made it the only legal tender in June 2019, ending the multi-currency regime that was in place for over a decade, but the ZWL continued to fall in value.

In October, retail prices of maize meal were more than eight times higher than the previous year because of the weak currency, reduced domestic supplies following a drought-induced 2019 harvest and foreign exchange shortages that curtailed imports (FAO-GIEWS, December 2019).

In December, most markets, even in typical surplus production areas, were without maize grain, increasing demand for maize meal and further contributing to high maize meal prices (FEWS NET, December 2019).

The low cereal harvests in the 2018/2019 agricultural season depleted household incomes from agricultural-related activities, further compounding the effects of inflated food prices (FAO-GIEWS, October 2019).

While casual labour remained the main income for 30 percent of rural families, those relying on food crop sales reduced from 22 percent in 2018 to 8 percent in 2019. Cash shortages remained the most influential stressors experienced by households, followed by increases in cereal prices and drought, particularly in the provinces of Manicaland and Midlands (SADC, October 2019).

Weather extremes

In 2019, Zimbabwe experienced its worst drought in decades, with temperatures hitting 50 degrees Celsius in some areas (WFP, January 2020). The limited access to or non-existent irrigation facilities increased farmers' vulnerability (WFP, December 2019).

The record-high temperatures in late October to early November affected water sources, agricultural activities and livestock. A high number of cattle deaths were reported in southern and western areas mainly due to livestock diseases (IPC, August 2019), but also to poor pasture conditions and water availability (FEWS NET, November 2019).

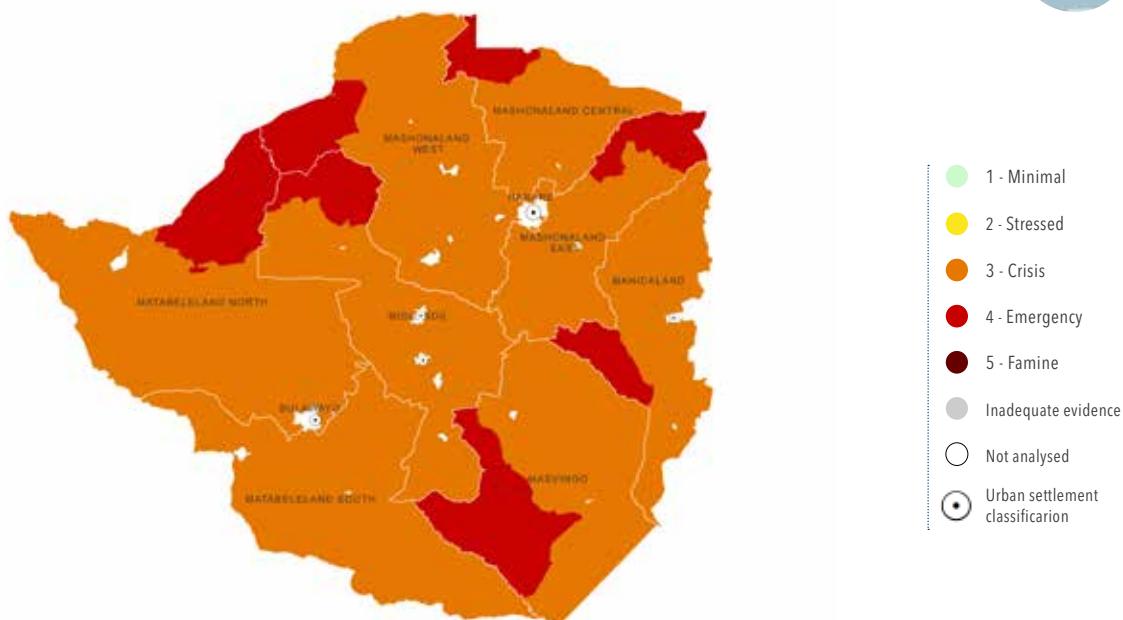
Cyclone Idai hit the country in March 2019 and affected around 270 000 people across nine districts in the eastern region as well as parts of southern Zimbabwe. The flooding and landslides that followed caused severe damages to crop and agriculture infrastructure (OCHA, August 2019).

Rainfall conditions were near to average from October–December 2019 despite late onset of rains countrywide and false starts in the southern and south-eastern parts of the country. Nevertheless, crop establishment was significantly affected (FEWS NET, October 2019).

At about 780 000 metric tonnes, Zimbabwe's 2018/19 national maize production was over 40 percent below the five-year average (FAO-GIEWS, October 2019). The country's

Map 70

Zimbabwe, IPC Acute food insecurity situation, October-December 2019



Source: Zimbabwe IPC Technical Working Group, August 2019.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

strategic grain reserve was severely depleted. Out of the 60 administrative rural districts only 11 had enough cereal to last until the next harvest (OCHA, August 2019). Import requirements were significantly above the average.

NUTRITION OVERVIEW

Due to worsening acute food insecurity, inflation, a cholera outbreak from the end of 2018 and progressive increase in the rates of diarrhoeal disease, child nutritional status worsened (SADC, October 2019).

Although acute malnutrition among children under 5 years of age remained 'low', it rose to 3.6 percent in 2019 from 2.5 percent in 2018. A higher prevalence of GAM was recorded in Makoni (7.4 percent), Mutare (5 percent), Seke (5.7 percent), Mhondoro-Ngezi (5.8 percent), Sanya (5.5 percent), Binga (6.1 percent), Lupane (5.2 percent), Masvingo (7.4 percent) and Goromonzi (19.3 percent) (ZimVAC, 2019). Stunting affected 24 percent of children (MICS, 2019).

Of particular concern is that only 11 percent of children aged 6–23 months consumed a minimum acceptable diet. Even though 83 percent of children were breastfed until their first birthday, only 42 percent were exclusively breastfed for the first 6 months (MICS, 2019). These were also likely to contribute to the severe anaemia levels among children (WHO, 2016) as well as the stunting levels.

Around half of rural households lacked access to basic water sources. Almost a third (31 percent) used open defecation (MICS, 2019). Water treatment plants have critical shortages of chemicals due to lack of foreign currency (OCHA, October 2019). Around 780 000 people were at risk of WASH-related disease outbreaks (OCHA, August 2019).

HIV/AIDS remained high in Zimbabwe with 12.7 percent of adults or 1.3 million people affected, almost 61 percent of them women (UNAIDS, 2018).

Zimbabwe was also dealing with widespread and worsening lack of essential medicine coupled with poor access to health services (OCHA, October 2019).

Acute food insecurity and malnutrition forecasts for 2020

The acute food insecurity forecasts included in this chapter were produced before COVID-19 became a pandemic and do not account for its hypothetical consequences. Having pre-pandemic data and analyses will allow for objective and evidence-based monitoring of its impact on food security.

REGIONAL FORECAST FOR EAST AFRICA

Abundant seasonal rains from mid-2019 benefitted crops and rangelands but also brought damaging floods, and fostered a severe desert locust outbreak that will likely aggravate acute food insecurity in 2020.

► Djibouti

In January 2020, 175 000 people were acutely food insecure, representing 27 percent of the rural population and 23 percent of urban dwellers in the five regions. The most-affected regions were Dikhil and Obock where 44–49 percent of the population was acutely food insecure, compared to 13 percent in Tadjourah, Ali Sabieh and Arta. Since late 2019, average to above-average rainfall and pasture and water availability improved livestock body conditions and benefitted pastoralist households through normal livestock production and sales (USAID, February 2020). However, the situation of some rural populations could deteriorate as around 27 000 people, who are largely reliant on agropastoralism, are living in areas affected by desert locust infestations (FAO and Government of Djibouti, January 2020).

Ⓐ Ethiopia

The number of acutely food-insecure people in need of urgent assistance – in Crisis or worse (IPC Phase 3 or above) – is projected to seasonally increase from 6.7 million in October 2019–January 2020 to 8.5 million in February–June 2020, due to the depletion of stocks from 2019 harvests (IPC, November 2019). The highest prevalence of acute food insecurity is expected in the pastoral Somali and Afar regions, where the lingering impact of consecutive poor rainy seasons has resulted

in significant livestock losses, as well as in agropastoral areas of eastern Oromiya region, where herd sizes are below-average and the 2019 Belg harvest was reduced. The recent desert locust infestation will likely contribute to diminished agricultural production, placing additional pressure on an already complex and fragile food security context. Since June 2019, six regions have experienced an infestation of desert locusts (Afar, Amhara, Dire Dawa, Oromia, Somali and Tigray), and by early 2020, the swarms were reported as having moved towards the Rift Valley, which is considered the breadbasket of Ethiopia (FAO, 2020).

A general election scheduled for August could worsen ongoing civil unrest and intercommunal violence. Further displacement of people is likely. Inflation is rising, driving up food prices (WFP, January 2020). The overall condition of IDPs and returnees will continue to be dire as hygiene and sanitation, as well as shelter conditions, are often inadequate (OCHA, December 2019).

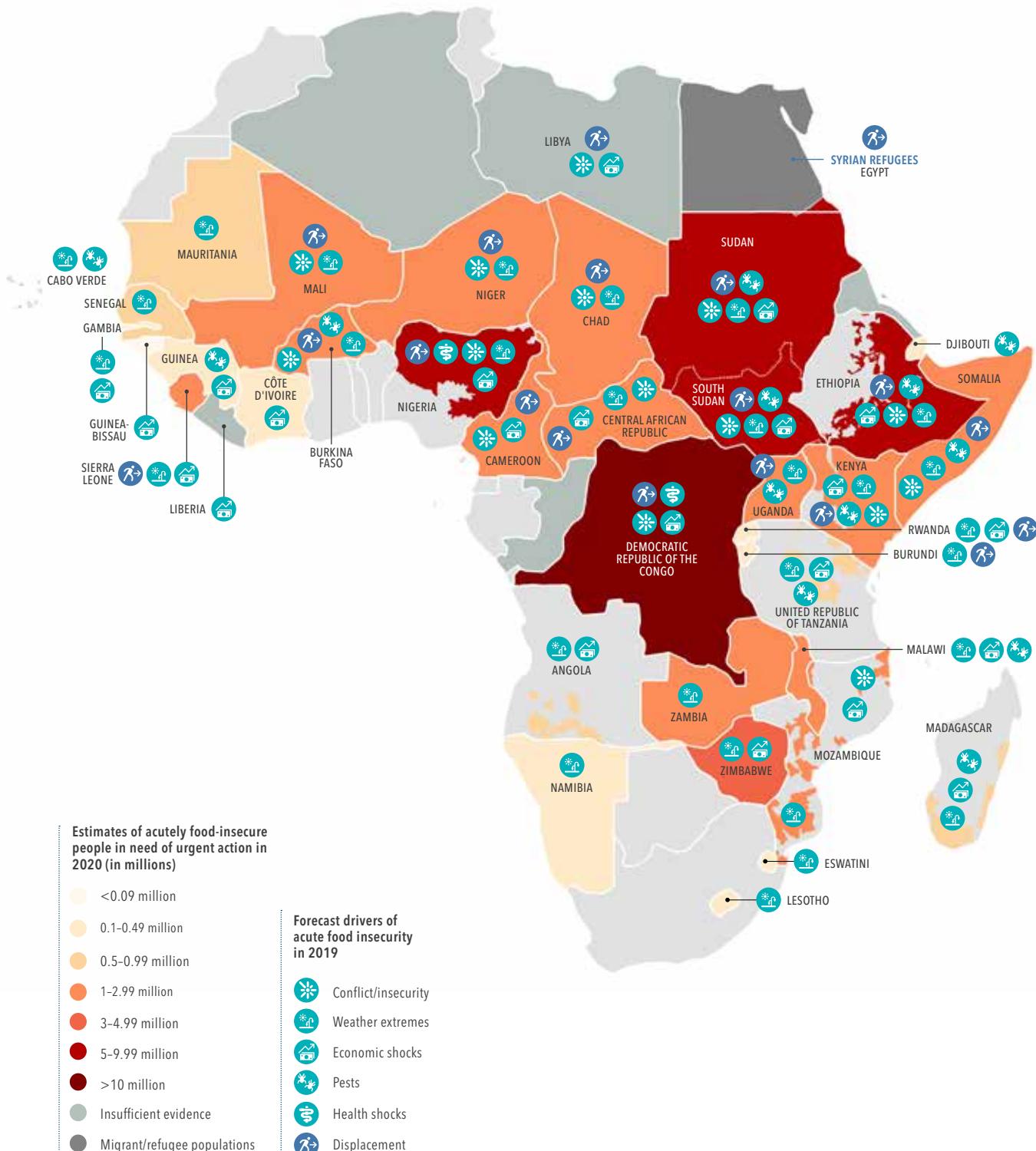
▼ Kenya

In the northern and eastern pastoral areas of Garissa, Mandera, Marsabit, Samburu, Tana River, Turkana and Wajir counties, the abundant 2019 October–December short rains boosted livestock conditions and productivity. This generally improved acute food insecurity levels from Crisis (IPC Phase 3) in late 2019 to Stressed (IPC Phase 2) conditions in early 2020. These levels are expected to prevail until July 2020 based on IPC February 2020 results. However, households that were the most affected by floods in Mandera, Tana River and Wajir counties are likely to remain in Crisis (IPC Phase 3). Desert locust swarms in northern and central areas, as well as along the shores of Lake Turkana in February 2020 were expected to expand further into the north-eastern areas of the country (FAO, 2020). For the period April–July 2020, 985 000 people in Kenya's ASALs were expected to face Crisis conditions or worse (IPC Phase 3 or above) (IPC, April 2020).

Number of acutely food-insecure people forecast to: ▲ increase in 2020; ▼ decrease in 2020; ► persist in 2020 at 2019 levels

Map 71

Number of people in IPC/CH Phase 3 or above, drivers and risks in Africa in 2020



Source: FSIN GRFC March 2020.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.
This map reflects analyses produced before COVID-19 became a pandemic and does not account for its direct and/or indirect impact on acute food insecurity.

▼ Somalia

In Somalia, the number of people facing Crisis or worse (IPC Phase 3 or above) levels of acute food insecurity was estimated at 1.2 million in January–March 2020, 55 percent fewer than in late 2019, due to the favourable impact of the abundant October–December Deyr rains on crop and livestock production. In the period from April–June, the number of acutely food-insecure people was projected to increase by 13 percent to 1.3 million people, mainly driven by substantial crop and pasture losses due to desert locusts, and the main Gu harvest, to be gathered in July, forecast at 15–25 percent below-average. Forecast above-average April–June Gu rains were expected to cause the Juba and Shabelle rivers to overflow after very high water flows and levels in late 2019 had damaged embankments. This was likely to lead to additional crop production shortfalls in riverine areas (FSNAU-FEWS NET, February 2020).

▼ South Sudan

Acute food insecurity levels are forecast to remain poor throughout the first half of 2020 as the lean season is exacerbated by ongoing local conflicts, years of conflict-related asset depletion, a crippled economy, poorly functioning markets and lack of infrastructure. In addition, northern and eastern areas that were devastated by floods in late 2019 incurred severe livelihood losses. An estimated 63 percent of the 2020 national cereal needs have been met by harvests, while the ongoing economic crisis will continue to inhibit households' purchasing power and push up food prices. The number of people facing Crisis or worse (IPC Phase 3 or above) levels of acute food insecurity is set to rise from nearly 5.3 million (45 percent of the population) in January 2020 to 6.5 million (55 percent of the population) by May–July. The highest prevalence of acute food insecurity will likely be in Jonglei State, the area worst affected by the floods, where close to 73 percent of the population will face Crisis (IPC Phase 3) or Emergency (IPC Phase 4) levels by the middle of the year (IPC, February 2020).

► The Sudan

A deterioration of the acute food insecurity situation is expected until the end of the lean season in September 2020, with seasonal trends exacerbated by an earlier than usual depletion of food stocks from the reduced 2019 harvest and the worsening macroeconomic situation, which is driving extremely high food and non-food prices and constraining food access. Despite availability of newly harvested cereal crops in January 2020, Crisis (IPC Phase 3) levels continue for IDPs in SPLM-N-controlled areas of South Kordofan. They also persist for IDPs and conflict-affected households in Jebel Marra region in Darfur, and in several areas of Abyei, northern parts of North Darfur, parts of North Kordofan and parts of Kassala and Red Sea states.

From February–May 2020, acute food insecurity is expected to deteriorate further, with Crisis (IPC Phase 3) levels expected in

North Kordofan and Red Sea states, in areas affected by flooding in Blue Nile, Kassala and White Nile states and for additional households in North Darfur. In the absence of humanitarian assistance, IDPs and conflict-affected people in parts of SPLM-N-controlled areas of Blue Nile and South Kordofan states, and IDPs in parts of Jebel Marra region are likely to face Emergency (IPC Phase 4). From June–September, 5–6 million people are expected to be acutely food insecure and in need of urgent assistance (FEWS NET, February 2020).

► Uganda

Nationally, acute food insecurity is at minimal levels, thanks to the above-average second season harvest, gathered in January 2020. However, Stressed (IPC Phase 2) acute food security levels in Bundibugyo district are expected to rise through May due to recent floods, landslides and severe crop damage, which left little or no harvests available for own consumption or sale. High food prices have forced many households in flood-affected areas to reduce the quantity and frequency of meals.

In the agropastoral north-eastern Karamoja region, below-average crop production will result in an earlier-than-usual depletion of household cereal stocks. However, abundant rains in the second half of 2019 improved livestock conditions and productivity, and an above-average availability of livestock products will maintain acute food security at Stressed (IPC Phase 2) levels. Refugees from South Sudan and the Democratic Republic of the Congo could face deteriorating acute food insecurity if adequate levels of humanitarian assistance are not provided. Acute food security conditions could deteriorate further in the face of the recent arrival of a mature swarm of desert locusts in February 2020 (FAO 2020). Considering these factors, from May–June 2020, 1.2–1.6 million people will likely face Crisis or worse (IPC Phase 3 or above) conditions (FEWS NET, February 2020).

REGIONAL FORECAST FOR CENTRAL AFRICA

Protracted conflict/insecurity in tandem with the damages incurred by 2019 flooding in many areas will either maintain or increase acute food insecurity levels in parts of Central Africa

► The Central African Republic

Seven years since the start of the conflict, despite the 2019 peace agreement between the Government and several armed groups, severe insecurity was expected to persist in 2020, mainly in western Ouham and Ouham-Pendé prefectures and in eastern and south-eastern Basse-Kotto, Haut-Mbomou, Mbomou and Haute-Kotto prefectures. Violence may further increase in the run-up to the election in 2020 (WFP, January 2020). The number of people facing Crisis or worse (IPC Phase 3 or above) is set to rise from nearly 1.6 million (35 percent of the population) in the



East Africa desert locust upsurge

The worst desert locust upsurge in decades is spreading across East Africa, threatening the livelihoods and food security of the region's rural population. It is the worst upsurge Eritrea, Ethiopia and Somalia have experienced in the last 25 years, Uganda in 60 years and in Kenya in 70 years (FAO).

The upsurge began in the Arabian Peninsula in 2018 after successive cyclones led to favourable breeding conditions, and ongoing conflict in Yemen limited pest control operations. By mid-2019, swarms had reached the Horn of Africa (northern Somalia, southern Eritrea and northern and eastern Ethiopia).

Exceptionally heavy rains across East Africa exacerbated locust reproduction, and by late 2019 and early 2020, the pests had also spread to coastal areas of the Sudan and Eritrea, central and southern Somalia, southern Ethiopia, Kenya, eastern Uganda and south-eastern South Sudan. Some locusts were also reported in northern United Republic of Tanzania and in north-eastern Democratic Republic of the Congo.

Most areas infected by desert locusts, as of 17 February, were facing either Stressed (IPC Phase 2) or Crisis (IPC Phase 3) food security outcomes. Crop and pasture losses had generally been minimal in Ethiopia, Kenya, and Somalia with the exception of northern and south-eastern Tigray, north-eastern Amhara, and eastern Oromia regions in Ethiopia which reported localized damages to the Meher crops in 2019.

According to FAO's Locust Watch, a favourable climate forecast in 2020 will likely cause the pest to spread, with the start of the long rains season in March–April of particular concern as it corresponds with the regeneration of rangelands and the start of planting activities. Though control operations were underway, they were hampered by limited resources, as well as conflict and insecurity in Somalia and north-eastern Kenya.

The impact on future food security will be highly dependent on the magnitude of production losses, both in marginal agricultural zones and in key surplus production areas, as

well as for rangeland resources. In this context, the Greater Horn of Africa Food Security and Nutrition Working Group (FSNWG) has developed two scenarios based on the likelihood of infestations and expected impacts on crops, rangelands and ultimately the food security of local populations.

In the most likely scenario, households in areas where swarms have caused damages – particularly those relying on cropping activities that are already Stressed (IPC Phase 2) or worse – will experience significant impact on food security. Given the average-to-above-average rainfall forecast for the region, the main assumption rests on significant crop losses for affected households, resulting in below-average production in some areas at a sub-national level, but the impact on national production and agricultural labour wages will be minimal. Vulnerable populations already affected by recent shocks and facing elevated levels of acute food insecurity are likely to face further deterioration, particularly in late 2020 and peaking during the 2021 lean season.

In the worst-case scenario, desert locust infestations would 1) cause significant losses during the 2020 main and secondary seasons, resulting in below-average harvests, and 2) cause major pasture and browse losses in arid and semi-arid regions, resulting in a more dire food security outlook. Food access, availability and stocks would be reduced. Pastoralists who face reduced rangeland availability would likely resort to atypical migration, thus accelerating the depletion of scarce rangeland resources and increasing the risks of livestock diseases and the likelihood of resource-based conflicts. Migration options would remain limited for the poorest pastoralists and for those living in conflict-affected areas. Under this scenario, a deterioration in food security outcomes would likely begin in mid-2020.

Source: FSNWG. 2020. Special Report – East Africa desert locust and Food Security Update: Current Upsurge Threatens Upcoming 2020 Agricultural Season. 17 February.

September 2019–April 2020 post-harvest period to 2.1 million (47 percent of the population) in the May–August 2020 lean period. This represents a 17 percent increase compared with the same period in 2019.

In the areas most affected by insecurity, where large numbers of IDPs are located, the seasonal deterioration of the food security situation will be compounded by conflict-related livelihood losses and disruptions. From May–August 2020, Emergency (IPC Phase 4) levels of acute food insecurity are expected to prevail in several areas of Basse Kotto, Nana Gribizi, Ouaka, Ouham, Ouham-Pendé and Vakaga prefectures and in parts of Haut-Mboumou, Kemo, Mambéré-Kadei, Mboumou and Sangha-Mbaéré prefectures (IPC, November 2019).

► Rwanda and Burundi

With conflict leading to large population displacements from neighbouring countries, food security needs in Burundi and Rwanda are expected to remain significant in 2020 among displaced populations, in particular. Both countries hosted close to 76 000 Congolese refugees each in late 2019 (UNHCR, February 2020). In addition, around 73 000 Burundian refugees were displaced in Rwanda, having fled political unrest from April 2015 (UNHCR, February 2020), and 113 000 people were internally displaced in Burundi mainly because of weather events as of January 2020 (IOM, February 2020).

In Burundi, above-average rainfall from late 2019 led to flooding, landslides and damaged crops. In Rwanda, food prices were unusually high in early 2020 as a result of increased transport costs and trade disruptions caused by torrential rains as well as reduced imports from Uganda (FEWS NET, February 2020; FAO-GIEWS, January 2020). However, in both countries above-average harvest prospects were expected to support Minimal (IPC Phase 1) food security outcomes through May 2020. Around 150 000–350 000 people in Burundi as well as 85 000–125 000 in Rwanda are likely to face Crisis or worse (IPC Phase 3 or above) levels of acute food insecurity (FEWS NET, February 2020).

REGIONAL FORECAST FOR SOUTHERN AFRICA

Post-harvest improvements are likely to be short-lived as poor rains, high food prices and unresolved political and economic instability could worsen acute food insecurity.

► Angola and Namibia

Improved seasonal rainfall has helped regenerate pasture and water resources and boost crop production prospects in 2020 in southern Angola and northern Namibia, following extreme dry conditions in the previous year. Agricultural production is expected to increase and contribute to an improvement in food security. In early 2020, Angola had 0.6 million and Namibia had

0.4 million acutely food-insecure people in Crisis or above (IPC Phase 3 or worse). This situation is mainly due to poor weather conditions in 2019. A slight decrease in acute food insecurity is projected through September in Namibia (IPC, October 2019).

► The Democratic Republic of the Congo

Acute food insecurity is expected to remain extremely concerning in conflict-affected eastern regions in 2020. In areas of Ituri, North Kivu and South Kivu provinces, where conflict intensified in 2019, the early 2020 harvest was expected to be below average because of disrupted agricultural activities and flood-related crop losses. Faster-than-normal depletion of household food stocks will result in an early onset of the lean season. In parts of Kasai Central, an outbreak of cassava mosaic virus could result in substantial crop losses. Maize availability is affected by reduced imports from neighbouring Zambia and Zimbabwe, where poor seasonal rains reduced 2019 maize harvests.

Despite the start of harvests, in January 2020 Crisis (IPC Phase 3) levels of acute food insecurity were expected to prevail through May in 17 out of 22 provinces analysed, with particularly high prevalence (35–45 percent) in Haut-Uele, Ituri, Kasai, Kasai Oriental and Tanganyika. The acute food insecurity situation is expected to further deteriorate in these areas with the progress of the lean season until July, when newly harvested crops will be available for consumption.

Around 13.6 million people were projected to face Crisis or worse (IPC Phase 3 or above) from January–May, including 3.6 million in Emergency (IPC Phase 4). These numbers reflect an improvement in some areas, such as Greater Kasai, due to expected improved security conditions and favourable rainfall. In parts of Ituri, Samkuru, South Kivu and Tanganyika, the acute food insecurity situation may worsen (IPC, August 2019).

There was still a high risk of re-emergence of the Ebola virus disease in early 2020 (WHO, March 2020).

► Eswatini and Lesotho

In early 2020, both countries' food security levels are expected to remain on a par with late 2019. In Eswatini, drier weather conditions towards the end of the cropping season are likely to maintain near-average cereal production levels in 2020, and food security is therefore anticipated to remain mostly stable. In Lesotho, a production recovery is expected to bolster national food supplies and reduce the number of people in need of assistance by the end of 2020. Eswatini had 0.2 and Lesotho had 0.4 million people in Crisis or worse (IPC Phase 3 or above) from January–March 2020. A production upturn in South Africa, the sub-region's main exporter and producer, would likely further underpin food security improvement. Its production of cereals is forecast at well above-average levels, and this boost to supplies will likely reduce prices, thereby helping to improve access to food staples for import-dependent countries (IPC, July 2019).

▼ Madagascar

The larger agricultural output in southern and south-eastern Madagascar in 2019 was projected to lead to a reduction in acute food insecurity, with an estimated 0.7 million people in Crisis or worse (IPC Phase 3 or above) in the January–March 2020 lean season. The population in these districts has limited capacity to withstand and recover from weather shocks, and even small production downturns can provoke a sharp deterioration in acute food insecurity.

The situation is worst in West Ampanihy District, where 30 percent of the population is expected to be in Emergency (IPC Phase 4). The number of acutely food-insecure people is expected to seasonally decrease to 0.4 million from April–June (IPC, November 2019). A forecast contraction in national paddy production following erratic distribution of seasonal rains could push up food prices and lower food supplies at the local level, straining food security later in the year.

▼ Malawi

Food security levels are expected to improve with a forecast above-average 2020 harvest, based on generally conducive weather. However, high staple food prices are likely to prevent a large reduction in food assistance needs. Around 1.9 million people face Crisis or worse (IPC Phase 3 or above) acute food security outcomes until March 2020 (IPC, January 2020).

► Mozambique

In some areas affected by cyclones Kenneth and Idai in 2019, the recovery process may be slower than expected due to severe weather including heavy rains and flooding, hailstorms and strong winds. In central provinces, the adverse weather is expected to result in localised shortfalls in production for a second consecutive year in 2020. Meanwhile, southern provinces of Mozambique have faced drought conditions. Insufficient and erratic rainfall resulted in multiple rounds of planting and production is expected to be well below average for the third consecutive season (FEWS NET, January 2020). Political and economic instability, if unresolved, could trigger violence and displacement (OCHA, December 2019). From January–February 2020, around 1.7 million people faced Crisis or worse (IPC Phase 3 or above) (IPC, July 2019).

► The United Republic of Tanzania

Acute food insecurity is expected to remain at similar levels during the lean season in early 2020. From May, the number of acutely food-insecure people (IPC Phase 3 or above) is projected to decline from about 1 million in November 2019–April 2020 to about 0.5 million (IPC, February 2020). This is the result of the 'msimu' harvests which are expected to increase cereal availability and 'masika' harvest which will boost availability. However, political and economic instability, if unresolved, could trigger violence and displacement (OCHA, December 2019).

► Zambia

While conditions may improve at the national level, they may worsen in the south where heavy rainfall since the beginning of January led to riverine and flash floods. The flooding destroyed crops, including maize, in some of the areas heavily affected by the last season's drought, according to the Government's Disaster Management and Mitigation Unit (DMMU). In addition, erratic rains and dry spells at the beginning of the rainy season in November had already compromised the planting period in the southern region. These recurrent climate shocks could aggravate the already fragile food security situation. From March, food security levels were expected to improve based on a forecast increase in the national cereal output. However, high prices of staple foods are likely to inhibit a more substantial improvement. Around 2.3 million people were expected to face Crisis or worse (IPC Phase 3 or above) levels of acute food insecurity during the lean season in October 2019–March 2020 (IPC November 2019).

► Zimbabwe

The alarming acute food insecurity situation is expected to worsen in 2020. Persisting economic difficulties have eroded the resilience of households. Given limited indications that there will be a significant turnaround in the economy during the first half of 2020, households are likely to continue to face severe food access constraints. Early rainfall deficits caused permanent wilting of crops in localized areas, while erratic rainfall is expected to result in a decline in crop productivity in the 2019/2020 season.

The ongoing economic crisis has hindered farmers' access to agricultural inputs, causing a reduction in the area planted with maize. The 2020 harvest is forecast to remain below the five-year average, which would sustain a tight supply situation and curtail potential earnings from crop sales for farming households. As a result, the acutely food-insecure rural population in need of urgent action is estimated at 4.3 million up to June 2020 (IPC, March 2020).

REGIONAL FORECAST FOR WEST AFRICA, THE SAHEL AND CAMEROON

Increasing violence and displacement in conflict-affected areas as well as weather extremes and disrupted regional trade will drive up acute food insecurity in many countries of West Africa.

► Burkina Faso

The escalation of conflict in northern areas (Nord, Centre-Nord and Sahel regions) and its spread to the eastern areas (Est region) is driving one of the world's fastest growing humanitarian crises. The number in Crisis or worse (CH Phase 3 or above) during the June–August 2020 lean season is forecast at 2.2 million, three times the estimated number in the same period last year (RPCA,

April 2020). The sharp increase in the number and gravity of violent episodes had displaced 765 000 people as of February 2020 – a 16-fold increase compared to January 2019 – resulting in severe livelihood losses (UNHCR, February 2020). In conflict-affected areas, many farmers have been forced to abandon their fields, while pastoralists have faced restricted animal access to pasture and water points as well as episodes of cattle raiding. Food markets are either closed or poorly attended by traders, sellers and buyers, while road ambushes and the looting of trucks have disrupted trade flows between the country's main western cereal-producing areas and the northern conflict-affected, cereal deficit areas (FEWS NET, January 2020). Constraints to humanitarian access often result in irregular and reduced food assistance operations.

Cameroon

Continued violence and instability will continue to drive high levels of acute food insecurity. About 2.7 million people are forecast to be in Crisis or worse (CH Phase 3 or above) levels of acute food insecurity from January–March 2020 before reducing to 2.1 million in June–August 2020 (CILSS-CH, March 2020). Boko Haram attacks in the Far North region continue, as does the precarious situation in North West and South West regions, where clashes between armed secessionists and security forces are disrupting agricultural and market activities and causing new displacements. Reduced exports to Nigeria also disrupt livestock and agricultural trade flows, lowering the purchasing power of producers (FEWS NET, January 2020). As of January 2020, the number of IDPs was estimated at 977 000, in addition to 293 Central African refugees and 111 000 Nigerian refugees (UNHCR, January 2020).

Chad

The number of acutely food-insecure people in Crisis or worse (CH Phase 3 or above) during the June–August 2020 lean season is forecast at 1.0 million, 60 percent higher than the estimated number in the same period last year (CILSS-CH, March 2020). This sharp deterioration is mainly driven by heightened violence in conflict-affected Lac and Tibesti regions, resulting in new displacements and increasing food prices. Climatic events, such as prolonged dry spells in Bahr El Ghazal, Hadjer, Kanem and Lamis regions, are contributing to deteriorating crop and livestock conditions (FEWS NET, January 2020). Meanwhile, floods in Mandoul and Moyen-Chari regions in October resulted in displacements and livelihood losses (FEWS NET, October 2019).

Côte d'Ivoire and Sierra Leone

With 2019 crop production lower than the previous year, food prices are expected to remain high in Sierra Leone in 2020. Currency depreciation could also limit food access for the most vulnerable, market-dependent populations (RPCA, April 2020). The border closures in Nigeria continue to disrupt regional trade and result in economic and food losses in countries across

the region, such as Côte d'Ivoire (RPCA, April 2020), where the appreciated value of the CFA franc against the USD will further affect exports and producers' incomes (ADB, January 2020).

► The Gambia, Guinea, Guinea-Bissau and Mauritania

Around 1.1 million are expected to be facing Crisis or worse (CH Phase 3 or above) from June–August 2020 in these four countries (RPCA, April 2020). With 2019 crop production lower than the previous year, food prices are expected to remain high in the Gambia. Currency depreciation in Guinea could also limit food access for the most vulnerable, market-dependent populations (RPCA, April 2020). Prices of cashew nuts in Guinea-Bissau are likely to remain below the government-fixed price level, and could further decrease following the next harvest, significantly constraining rural populations' incomes and access to food.

Mauritania has experienced a third consecutive year of pasture deficits in border areas, placing additional pressure on pastoralists and natural resources (FEWS NET, February 2020). Floods contributed to localized crop production shortfalls in southern areas. Despite well-supplied markets and stable food prices, an early onset of the lean season in 2020 and increased market reliance of agro-pastoral and pastoralist households is expected (FEWS NET, January 2020). Around 610 000 people are forecast to be in Crisis or worse (CH Phase 3 or above) during the lean season in June–August 2020 (RPCA, April 2020).

► Mali

While security improved in northern areas in 2019, insecurity is severely affecting the more populated central areas, where armed groups are mostly targeting civilians. As of January, persisting insecurity in the Liptako Gourma areas and in Menaka continued to disturb movements of livestock, which could worsen body conditions (FEWS NET, January 2020). Violence and displacement are forecast to continue in 2020. As a result, about 1.3 million people are expected to face Crisis or worse (CH Phase 3 or above) during the June–August 2020 lean season. This is more than double the estimated 2019 lean season number. Forty percent of the projected acutely food-insecure population is located in the central Mopti region (RPCA, April 2020).

► The Niger

The number of people facing Crisis or worse (CH Phase 3 or above) during the June–August 2020 lean season is forecast at 2.0 million, more than 70 percent higher than the same period last year (CILSS-CH, March 2020). This can be attributed to the prolonged conflict in neighbouring Burkina Faso, Mali and Nigeria spreading into the Niger, disrupting agriculture, transport and markets and resulting in displacement, particularly in Diffa, Tahoua and Tillabery regions. Dry spells, floods and pest attacks in 2019 affected crop production (down 6 percent compared to 2018 levels) particularly in parts of Dosso, Maradi, Tahoua and Tillabery regions, leading to an expected earlier-than-usual onset of the

lean season (CILSS and Ministère de l'Agriculture et de l'Elevage, November 2019). Drought conditions, limited animal mobility due to conflict and the closure of the border with Nigeria have curtailed the demand for livestock and driven down livestock prices, negatively affecting pastoralist household incomes and purchasing power in 2020 (FEWS NET, January 2020).

Northern Nigeria

The number of acutely food-insecure people (CH Phase 3 or above) during the June–August 2020 lean season is forecast at 7.1 million, over 40 percent up from the same period last year (CILSS-CH, March 2020). The expected deterioration is mainly due to the intensification of armed violence in conflict-affected north-eastern areas (Borno, Adamawa and Yobe states), where tight supplies continue to sustain high food prices. In these states, around 3.7 million people were expected to be facing Crisis or worse (CH Phase 3 or above) in June–August 2020 – which constitutes a significant increase (23 percent) compared to the same period in 2019. Escalating intercommunal conflict and armed banditry in north-western and central areas (Kaduna, Katsina, Kebbi, Kogi, Nasarawa, Niger, Plateau and Zamfara states), and widespread floods from June–October 2019 also resulted in localized livelihood losses, affecting the food security of local populations in 2020 (FEWS NET, January 2020). Border closures continue to limit food imports – particularly of rice – and drive up prices (FAO-GIEWS, February 2020).

Senegal

Poor and erratic rainfall and prolonged dry spells have led to pasture deficits for a third consecutive year in areas bordering Burkina Faso, Chad, Mali and the Niger and created additional pressure on pastoral households and natural resources (FEWS NET, February 2020). Floods affected crop production, contributing to a fall in cereal production (down 4 percent compared to 2018). Despite well-supplied markets and stable food prices, an early onset of the lean season in 2020 and increased market reliance of agropastoral and pastoralist households is expected (FEWS NET, January 2020). Around 767 000 people are forecast to be in Crisis or worse (CH Phase 3 or above) during the lean season in June–August 2020 (CILSS-CH, March 2020).

REGIONAL FORECAST FOR ASIA AND THE MIDDLE EAST

Violent conflict will drive alarming rates of acute food insecurity and acute malnutrition across the most troubled areas of this region.

Afghanistan

In Afghanistan, high levels of acute food insecurity and malnutrition are expected in 2020 due to the cumulative

impacts of decades of war, continued insecurity, repeated displacement, the lingering impact of the drought in rural areas, annual flooding, and related interruptions to agriculture. Other notable contributors to acute food insecurity include widespread unemployment, loss of livelihoods, grinding poverty, high market reliance and elevated food prices (OCHA, December 2019). Given the political instability, the security outlook for early 2020 looks mostly unchanged from 2019. Average rainfall levels are expected in 2020 (OCHA, December 2019). Some 11.3 million people were estimated to be in Crisis or worse (IPC Phase 3 or above) up to March 2020, based on projections for 2020 (IPC November 2019).

Bangladesh (Cox's Bazar)

The majority of the 915 000 Rohingya refugees residing in Teknaf and Ukhia upazilas of Cox's Bazar are expected to remain in 2020.¹ The environment may become more complex, driven by factors such as evolving public opinion and decreasing social cohesion, following deteriorating security around camps in 2019, especially for women and girls. Government policy considerations and humanitarian access constraints may present further challenges – although dependence on external aid will likely continue. Without continued funds, the basic services put in place for Rohingya refugees could be at risk, with potential to endanger lives and lead to a rapid security breakdown. The impact of a cyclone would be devastating for the fragile camps and the Bangladeshi communities, in particular those on the coastline (JRP, March 2020).

The Democratic People's Republic of Korea

The geopolitical situation will likely remain volatile, with the protracted humanitarian crisis experienced by the most vulnerable unlikely to abate. Limited availability of agricultural inputs is likely to remain in 2020, ensuring that a lack of dietary diversity, acute food insecurity and malnutrition remain critical challenges. The health system faces a pressing shortage of essential medical supplies (OCHA, December 2019).

Iraq

Intermittent conflict and sociopolitical unrest continue to aggravate and threaten livelihoods. High levels of unemployment, perceived corruption and lack of basic services sparked widespread protests from October 2019, incurring adverse consequences for food security (WFP, January 2020). Without communal reconciliation, large-scale reconstruction, and widespread economic rejuvenation, high numbers of IDPs, returnees and host communities will remain vulnerable. The pace of closures and consolidations of IDP camps is an area of uncertainty for 2020: when families are relocated to non-camp settings, it is harder for humanitarian organizations to service their needs or track their vulnerabilities (OCHA, December 2019).

¹ Rohingya refugees/Forcibly Displaced Myanmar Nationals (FDMN) registered under the joint Government-UNHCR registration exercise as of 31 December 2019. This figure was released after completion of the JRP 2020 planning process, using a planning figure of 855 000 persons.

Lebanon

Lebanon is facing a macroeconomic crisis, and the ongoing political deadlock that followed the Prime Minister's resignation under pressure from anti-government protests is likely to accelerate the economic decline. The country's very high public debt is placing a strain on foreign currency reserves, leading to reduced capacity to import critical goods, such as food and fuel. The local currency depreciated by 63 percent on the informal market from October 2019–February 2020, eroding people's purchasing power (WFP, March 2020).

Pakistan

Pakistan is experiencing its worst locust infestation since the 1990s following a drought period. The Government has declared a state of emergency and it is particularly worried about the potential impact on domestic food production to vulnerable agropastoral populations (FAO, April 2020). Nearly a decade of conflict and terrorism in 13 newly-merged districts/tribal subdivisions of Bajaur, Khyber, Kurram, Mohmand, North Waziristan, Orakzai and South Waziristan in Khyber Pakhtunkhwa (formerly known as Federally Administered Tribal Agencies (FATA)) and Bannu, Dera Ismail Khan, Kohat, Lakki Marwat, Peshawar and Tank (formerly known as Frontier regions), have caused major population displacements, disrupted livelihoods and severely damaged rural infrastructure and markets. Although the security situation has improved, in 2020, people are expected to continue facing difficulties in restoring their livelihoods. Their lack of purchasing power will likely be exacerbated by rising food prices as well as livestock diseases. Consequently, from June–August 2020, around 1.27 million people (25 percent of the population analysed) are expected to face Crisis or worse conditions (IPC Phase 3 or above) (IPC, April 2020).²

Palestine

The political situation and other main drivers of acute food insecurity are likely to remain largely unchanged in 2020. In the absence of investment, there is growing pressure placed on coping mechanisms, thereby deepening the vulnerability of the population. In the West Bank, policies and practices affecting Area C, East Jerusalem and the Israeli-controlled part of Hebron city are expected to continue, leading to erosion of livelihoods. Economic development will remain hampered by the limitations on Palestinian access to land and natural resources, and by a multi-layered system of administrative, bureaucratic and physical constraints, including the Barrier (OCHA, December 2019).

The Syrian Arab Republic

In early 2020 the humanitarian situation in north-west Syria was deteriorating at an alarming rate, as military operations and clashes intensified across the Idlib area, including in parts of northern Hama and western Aleppo (OCHA, February 2020).

² Preliminary findings pending official release at country level

Between early December 2019 and late February 2020, more than 900 000 people were estimated to have fled their homes or shelters in Idlib for northern Idlib and Aleppo governorates, seeking refuge in increasingly crowded areas (UNHCR, February 2020). Hostilities are having a devastating impact on key civilian infrastructure, particularly health facilities across Idlib and western Aleppo governorates (OCHA, February 2020).

Newly displaced people, overburdened communities, spontaneous returnees and IDPs living in sites of last resort, collective centres or in open areas are expected to remain particularly vulnerable in 2020. Food access was expected to worsen as food prices are rising (the reference food basket was 57 percent higher in February 2020 than in October 2019) and traders are unwilling to grant credit. The informal exchange rate is depreciating both in the Syrian Arab Republic and in Lebanon, further complicating the inflow of goods into the country (WFP, March 2020). Households headed by women and children, and people with disabilities will be highly vulnerable. Humanitarian access – including to conduct needs assessments – is likely to vary across the country. It continues to be severely challenged by several factors, including hostilities, administrative regulations and restrictions on staff movements (OCHA, December 2019).

Yemen

The beginning of 2020 was marked by the prospects for peace in Yemen, with the UN-backed Stockholm Agreement leading to a significant drop in violence in Hodeidah. However, conflict remains intense in several areas of the country and violence will likely continue (ACLED, January 2020). The combined effects of conflict, macroeconomic crisis, weather-related shocks and crop pests, including fall armyworm and desert locusts, are likely to lead to persisting levels of acute food insecurity in 2020 and may further increase acute malnutrition across the country. These conditions will likely ensure that Yemen remains the world's worst global food insecurity and malnutrition crisis in 2020. Should peace process efforts bring about a substantial lowering of the intensity of the conflict, this could provide some respite, but the process is likely to be protracted.

The number of acutely food-insecure people is expected to exceed 17 million, based on FEWS NET, and the risk of Famine (IPC Phase 5) persists, particularly if conflict significantly disrupts port operations (FEWS NET, February 2020).

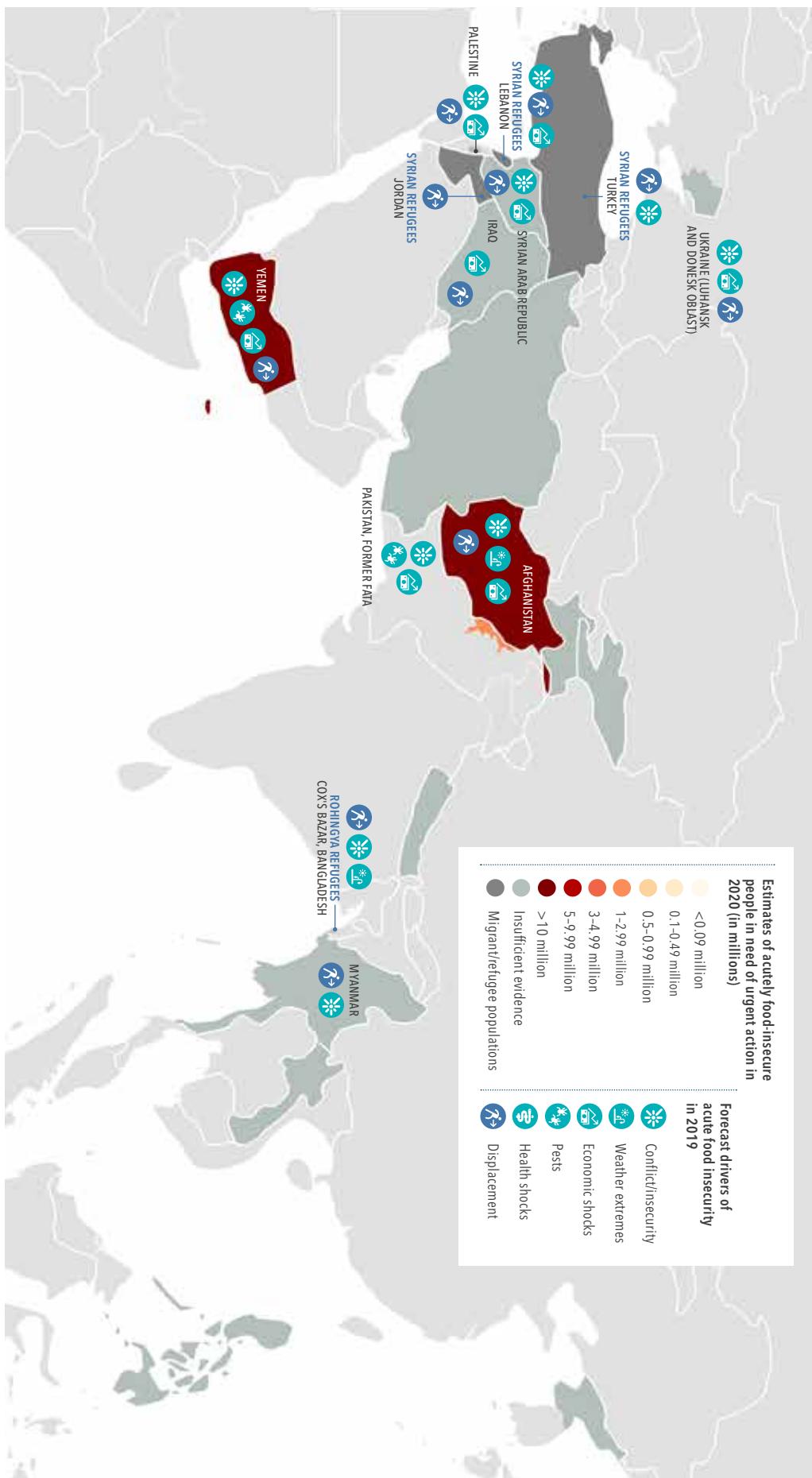
REGIONAL FORECAST FOR EUROPE

Ukraine (Donetsk and Luhansk oblasts)

December 2019 marked an important turning point and potentially new forward momentum in establishing a permanent ceasefire in the Ukraine. For the first time in three years the Presidents of France, the Russian Federation and Ukraine and the Federal Chancellor of Germany met to reinvigorate the stalled

Map 72

Number of people in IPC Phase 3 or above, drivers and risks in the Middle East and South Asia in 2020



Source: FSIN GRFC March 2020.
The boundaries and names shown and

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. This map reflects analyses produced before COVID-19 became a pandemic and does not account for its direct and/or indirect impact on acute food insecurity.

conflict settlement process. Other promising actions included the disengagement of forces in several areas and the exchange of prisoners. However, humanitarian needs in conflict-affected areas of Eastern Ukraine (Donetsk and Luhansk oblasts) are expected to remain severe in 2020 because of the effects of the six-year crisis on the lives, livelihoods and resilience of people. The most vulnerable are urban populations living closest to the 'contact line' (OCHA, January 2020).

REGIONAL FORECAST FOR LATIN AMERICA AND THE CARIBBEAN

Sociopolitical crises, lack of employment and high food prices are likely to lead to deteriorating acute food insecurity in some countries.

Colombia

Conditions within the Venezuela (Bolivarian Republic of) will likely maintain the continuous flow of people to Colombia, with an increase in their needs upon their arrival in the country. The restrictions imposed by other countries – as well as the degree of access that the Government of Colombia has offered to Venezuelans – will have an impact on the number of those in transit and with intent to stay in Colombia (R4V, January 2020).

⚠️ Haiti

The sociopolitical unrest that paralyzed the economy and drove up food prices in 2019 (WFP, January 2020) had stabilized by early 2020, allowing for transportation and commercial activities to resume. However, the current dysfunction of Parliament creates uncertainty, and mass protests and episodes of violence may resurface in coming months (FAO, January 2020) and further weaken the country's economy. This in turn will diminish the ability of the poorest Haitians to meet their basic needs, as well as the capacity of the State to provide essential services (OCHA, December 2019).

Household food security therefore remains fragile, hampered by high food prices, the lack of employment opportunities and the residual effects of the sociopolitical crisis (FEWS NET, January 2020). According to the October 2019 IPC analysis, if no actions were taken to restore the food security and livelihoods of vulnerable populations, the number of people facing Crisis or worse (IPC Phase 3 or above) would increase from 3.7 million in October 2019–February 2020 to 4.1 million during the March–June 2020 lean season (IPC, October 2019).

Venezuela (Bolivarian Republic of)

Venezuelans will face continued loss of livelihoods, and negative coping strategies could become the norm for the most vulnerable (OCHA, December 2019). The crisis is likely to affect increasing numbers of people in 2020. International sanctions could deepen the economic crisis and internal political tensions may escalate

domestic unrest (International Rescue Committee, January 2020).

The outflow of Venezuelans is expected to continue, making it one of the world's largest migration crises (R4V, January 2020). By the end of 2020, around 2.4 million are expected to be in Colombia and 659 000 in Ecuador (RMRP 2020). Various host countries have imposed stricter entry requirements to ease the burden on near-exhausted response capacities and to defuse growing social tensions (OCHA, December 2019).

A substantial increase in those undertaking circular migration to meet basic needs is also expected, primarily between the Venezuela (Bolivarian Republic of) and Colombia. Other vulnerable people will include those returning from Venezuela (Bolivarian Republic of) to their countries of origin, people in transit and host communities. Refugees and migrants living in shelters, on the streets and recent arrivals in a host/transit country are among the most vulnerable. Overstretched national capacities, as well as the economic and political difficulties in some host countries may adversely affect the refugees and migrants (R4V, January 2020).

The Central American Dry Corridor

The 2019 drought and depressed household incomes, particularly for coffee growers, will drive acute food insecurity in the Dry Corridor.

From February, the lack of basic grain reserves resulting from the prolonged 2019 drought and the fall in demand for casual agricultural labour – the main source of income for poor households – were expected to limit food access and signify the premature start of the lean season. The decline in international coffee prices continues to depress the incomes of coffee growers and consequently of those reliant on daily wages as coffee cutters. Households in the Dry Corridor will have limited chances to save money to buy food, pay credits and save for subsequent months (FEWS NET, January 2020).

In Honduras, the number of people in Crisis or worse (IPC Phase 3 or above) is expected to increase from about 1 million in November 2019–February 2020 to 1.2 million in March–June 2020. In April–July 2020, 1.3 million people in rural Guatemala, representing 19 percent of the rural population, are expected to be in Crisis or worse (IPC Phase 3 or above) (IPC, December 2019). Around or less than 0.1 million people will likely face Crisis or worse (IPC Phase 3 or above) conditions in both Nicaragua and El Salvador from May–August 2020 (FEWS NET, February 2020).

In 2020, migration from Central America to northern countries is expected to continue, spurred by irregular climate patterns affecting food production, and criminality/insecurity in the Dry Corridor. Migrants face uncertainties amid the implementation of deals with the northern countries of Central America that would see asylum seekers returned from their destination country to their country of transit (OCHA, December 2019).

Map 73

Number of people in IPC Phase 3 or above, drivers and risks in Latin America and the Caribbean in 2020



MALNUTRITION FORECAST EARLY 2020

In a number of countries affected by food crises in 2019, in addition to the inadequate dietary intake, a deterioration of the malnutrition situation is expected if disease outbreaks are not well managed and continue to spread, affecting children's nutritional status. In contexts of conflict where violence, insecurity and displacements are likely to increase, the nutrition situation is also expected to deteriorate due to the spread of diseases, limited access to food and basic services as well as limited access to humanitarian aid, such as in conflict areas in Burkina Faso, Mali, northern Nigeria and Yemen.

A persistent, deteriorated situation is forecast for countries with political and economic crises that are not likely to improve in the coming year including Eswatini, Haiti and Zimbabwe. In countries with positive food security forecasting, such as Malawi, the nutrition situation is not likely to deteriorate.

Nine countries (Chad, Kenya, Madagascar, Mozambique, the Niger, Nigeria, Somalia, South Sudan and Uganda) affected by

food crises in 2019 have conducted an IPC Acute Malnutrition analysis and produced a forecast for early 2020. The situation is expected to deteriorate in all provinces of Chad and the Niger due to the seasonal increase in malaria, diarrhoea and respiratory infections, which peak from May–September, and constitute the main driving factors of acute malnutrition in these countries.

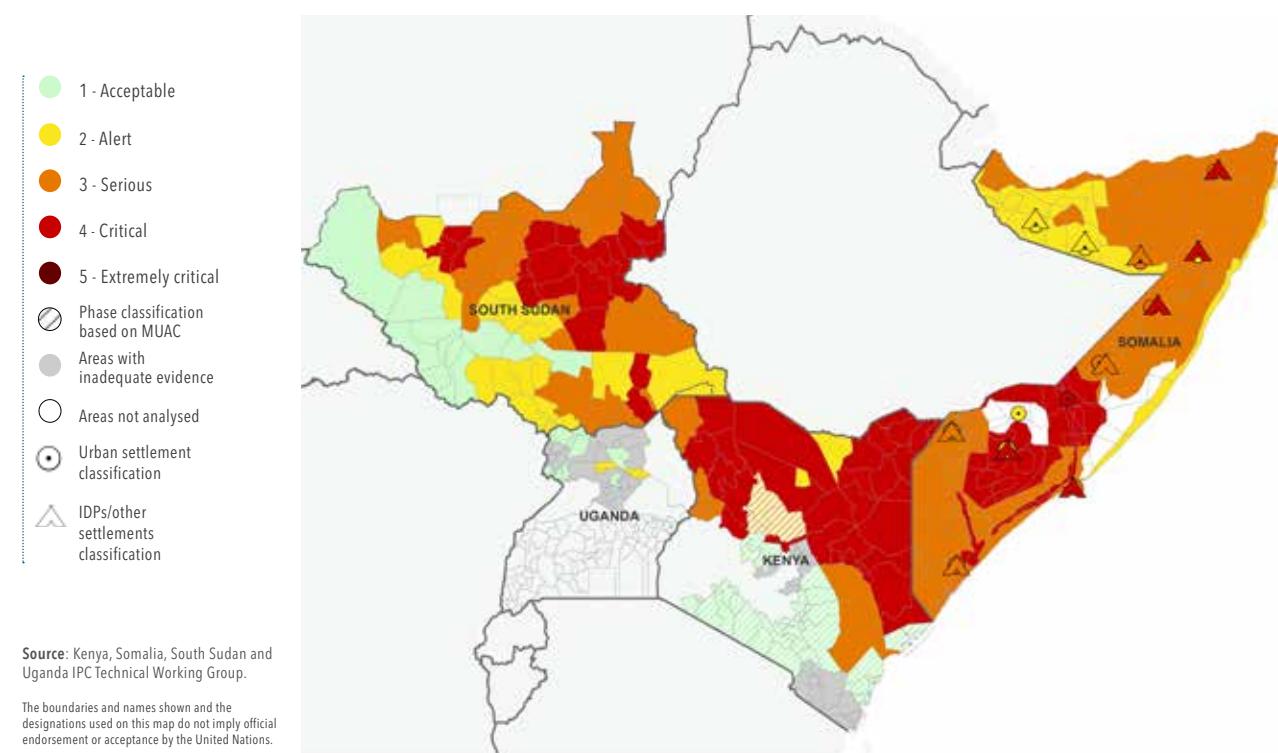
The deteriorating situations expected in Nigeria are the result of poor child-feeding practices coupled with seasonal food shortages and increased morbidity in the areas surveyed.

In Madagascar, the acute malnutrition situation was expected to deteriorate in more than 90 percent of the 12 areas analysed as the forecast period coincides with an increased incidence of diseases associated with poor sanitation and hygiene practices.

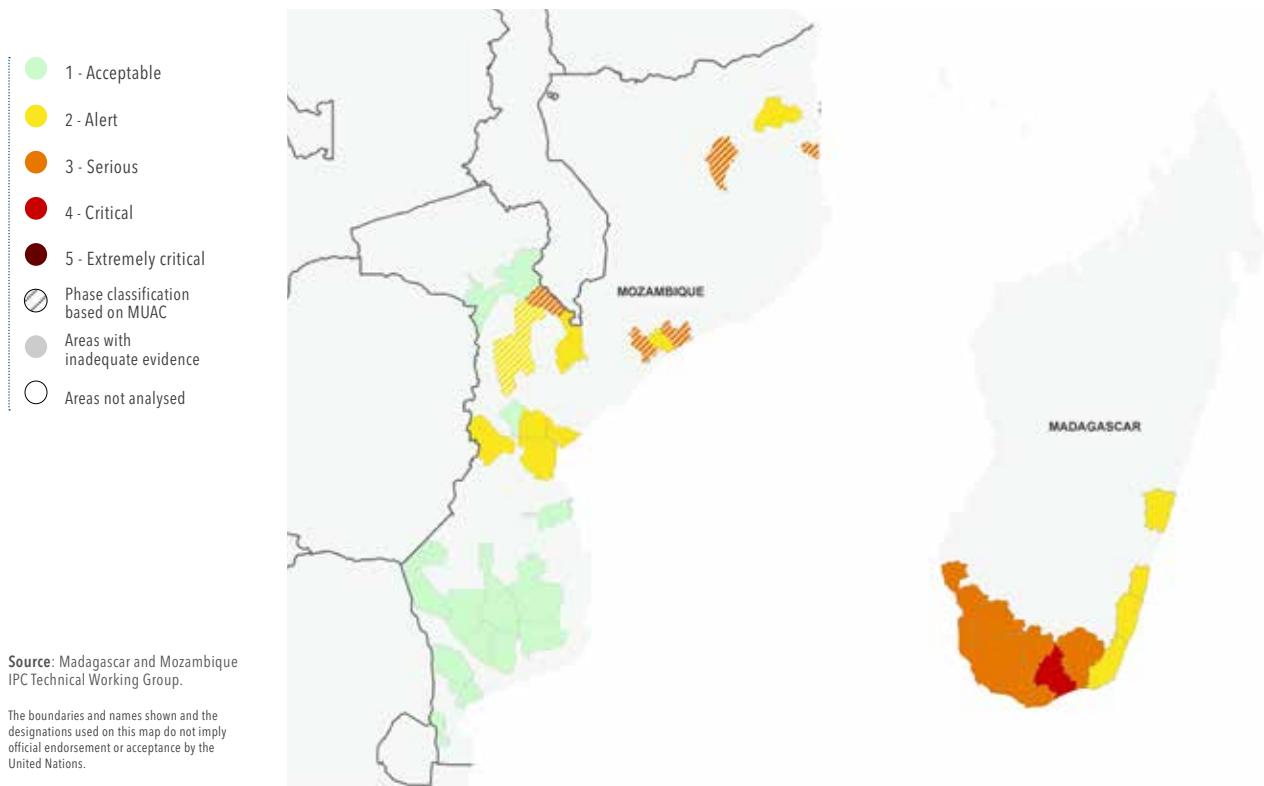
The nutritional status in a third of the 31 districts analysed in Mozambique are expected to deteriorate in the lean season when heavy rains contribute to an increase in the number of cases of malaria and diarrhoea. Deterioration is also possible in the districts affected in 2019 by cyclones Idai and Kenneth (Cabo Delgado and Sofala).

Map 74

Horn of Africa, IPC Acute malnutrition projections for 2020



Map 75

Southern Africa, IPC Acute malnutrition projections for 2020

Map 76

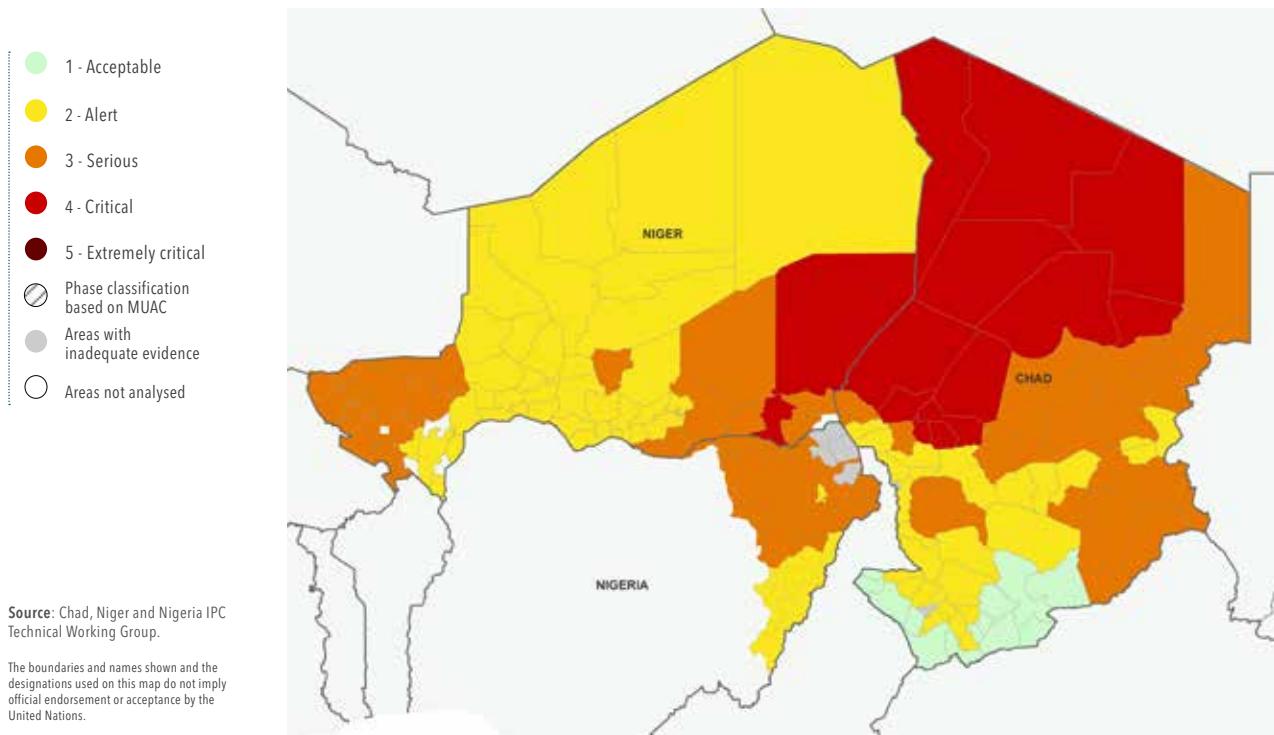
West Africa, IPC Acute malnutrition projections for 2020

Table 6

Acute food insecurity forecast for 2020

COUNTRIES OR TERRITORIES	2019 PEAK NUMBER		ESTIMATES FOR 2020 PEAK NUMBER			TREND IN 2020 PEAK NUMBER COMPARED TO 2019 PEAK NUMBER
	PERIOD	POPULATION IN IPC/CH PHASE 3 OR ABOVE (MILLIONS)	ANTICIPATED PEAK PERIOD	POPULATION IN IPC/CH PHASE 3 OR ABOVE (MILLIONS)	HIGHEST EXPECTED AREA CLASSIFICATION	
Afghanistan	Nov 2019-Mar 2020	11.3	Jan-Apr 2020	11.3	Phase 4 Emergency	► Stable
Angola (24 communes in 3 provinces)	Oct 2019-Feb 2020	0.6	Jan-Feb 2020	0.6	Phase 4 Emergency	► Stable
Bangladesh (Cox's Bazar and host populations)	Nov-Dec 2019	1.3	N/A	N/A	N/A	N/A
Burkina Faso	Oct-Dec 2019	1.2	Jun-Aug 2020	2.2	Phase 3 Crisis	▲ Increase
Burundi	Mar-Apr 2019	0.2	April-May 2020	0.15-0.35	Phase 1 Minimal	► Stable
Cabo Verde	Oct-Dec 2019	0.01	Jun-Aug 2020	0.01	Phase 2 Stressed	► Stable
Cameroon*	Oct-Dec 2019	1.4	Jan-Mar 2020	2.7	Phase 3 Crisis	N/A
Central African Republic*	May-Aug 2019	1.8	May-Aug 2020	2.1	Phase 4 Emergency	▲ Increase
Chad	Jun-Aug 2019	0.6	Jun-Aug 2020	1.0	Phase 3 Crisis	▲ Increase
Colombia (Venezuelan migrants)	Sep-Dec 2019	0.9	N/A	N/A	N/A	N/A
Côte d'Ivoire*	Jun-Aug 2019	0.06	Jan-Mar 2020	0.2	Phase 2 Stressed	▲ Increase
Democratic Republic of the Congo*	Jul-Dec 2019	15.6	Varies in each area/region	13.6	Phase 4 Emergency	► Stable
Djibouti	N/A	N/A	January 2020	0.2	N/A	► Stable
Ecuador (Venezuelan migrants)	Jan-Mar 2019	0.3	N/A	N/A	N/A	N/A
El Salvador**	Apr-Jul 2019	0.3	May-Aug 2020	<0.1	Phase 2 Stressed	N/A
Eswatini (rural population)	Oct 2019-Mar 2020	0.2	Jan-Mar 2020	0.2	Phase 3 Crisis	► Stable
Ethiopia (selected areas in 6 regions)	Jul-Sep 2019	8.0	Feb-Jun 2020	8.5	Phase 3 Crisis	▲ Increase
Gambia	Oct-Dec 2019	0.2	Jun-Aug 2020	0.1	Phase 2 Stressed	► Stable
Guatemala*	Mar-Jun 2019	3.1	May-Aug 2020	1.3	Phase 3 Crisis	▲ Increase
Guinea	Jun-Aug 2019	0.3	Jun-Aug 2020	0.3	Phase 2 Stressed	► Stable
Guinea-Bissau	Oct-Dec 2019	0.1	Jun-Aug 2020	0.07	Phase 2 Stressed	► Stable
Haiti	Oct 2019-Feb 2020	3.7	Mar-Jun 2020	4.1	Phase 4 Emergency	▲ Increase
Honduras (13 departments)	Nov 2019-Feb 2020	1.0	Mar-Jun 2020	1.2	Phase 3 Crisis	▲ Increase
Iraq	Jan-Dec 2019	1.8	N/A	N/A	N/A	N/A
Kenya	Aug-Oct 2019	3.1	Jan-Mar 2020	1.3	Phase 2 Stressed	▼ Decrease
Lebanon (Syrian refugees)	Apr-May 2019	0.3	N/A	N/A	N/A	N/A
Lesotho (rural population)	Oct 2019-Mar 2020	0.4	Jan-Mar 2020	0.4	Phase 3 Crisis	► Stable
Liberia	Jun-Aug 2019	0.04	Oct-Dec 2020	N/A	N/A	N/A
Libya	Jan-Dec 2019	0.3	N/A	N/A	N/A	N/A
Madagascar*	Nov 2018-Mar 2019	1.3	Jan-Mar 2020	0.7	Phase 3 Crisis	▼ Decrease
Malawi	Oct 2018-Mar 2019	3.3	Jan-Mar 2020	1.9	Phase 3 Crisis	▼ Decrease
Mali	Oct-Dec 2019	0.6	Jun-Aug 2020	1.3	Phase 3 Crisis	▲ Increase
Mauritania	Jun-Aug 2019	0.6	Jun-Aug 2020	0.6	Phase 3 Crisis	► Stable
Mozambique (39 districts)	Oct 2019-Feb 2020	1.7	Jan-Mar 2020	1.7	Phase 3 Crisis	► Stable
Myanmar	Jan-Dec 2019	0.7	N/A	N/A	N/A	N/A
Namibia	Oct 2019-Mar 2020	0.4	Jan-Mar 2020	0.4	Phase 3 Crisis	► Stable
Nicaragua	Jul-Sep 2019	0.08	May-Aug 2020	0.07-0.11	Phase 2 Stressed	► Stable
Niger	Oct-Dec 2019	1.4	Jun-Aug 2020	2.0	Phase 3 Crisis	▲ Increase
Nigeria (16 states and Federal Capital Territory)	Jun-Aug 2019	5.0	Jun-Aug 2020	7.1	Phase 4 Emergency	▲ Increase
Pakistan (Balochistan and Sindh drought-affected areas, 2019/former FATA, 2020)***	Oct 2018-Jul 2019	3.1	Jun-August 2020	1.3	Phase 3 Crisis	N/A
Palestine	Jan-Dec 2019	1.7	N/A	N/A	N/A	N/A
Rwanda	Apr-May 2019	0.1	Apr-May 2020	0.085-0.125	Phase 1 Minimal	► Stable
Senegal	Oct-Dec 2019	0.4	Jun-Aug 2020	0.8	Phase 3 Crisis	▲ Increase
Sierra Leone	Oct-Dec 2019	0.3	Jun-Aug 2020	1.3	Phase 3 Crisis	▲ Increase
Somalia	Oct-Dec 2019	2.1	Apr-Jun 2020	1.3	Phase 3 Crisis	▼ Decrease
South Sudan	May-Jul 2019	7.0	May-Jul 2020	6.5	Phase 4 Emergency	▼ Decrease
Sudan**	Jun-Aug 2019	5.9	Jun-Sep 2020	5.0-6.0	Phase 4 Emergency	► Stable
Syrian Arab Republic	Jan-May 2019	6.6	N/A	N/A	N/A	N/A
Turkey (Syrian refugees)	Apr-Sep 2019	0.5	N/A	N/A	N/A	N/A
Uganda	Apr-Jul 2019	1.5	May-Jun 2020	1.2-1.6	Phase 3 Crisis	► Stable
Ukraine (Luhansk and Donetsk oblasts, and IDP)	Jan-Dec 2019	0.5	N/A	N/A	N/A	N/A
United Republic of Tanzania (16 districts)	Nov 2019-Apr 2020	1.0	Jan-Feb 2020	1.0	Phase 3 Crisis	► Stable
Venezuela (Bolivarian Republic of)	Jul-Sep 2019	9.3	N/A	N/A	N/A	N/A
Yemen**	Dec 2018-Jan 2019	15.9	Jul-Sep 2020	17+	Phase 4 Emergency	▲ Increase
Zambia (86 districts)	Oct 2019-Mar 2020	2.3	Jan-Mar 2020	2.3	Phase 4 Emergency	► Stable
Zimbabwe (rural population)	Oct-Dec 2019	3.6	Jan-May 2020	4.3	Phase 4 Emergency	▲ Increase

* Due to different population/geographical coverage, the 2019 peak and 2020 anticipated peak are not directly comparable

** Due to different data sources, the 2019 peak and 2020 anticipated peak numbers are not directly comparable

*** Due to different population/geographical coverage, the 2019 peak and 2020 anticipated peak are not directly comparable. The 2020 forecasts are pending official release at country level.

Table 6 continued

Acute food insecurity forecast for 2020 continued

COUNTRIES OR TERRITORIES	MAIN DRIVERS
Afghanistan (cont...)	Conflict/insecurity and related displacement; weather extremes – floods, dry spells, related production shortfalls; economic shocks – reduced purchasing power
Angola (cont...)	Weather extremes – dry spells and related production shortfalls; economic shocks – reduced purchasing power
Bangladesh (cont...)	Conflict/insecurity and related displacement; weather extremes – floods
Burkina Faso (cont...)	Conflict/insecurity and related displacement; weather extremes – dry spells; pests
Burundi (cont...)	Weather extremes – floods and related displacement
Cabo Verde (cont...)	Weather extremes – dry spells; pests and related production shortfalls
Cameroon (cont...)	Conflict/insecurity and related displacement; economic shocks – reduced purchasing power
Central African Republic (cont...)	Conflict/insecurity and related displacement; weather extremes – floods, and related production shortfalls; economic shocks – reduced purchasing power
Chad (cont...)	Conflict/insecurity and related displacement; weather extremes – dry spells, floods
Colombia (cont...)	Economic shocks – downturn and related reduced purchasing power and displacement
Côte d'Ivoire (cont...)	Economic vulnerability – localized production shortfalls
Dem. Rep. of the Congo (cont...)	Conflict/insecurity and related displacement; economic shocks – reduced purchasing power; Health shocks – EVD outbreak
Djibouti (cont...)	Pests – desert locusts
Ecuador (cont...)	Economic shocks – downturn and related reduced purchasing power and displacement
El Salvador (cont...)	Weather extremes – dry spells and related production shortfalls
Eswatini (cont...)	Weather extremes – dry spells and related production shortfalls
Ethiopia (cont...)	Weather extremes – dry spells and related production shortfalls; conflict/insecurity, and related displacements; pests – desert locusts; economic shocks – reduced purchasing power
Gambia (cont...)	Weather extremes – dry spells and related production shortfalls; economic shocks – reduced purchasing power
Guatemala (cont...)	Weather extremes – dry spells and related production shortfalls
Guinea (cont...)	Economic shocks – reduced purchasing power; pests
Guinea-Bissau (cont...)	Economic shocks – reduced purchasing power
Haiti (cont...)	Economic shocks – related reduced purchasing power; weather extremes – dry spells and related production shortfalls; insecurity/political crisis
Honduras (cont...)	Weather extremes – dry spells and related production shortfalls
Iraq (cont...)	Conflict/insecurity and related displacement; insecurity/political crisis; economic shocks – reduced purchasing power
Kenya (cont...)	Weather extremes – floods, dry spells and related production shortfalls; pests – desert locusts; economic shocks – reduced purchasing power; conflict/insecurity and related displacement
Lebanon (cont...)	Refugee influx from conflict-affected countries; economic shocks – reduced purchasing power
Lesotho (cont...)	Weather extremes – dry spells and related production shortfalls
Liberia (cont...)	Economic shocks – reduced purchasing power
Libya (cont...)	Conflict/insecurity and related displacement; economic shocks – reduced purchasing power
Madagascar (cont...)	Weather extremes – dry spells, floods and related production shortfalls; economic shocks – reduced purchasing power; pests – fall armyworm
Malawi (cont...)	Economic shocks – reduced purchasing power; weather extremes – dry spells and floods, and related production shortfalls; pests – fall armyworm
Mali (cont...)	Conflict/insecurity and related displacement; weather extremes – dry spells
Mauritania (cont...)	Weather extremes – dry spells, and related production shortfalls
Mozambique (cont...)	Weather extremes – dry spells and floods, and related production shortfalls; economic shocks – reduced purchasing power; conflict/insecurity
Myanmar (cont...)	Conflict/insecurity and related displacement
Namibia (cont...)	Weather extremes – dry spells, and related production shortfalls
Nicaragua (cont...)	Weather extremes – dry spells, and related production shortfalls; insecurity/political crisis
Niger (cont...)	Conflict/insecurity and related displacement; weather extremes – dry spells/floods, and related production shortfalls
Nigeria (cont...)	Conflict/insecurity and related displacement; weather extremes – floods, and related production shortfalls; economic shocks – reduced purchasing power; health shocks – disease outbreaks
Pakistan (cont...)	Conflict/insecurity; economic shocks (inflation); livestock disease outbreaks; pests – desert locusts
Palestine (cont...)	Conflict/insecurity and related displacement; economic shocks – reduced purchasing power
Rwanda (cont...)	Refugee influx from conflict-affected countries; economic shocks – reduced purchasing power; weather extremes – floods
Senegal (cont...)	Weather extremes – dry spells, and related production shortfalls
Sierra Leone (cont...)	Weather extremes – floods and related displacement/production shortfalls; economic shocks – reduced purchasing power
Somalia (cont...)	Weather extremes – floods, dry spells and related production shortfalls; conflict/insecurity and related displacement; pests – desert locusts
South Sudan (cont...)	Conflict/insecurity and related displacement; weather extremes – floods and related production shortfalls; economic shocks – downturn; pests – desert locusts
Sudan (cont...)	Weather extremes – dry spells and floods; economic shocks – downturn and reduced purchasing power; conflict/insecurity and displacement; pests – desert locusts
Syrian Arab Republic (cont...)	Conflict/insecurity and related displacement; economic shocks – reduced purchasing power
Turkey (cont...)	Refugee influx from conflict-affected countries
Uganda (cont...)	Refugee influx from conflict-affected countries ; weather extremes – dry spells, floods and related production shortfalls; pests – desert locusts
Ukraine (cont...)	Conflict/insecurity and related displacement; economic shocks – reduced purchasing power
United Rep. of Tanzania (cont...)	Weather extremes – dry spells and related production shortfalls; economic shocks – reduced purchasing power; pests – desert locusts and fall armyworm
Venezuela (Bolivarian Rep. of) (cont...)	Economic shocks – downturn and related reduced purchasing power, production shortfalls and displacement
Yemen (cont...)	Conflict/insecurity and related displacement and production shortfalls; economic shocks – downturn and reduced purchasing power; pests – desert locusts
Zambia (cont...)	Weather extremes – dry spells, floods and related production shortfalls
Zimbabwe (cont...)	Economic shocks – downturn and reduced purchasing power; weather extremes – dry spells and related production shortfalls

The forecast 2020 estimates provided in this table for Cameroon, Côte d'Ivoire, Djibouti, Ethiopia, Guinea-Bissau, Honduras and Sierra Leone reflects only the highest forecast available for 2020 – not the anticipated peak period, for which no estimates are available. The estimated peak numbers for Afghanistan, Angola, Eswatini, Lesotho, Mozambique, Namibia, United Republic of Tanzania and Zambia remained unchanged between 2019 and 2020 as the same analysis was used to assess peak numbers of both years.

Table 7

IPC Acute food insecurity reference table

Phase name and description	Phase 1 None/Minimal	Phase 2 Stressed	Phase 3 Crisis	Phase 4 Emergency	Phase 5 Catastrophe/Famine
	Households are able to meet essential food and non-food needs without engaging in atypical and unsustainable strategies to access food and income.	Households have minimally adequate food consumption but are unable to afford some essential non-food expenditures without engaging in stress-coping strategies.	Households either have food consumption gaps that are reflected by high or above-usual acute malnutrition; or are marginally able to meet minimum food needs but only by depleting essential livelihood assets or through crisis-coping strategies.	Households either have large food consumption gaps which are reflected in very high acute malnutrition and excess mortality; or are able to mitigate large food consumption gaps but only by employing emergency livelihood strategies and asset liquidation.	Households have an extreme lack of food and/or other basic needs even after full employment of coping strategies. Starvation, death, destitution and extremely critical acute malnutrition levels are evident.(For Famine Classification, area needs to have extreme critical levels of acute malnutrition and mortality.)
Priority response objective	Action required to build resilience and for disaster risk reduction.	Action required for disaster risk reduction and to protect livelihoods.	URGENT ACTION required to protect livelihoods and reduce food consumption gaps.	URGENT ACTION required to save lives and livelihoods.	URGENT ACTION required to revert/prevent widespread death and total collapse of livelihoods

ACUTE FOOD INSECURITY FIRST-LEVEL OUTCOMES First-level outcomes refer to characteristics of food consumption and livelihood change. Thresholds that correspond as closely as possible to the Phase descriptions are included for each indicator. Although cut-offs are based on applied research and presented as global reference, correlation between indicators is often somewhat limited and findings need to be contextualized. The area is classified in the most severe Phase that affects at least 20% of the population.

Food consumption (focus on energy intake)	Quantity: Adequate energy intake Dietary energy intake: Adequate (avg. 2 350 kcal pp/day) and stable Household Dietary Diversity Score: 5-12 food groups and stable Food Consumption Score: Acceptable and stable Household Hunger Scale: 0 (none) Reduced Coping Strategies Index: 0-3 Household Economy Analysis: No livelihood protection deficit	Quantity: Minimally Adequate Dietary energy intake: Minimally adequate (avg. 2 100 kcal pp/day) Household Dietary Diversity Score: 5 FG but deterioration ≥1 FG from typical Food Consumption Score: Acceptable but deterioration from typical Household Hunger Scale: 1 (slight) Reduced Coping Strategies Index: 4-18 Household Economy Analysis: Small or moderate livelihood protection deficit <80%	Quantity: Moderately Inadequate – Moderate deficits Dietary energy intake: Food gap (below avg. 2 100 kcal pp/day) Household Dietary Diversity Score: 3-4 FG Food Consumption Score: Borderline Household Hunger Scale: 2-3 (moderate) Reduced Coping Strategies Index: ≥19 (non-defining characteristics (NDC) to differentiate P4 and 5) Household Economy Analysis: Livelihood protection deficit ≥80%; or survival deficit <20%	Quantity: Very Inadequate – Large deficits Dietary energy intake: Large food gap; much below 2 100 kcal pp/day Household Dietary Diversity Score: 0-2 FG Food Consumption Score: Poor (NDC to differentiate P4 and 5) Household Hunger Scale: 4 (severe) Reduced Coping Strategies Index: ≥19 (NDC to differentiate P3, 4 and 5) Household Economy Analysis: Survival deficit ≥20% but <50%	Quantity: Extremely Inadequate – Very large deficits Dietary energy intake: Extreme food gap Household Dietary Diversity Score: 0-2 FG Food Consumption Score: Poor (NDC to differentiate P4 and 5) Household Hunger Scale: 5-6 (severe) Reduced Coping Strategies Index: ≥19 (NDC to differentiate P3, 4 and 5) Household Economy Analysis: Survival deficit ≥50%
Livelihood change (assets and strategies)	Livelihood change: Sustainable livelihood strategies and assets Livelihood coping strategies: No stress, crisis or emergency coping observed	Livelihood change: Stressed strategies and/or assets; reduced ability to invest in livelihoods Livelihood coping strategies: Stress strategies are the most severe strategies used by the household in the past 30 days	Livelihood change: Accelerated depletion/erosion of strategies and/or assets Livelihood coping strategies: Crisis strategies are the most severe strategies used by the household in the past 30 days	Livelihood change: Extreme depletion/liquidation of strategies and assets Livelihood coping strategies: Emergency strategies are the most severe strategies used by the household in the past 30 days	Livelihood change: Near complete collapse of strategies and assets Livelihood coping strategies: Near exhaustion of coping capacity

FOOD SECURITY SECOND-LEVEL OUTCOMES Second-level outcomes refer to area-level estimations of nutritional status and mortality that are especially useful for identification of more severe phases when food gaps are expected to impact malnutrition and mortality. For both nutrition and mortality area outcomes, household food consumption deficits should be an explanatory factor in order for that evidence to be used in support of the classification.

Nutritional status*					
Global Acute Malnutrition based on Weight-for-Height Z-score	Acceptable <5%	Alert 5-9.9%	Serious 10-14.9% or > than usual	Critical 15-29.9% or > much greater than average	Extremely Critical ≥30%
Global Acute Malnutrition based on Mid-Upper Arm Circumference	5%	5-9.9%	10-14.9%	≥15%	
Body Mass Index <18.5	<5%	5-9.9%	10-19.9%, 1.5 x greater than baseline	20-39.9%	≥40%
Mortality*	Crude Death Rate <0.5/10,000/day Under-five Death Rate <1/10,000/day	Crude Death Rate <0.5/10,000/day Under-five Death Rate <1/10,000/day	Crude Death Rate 0.5-0.99/10,000/day Under-five Death Rate 1-2/10,000/day	Crude Death Rate 1-1.99/10,000/day <2x reference Under-five Death Rate 2-3.99/10,000/day	Crude Death Rate ≥2/10,000/day Under-five Death Rate ≥4/10,000/day

FOOD SECURITY CONTRIBUTING FACTORS For contributing factors, specific indicators and thresholds for different phases need to be determined and analysed according to the livelihood context; nevertheless, general descriptions for contributing factors are provided below.

Food availability, access, utilization, and stability	Adequate to meet short-term food consumption requirements Safe water ≥15 litres pp/day	Borderline adequate to meet food consumption requirements Safe water marginally ≥15 litres pp/day	Inadequate to meet food consumption requirements Safe water >7.5 to 15 litres pp/day	Very inadequate to meet food consumption requirements Safe water >3 to <7.5 litres pp/day	Extremely inadequate to meet food consumption requirements Safe water ≤3 litres pp/day
Hazards and vulnerability	None or minimal effects of hazards and vulnerability on livelihoods and food consumption	Effects of hazards and vulnerability stress livelihoods and food consumption	Effects of hazards and vulnerability result in loss of assets and/or significant food consumption deficits	Effects of hazards and vulnerability result in large loss of livelihood assets and/or extreme food consumption deficits	Effects of hazards and vulnerability result in near complete collapse of livelihood assets and/or near complete food consumption deficits

Table 8

IPC Acute malnutrition (AMN) reference table

Phase name and description	Phase 1 Acceptable	Phase 2 Alert	Phase 3 Serious	Phase 4 Critical	Phase 5 Extremely critical
	Less than 5% of children are acutely malnourished.	5–9.9% of children are acutely malnourished.	10–14.9% of children are acutely malnourished.	15–29.9% of children are acutely malnourished. The mortality and morbidity levels are elevated or increasing. Individual food consumption is likely to be compromised.	30% or more children are acutely malnourished. Widespread morbidity and/or very large individual food consumption gaps are likely evident.
Priority response objective to decrease Acute Malnutrition and to prevent related mortality.	Maintain the low prevalence of Acute Malnutrition.	Strengthen existing response capacity and resilience. Address contributing factors to Acute Malnutrition. Monitor conditions and plan response as required.	Urgently reduce Acute Malnutrition levels by: scaling up treatment and prevention of affected populations.	Urgently reduce Acute Malnutrition levels by: significantly scaling up and intensifying treatment and protection activities to reach additional population affected.	Urgently reduce Acute Malnutrition levels by: addressing widespread Acute Malnutrition and disease epidemics by all means.
Global Acute Malnutrition (GAM) based on weight for height Z-score (WHZ)	<5%	5.0 to 9.9%	10.0 to 14.9%	15.0 to 29.9%	≥30%
Global Acute Malnutrition (GAM) based on Mid-Upper Arm Circumference (MUAC)	5%	5–9.9%	10–14.9%	≥15%	

*GAM based on MUAC must only be used in the absence of GAM based on WHZ; the final IPC Acute Malnutrition phase with GAM based on MUAC should be supported by the analysis of the relationship between WHZ and MUAC in the area of analysis and also by using convergence of evidence with contributing factors. In exceptional conditions where GAM based on MUAC is significantly higher than GAM based on WHZ (i.e. two or more phases), both GAM based on WHZ, and GAM based on MUAC should be considered, and the final phase should be determined with convergence of evidence.

- 1 The mortality mentioned above refers to the increased risk of mortality with the increased levels of Acute Malnutrition.
- 2 Priority response objectives recommended by the IPC Acute Malnutrition Reference Table focus on decreasing Acute Malnutrition levels; specific actions should be informed through a response analysis based on the information provided by analyses of contributing factors to Acute Malnutrition as well as delivery-related issues, such as government and agencies' capacity, funding and insecurity in the area.
- 3 GAM based on WHZ is defined as WHZ<-2 or presence of oedema; GAM based on MUAC is defined as MUAC<125mm or presence of oedema

Table 9

Estimates of acutely food-insecure people in 2019–2020

COUNTRIES OR TERRITORIES	TOTAL POPULATION OF REFERENCE (MILLIONS)	SOURCES ¹	HIGHEST NUMBER OF ACUTELY FOOD-INSECURE PEOPLE IN 2019				
			PERCENTAGE OF POPULATION ANALYSED OUT OF TOTAL POPULATION OF REFERENCE	POPULATION IN STRESSED (IPC/CH PHASE 2)		POPULATION IN CRISIS OR WORSE (IPC/CH PHASE 3 OR ABOVE)	
				PERSONS (MILLIONS)	PERCENTAGE OF TOTAL POPULATION ANALYSED	PERSONS (MILLIONS)	PERCENTAGE OF TOTAL POPULATION ANALYSED
Afghanistan	32.2	IPC analysis Sep 2019, covering Nov 2019–Mar 2020	95%	9.5	31%	11.3	37%
Angola (24 communes in 3 provinces)	31.8	IPC analysis Aug 2019, covering Oct 2019–Feb 2020	3%	0.2	21%	0.6	62%
Bangladesh (Cox's Bazar and host populations)	3.5	WFP REVA, covering Nov–Dec 2019	100%	N/A	N/A	1.3	37%
Burkina Faso	21.4	CH analysis Nov 2019, covering Oct–Dec 2019	100%	3.6	17%	1.2	6%
Burundi	11.5	FEWS NET internal figures covering Mar–Apr 2019	100%	N/A	N/A	0.2	2%
Cabo Verde	0.6	CH analysis Nov 2019, covering Oct–Dec 2019	86%	0.1	13%	0.01	2%
Cameroon*	25.0	CH analysis Nov 2019, covering Oct–Dec 2019	64%	3.8	24%	1.4	8%
Central African Republic (excluding Lobaye)*	4.8	IPC analysis May 2019, covering May–Aug 2019	91%	1.8	41%	1.8	41%
Chad	15.8	CH analysis Mar 2019, covering Jun–Aug 2019	91%	2.7	19%	0.6	4%
Colombia (Venezuelan migrants)	1.6	WFP EFSA, covering Sep–Dec 2019	100%	0.7	41%	0.9	55%
Côte d'Ivoire*	25.5	CH analysis Mar 2019, covering Jun–Aug 2019	77%	2.6	13%	0.06	0%
Democratic Republic of the Congo*	86.8	IPC analysis Jun 2019, covering Jul–Dec 2019	69%	27.0	45%	15.6	26%
Djibouti	1.1	No data available	N/A	N/A	N/A	N/A	N/A
Ecuador (Venezuelan migrants)	0.4	WFP EFSA, covering Jan–Mar 2019	100%	0.1	24%	0.3	76%
El Salvador**	6.4	IPC analysis Nov 2018, covering Apr–Jul 2019	22%	0.5	34%	0.3	22%
Eswatini (rural population)	1.4	IPC analysis Jun 2019, covering Oct 2019–Mar 2020	67%	0.4	39%	0.2	25%
Ethiopia (selected areas in 6 regions)	112.1	IPC analysis Sep 2019, covering Jul–Sep 2019	26%	10.0	34%	8.0	27%
Gambia	2.2	CH analysis Nov 2019, covering Oct–Dec 2019	89%	0.4	23%	0.2	10%
Guatemala*	17.6	IPC analysis Mar 2019, covering Mar–Jun 2019	95%	4.8	29%	3.1	18%
Guinea	13.4	CH analysis Mar 2019, covering Jun–Aug 2019	75%	1.4	14%	0.3	3%
Guinea-Bissau	2.0	CH analysis Nov 2019, covering Oct–Dec 2019	63%	0.3	26%	0.1	10%
Haiti	11.3	IPC analysis Oct 2019, covering Oct 2019–Feb 2020	93%	3.2	31%	3.7	35%
Honduras (13 departments)	9.7	IPC analysis Nov 2019, covering Nov 2019–Feb 2020	53%	1.8	35%	1.0	18%
Iraq	39.3	OCHA Iraq Humanitarian Needs Overview 2020, Nov 2019	100%	N/A	N/A	1.8	5%
Kenya	52.6	IPC analysis Jul 2019, covering Aug–Oct 2019	26%	6.0	43%	3.1	22%
Lebanon (Syrian refugees)	0.9	WFP EFSA, covering Apr–May 2019	100%	0.6	63%	0.3	29%
Lesotho (rural population)	2.3	IPC analysis Jun 2019, covering Oct 2019–Mar 2020	63%	0.6	38%	0.4	30%
Liberia	5.0	CH analysis Mar 2019, covering Jun–Aug 2019	87%	0.8	19%	0.04	1%
Libya	6.7	OCHA Libya Humanitarian Needs Overview 2020, Jan 2020	100%	N/A	N/A	0.3	5%
Madagascar*	24.3	IPC analysis Oct 2018, covering Nov 2018–Mar 2019	19%	1.3	29%	1.3	28%
Malawi	18.1	IPC analysis Aug 2018, covering Oct 2018–Mar 2019	84%	5.0	33%	3.3	22%
Mali	20.5	CH analysis Nov 2019, covering Oct–Dec 2019	100%	2.9	14%	0.6	3%
Mauritania	4.7	CH analysis Mar 2019, covering Jun–Aug 2019	87%	1.2	28%	0.6	15%
Mozambique (39 districts)	27.9	IPC analysis Jun 2019, covering Oct 2019–Feb 2020	18%	1.6	32%	1.7	34%
Myanmar	54.0	OCHA Myanmar Humanitarian Needs Overview 2020, Dec 2019	100%	0.02	0%	0.7	1%
Namibia	2.5	IPC analysis Oct 2019, covering Oct 2019–Mar 2020	97%	0.8	35%	0.4	18%
Nicaragua	6.0	FEWS NET internal figures covering Jun–Aug 2019	100%	N/A	N/A	0.08	1%
Niger	21.8	CH analysis Nov 2019, covering Oct–Dec 2019	100%	4.5	20%	1.4	7%
Nigeria (16 states and Federal Capital Territory)	201.0	CH analysis Mar 2019 and Jun 2019, covering Jun–Aug 2019	51%	18.8	18%	5.0	5%
Pakistan (Balochistan and Sindh drought-affected areas)	216.6	IPC analysis Apr 2019, covering Oct 2018–Jul 2019	3%	1.4	23%	3.1	51%
Palestine	5.0	OCHA Palestine Humanitarian Needs Overview 2020, Jan 2020	100%	0.8	17%	1.7	33%
Rwanda	12.6	FEWS NET internal figures covering Apr–May 2019	100%	N/A	N/A	0.1	1%
Senegal	16.2	CH analysis Nov 2019, covering Oct–Dec 2019	81%	1.8	14%	0.4	3%
Sierra Leone	8.1	CH analysis Nov 2019, covering Oct–Dec 2019	100%	2.6	33%	0.3	4%
Somalia	12.3	IPC analysis Aug 2019, covering Oct–Dec 2019	80%	4.2	34%	2.1	17%
South Sudan	11.4	IPC analysis May 2019, covering May–Jul 2019	100%	3.2	28%	7.0	61%
Sudan**	42.8	IPC analysis Jul 2019, covering Jun–Aug 2019	98%	11.8	28%	5.9	14%
Syrian Arab Republic	18.3	OCHA Syria Humanitarian Response Plan Monitoring Report, covering Jan–May 2019	100%	2.6	14%	6.6	36%
Turkey (Syrian refugees)	3.6	WFP EFSA, covering Apr–Sep 2019	75%	1.6	58%	0.5	17%
Uganda	40.0	FEWS NET internal figures covering Apr–Jul 2019,	100%	N/A	N/A	1.5	4%
Ukraine (Luhansk and Donetsk oblasts, and IDPs)	42.0	OCHA Ukraine Humanitarian Needs Overview 2020, Jan 2020	15%	N/A	N/A	0.5	9%
United Republic of Tanzania (16 districts)	58.0	IPC analysis Nov 2019, covering Nov 2019–Apr 2020	8%	1.7	34%	1.0	20%
Venezuela (Bolivarian Republic of)	28.5	WFP EFSA, covering Jul–Sep 2019	100%	8.9	60%	9.3	32%
Yemen**	29.9	IPC analysis Dec 2018, covering Dec 2018–Jan 2019	100%	8.9	30%	15.9	53%
Zambia (86 districts)	17.9	IPC analysis May 2019, covering Oct 2019–Mar 2020	53%	3.1	33%	2.3	24%
Zimbabwe (rural population)	14.6	IPC analysis Jun 2019, covering Oct–Dec 2019	64%	2.7	28%	3.6	38%

^{*} Due to different population/geographical coverage, the 2019 peak and 2020 anticipated peak are not directly comparable.^{**} Due to different data sources, the 2019 peak and 2020 anticipated peak numbers are not directly comparable.¹ The month for IPC/CH source is the month of the analysis, followed by the analysis period. For HNO, date refers to report release date

Table 9 continued

Estimates of acutely food-insecure people in 2019–2020 continued

COUNTRIES OR TERRITORIES	SOURCES ¹	LATEST UPDATE IN 2019				ESTIMATES FOR 2020 PEAK NEEDS		
		POPULATION IN STRESSED (IPC/CH PHASE 2)		POPULATION IN CRISIS OR WORSE (IPC/CH PHASE 3 OR ABOVE)		ANTICIPATED PEAK PERIOD	POPULATION IN CRISIS OR WORSE (IPC/CH PHASE 3 OR ABOVE) (MILLIONS)	SOURCE
			PERCENTAGE OF TOTAL POPULATION ANALYSED		PERCENTAGE OF TOTAL POPULATION ANALYSED			
Afghanistan (cont...)	No further update					Jan-Apr 2020	11.3	IPC
Angola (cont...)	No further update					Jan-Feb 2020	0.6	IPC
Bangladesh (cont...)	No further update					No forecast		
Burkina Faso (cont...)	No further update					Jun-Aug 2020	2.2	CH
Burundi (cont...)	No further update					Apr-May 2020	0.15-0.35	FEWS NET
Cabo Verde (cont...)	No further update					Jun-Aug 2020	0.01	CH
Cameroon (cont...)*	No further update					Jan-Mar 2020	2.7	CH
Central Af. Republic (cont...)*	IPC analysis Sep 2019, covering Sep 2019-Apr 2020	1.7	38%	1.6	35%	May-Aug 2020	2.1	IPC
Chad (cont...)	CH analysis Nov 2019, covering Oct-Dec 2019	2.2	15%	0.6	4%	Jun-Aug 2020	1.0	CH
Colombia (cont...)	No further update					No forecast		
Côte d'Ivoire (cont...)*	CH analysis Nov 2019, covering Oct-Dec 2019	0.2	10%	0.01	0%	Jan-Mar 2020	0.2	CH
Dem. Rep. of the Congo (cont...)*	No further update					Varies by area/region	13.6	IPC
Djibouti (cont...)	No further update					January 2020	0.2	WFP
Ecuador (cont...)	No further update					No forecast		
El Salvador (cont...)**	No further update					May-Aug 2020	<0.1	FEWS NET
Eswatini (cont...)	No further update					Jan-Mar 2020	0.2	IPC
Ethiopia (cont...)	IPC analysis Sep 2019, covering Oct 2019-Jan 2020	10.5	36%	6.7	24%	Feb-Jun 2020	8.5	IPC
Gambia (cont...)	No further update					Jun-Aug 2020	0.1	CH
Guatemala (cont...)*	IPC analysis Dec 2019, covering Dec 2019-Mar 2020	2.3	34%	1.0	15%	May-Aug 2020	1.3	IPC
Guinea (cont...)	CH analysis Nov 2019, covering Oct-Dec 2019	0.9	9%	0.1	1%	Jun-Aug 2020	0.3	CH
Guinea-Bissau (cont...)	No further update					Jun-Aug 2020	0.1	CH
Haiti (cont...)	No further update					Mar-Jun 2020	4.1	IPC
Honduras (cont...)	No further update					Mar-Jun 2020	1.2	IPC
Iraq (cont...)	No further update					No forecast		
Kenya (cont...)	No further update					Jan-Mar 2020	1.3	IPC
Lebanon (cont...)	No further update					No forecast		
Lesotho (cont...)	No further update					Jan-Mar 2020	0.4	IPC
Liberia (cont...)	No further update					Oct-Dec 2020	N/A	CH
Libya (cont...)	No further update					No forecast		
Madagascar (cont...)*	IPC analysis Oct 2019, covering Nov 2019-Mar 2020	1.3	38%	0.7	20%	Jan-Mar 2020	0.7	IPC
Malawi (cont...)	IPC analysis Nov 2019, covering Nov 2019-Mar 2020	4.3	29%	1.9	13%	Jan-Mar 2020	1.9	IPC
Mali (cont...)	No further update					Jun-Aug 2020	1.3	CH
Mauritania (cont...)	CH analysis Nov 2019, covering Oct-Dec 2019	0.7	16%	0.3	7%	Jun-Aug 2020	0.6	CH
Mozambique (cont...)	No further update					Jan-Mar 2020	1.7	IPC
Myanmar (cont...)	No further update					No forecast		
Namibia (cont...)	No further update					Jan-Mar 2020	0.4	IPC
Nicaragua (cont...)	FEWS NET internal figures covering Oct-Dec 2019,	N/A	N/A	<0.1		May-Aug 2020	0.07-0.11	FEWS NET
Niger (cont...)	No further update					Jun-Aug 2020	2.0	CH
Nigeria (cont...)	CH analysis Nov 2019, covering Oct-Dec 2019	14.7	14%	4.0	4%	Jun-Aug 2020	7.1	CH
Pakistan (cont...)	IPC analysis Apr 2019, covering Jul-Nov 2019	1.4	24%	3.0	51%	Jul-Aug 2020	1.3	IPC
Palestine	No further update					No forecast		
Rwanda (cont...)	FEWS NET internal figures covering Oct-Dec 2019,	N/A	N/A	0.1-0.12		Apr-May 2020	0.085-0.125	FEWS NET
Senegal (cont...)	No further update					Jun-Aug 2020	0.8	CH
Sierra Leone (cont...)	No further update					Jun-Aug 2020	1.3	CH
Somalia (cont...)	No further update					Apr-Jun 2020	1.3	IPC
South Sudan (cont...)	IPC analysis Aug 2019, covering Sep-Dec 2019	4.7	40%	4.5	39%	May-Jul 2020	6.5	IPC
Sudan (cont...)**	No further update					Jun-Sep 2020	5.0-6.0	FEWS NET
Syrian Arab Republic (cont...)	No further update					No forecast		
Turkey (cont...)	No further update					No forecast		
Uganda (cont...)	FEWS NET internal figures	N/A	N/A	0.5-0.99		May-Jun 2020	1.2-1.6	FEWS NET
Ukraine (cont...)	No further update					No forecast		
United Rep. of Tanzania (cont...)	No further update					Jan-Feb 2020	1.0	IPC
Venezuela (cont...)	No further update					No forecast		
Yemen (cont...)**	IPC analysis Jul 2019, covering Jul-Sep 2019, hotspots only	0.8	32%	1.2	52%	Jul-Sep 2020	17+	FEWS NET
Zambia (cont...)	No further update					Jan-Mar 2020	2.3	IPC
Zimbabwe (cont...)	No further update					Jan-May 2020	4.3	IPC

* Due to different population/geographical coverage, the 2019 peak and 2020 anticipated peak are not directly comparable.

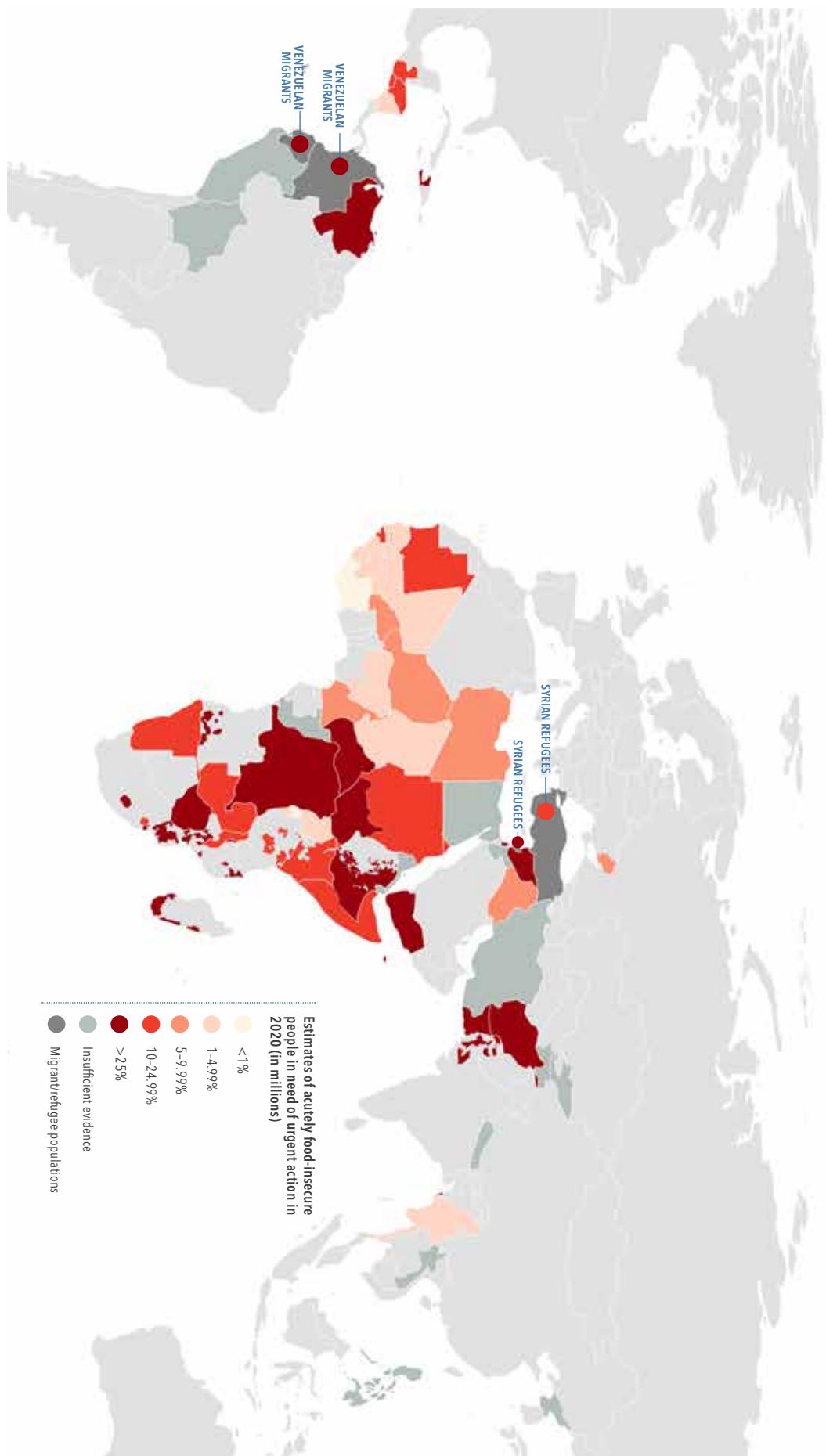
** Due to different data sources, the 2019 peak and 2020 anticipated peak numbers are not directly comparable.

¹ The month for IPC/CH source is the month of the analysis, followed by the analysis period. For HNO, date refers to report release date

The forecast 2020 estimates in this table for Djibouti, Ethiopia, Guinea-Bissau, Honduras and Sierra Leone reflect only the furthest forecast available for 2020 – not the anticipated peak period, for which no estimates are available. The estimated peak numbers for Afghanistan, Angola, Eswatini, Lesotho, Mozambique, Namibia, United Republic of Tanzania and Zambia remained unchanged from 2019–2020 as the same analysis was used to assess peak numbers of both years.

Map 77

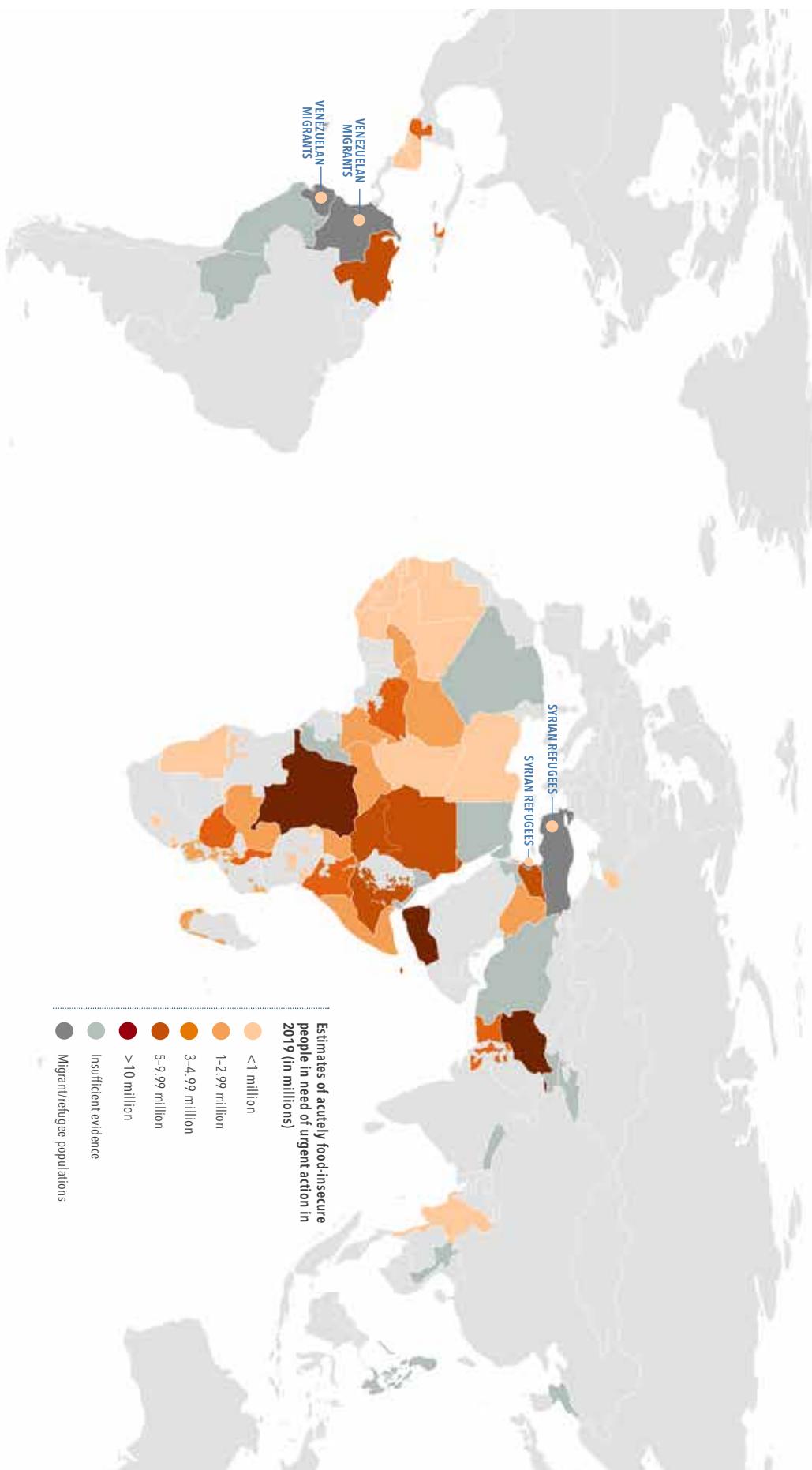
Share of acutely food-insecure people (percent) in need of urgent action in 2019



Source: FS/N GRFC March 2020.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Map 78

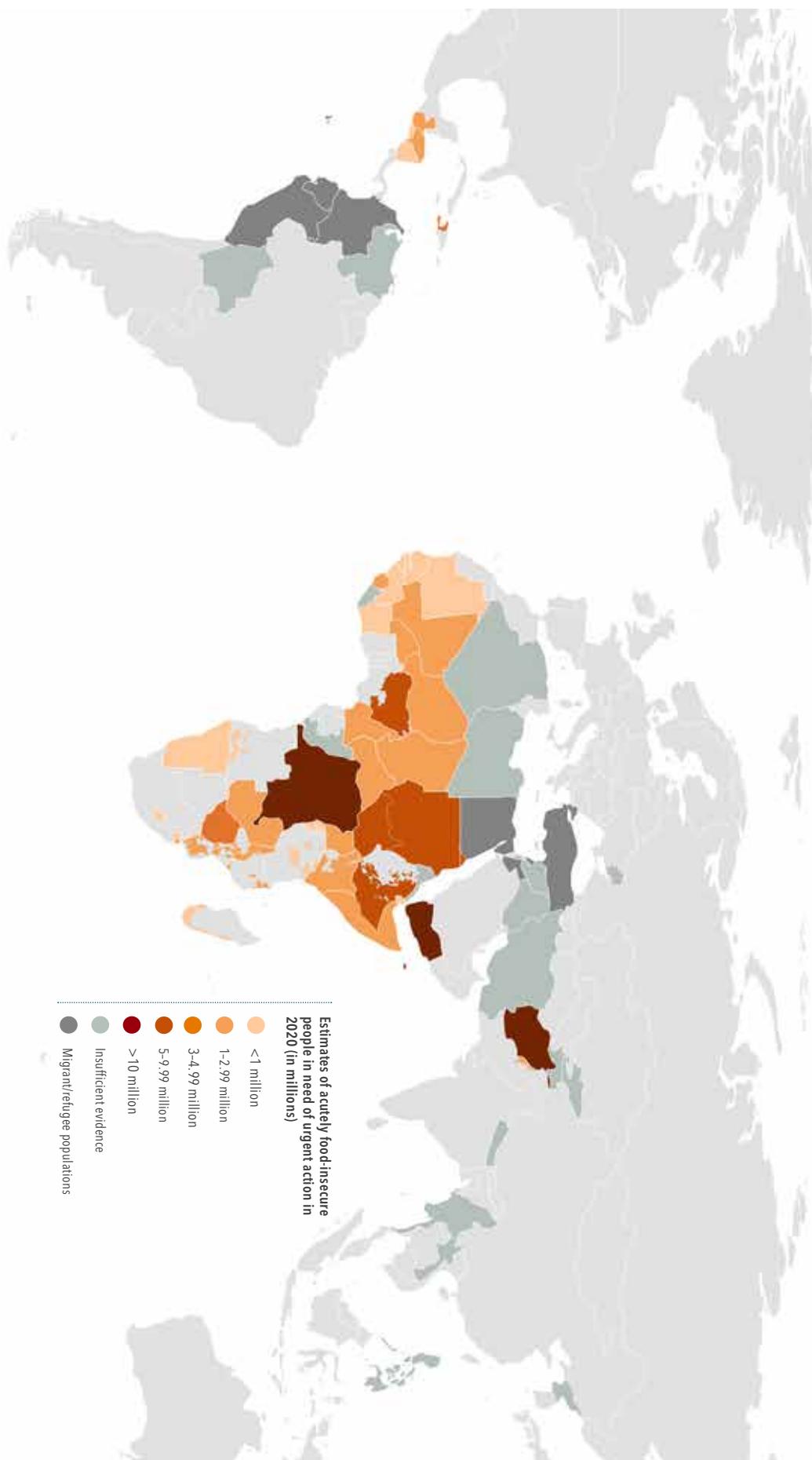
Numbers of acutely food-insecure people in need of urgent action in 2019 (in millions)



Source: FS/N GRFC March 2020.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Estimates of acutely food-insecure people in need of urgent action in 2020 (in millions)



Source: FSN GRFC March 2020.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. This map reflects analyses produced before COVID-19 became a pandemic and does not account for its direct and/or indirect impact on acute food insecurity.

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CHAPTER 2

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The FSIN, founded by FAO, IFPRI and WFP, is a technical global platform for the exchange of expertise, knowledge and best practice among a network of food security and nutrition practitioners.

FSIN provides the core coordination and technical support to the Global Network Against Food Crises analytical pillar 1 which focuses on evidence to better understand food crises. Its purpose is to promote timely, independent and consensus-based information while also highlighting and addressing critical data and information gaps.