

FOOD AFFORDABILITY IN CONFLICT-TORN YEMEN IN LIGHT OF THE UKRAINE WAR

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JOINT SDG FUND



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EXECUTIVE SUMMARY

Yemen's high levels of acute food insecurity are driven by a number of different and often interrelated factors. These factors are a result of, and/or have been aggravated by, the conflict and the related economic warfare. **The major challenges contributing to difficulties in accessing food supplies, as reported by the household survey conducted under this project, include lack of money, lack of humanitarian assistance and distance from food supplies.**

Availability of food supplies does not seem to be an issue affecting people's food security. The total amount of food available in Yemen is dependent on local production, commercial imports, humanitarian food assistance, and food stocks/reserves. Analysis shows food import trends over the past five years are stable, although slightly below the pre-war average. However, **imported food commodities account for about 70% of food by volume, and cereal import dependence is estimated at 97%. Imported food constitutes 83% of the daily calories' intake of Yemenis. While stability of imports is vital to food security in Yemen, these high percentages mean Yemen remains highly vulnerable to external shocks and global dynamics, compounded by domestic challenges.**

Domestic food production, on the other hand, accounts for 30% of total food volumes in country. The conflict has had a detrimental impact on Yemen's agriculture, with grain crops having been the most affected in terms of production volumes. Despite this decline and the marginal role of locally produced food to cover domestic demand, farming remains the backbone of most rural Yemeni livelihoods – about 73% of Yemenis depend on agriculture and fisheries for food and income. **The high price of locally produced wheat compared to imported wheat suggests that Yemeni farmers are being undercut by the cost of imported foods, which makes domestic crops unaffordable to locals and further decreases farmers' income and purchasing power.**

The household survey conducted under this project showed a high prevalence of humanitarian aid reliance within the farming community. Humanitarian food assistance, estimated in terms of direct food imports destined for aid, amounts to 10% of total food imports on yearly average (in 2022). Over half of the respondents to the household survey who received assistance in the previous 12 months (65% of the total), reported that without assistance they could afford to cover some needs but not all of them. While all these sources contribute to a sufficient availability of food at the national level, this does not necessarily reflect what is available at the household level. **A number of studies report that food insecurity at the household level is due to decreased purchasing power – or the reduced ability to cover basic needs.** Since the beginning of the war, the cost of the Minimum Food Basket – that includes wheat flour, sugar, rice, and vegetable oil – has increased by 483% in Internationally Recognised Government of Yemen (IRG) areas and by 188% in the De-Facto Authority (DFA) areas (in Yemeni rials) due to the depreciation of the currency (of the new banknotes used in IRG areas), inflation, and global market price developments. The percentage increase is less in US dollar, 68% and 28% in DFA and IRG areas respectively. However, the increase between 2014 and 2022 in US dollar is higher in DFA areas because of the different exchange rates in IRG and DFA areas.

In addition to increased prices, the challenges related to accessing livelihood opportunities for millions of Yemenis remain a crucial factor impacting people's ability to access food. In the household survey – which given the relatively small sample size and limited geographic reach is not representative level – only 38% of respondents reported being employed (20% being employed by someone else and 18% being employed in farming or self-employed). Unemployed people accounted for 15% of total respondents with an additional 43% self-reporting as housewives (77% of all female respondents). Moreover, the survey showed that for 69% of the respondents, only one member of the household receives an income (for an average household size of six), and only 18% have two members receiving an income. Among those who responded that no one in the household receives an income (9% of the total), 86% receive humanitarian assistance. The survey also highlighted that for 65% of the respondents, it is the male head of the household who receives an income, and it is also the male head of the household who decides how to spend the household income for 67% of the respondents. In terms of frequency of income payment, people in IRG areas seem to be paid more regularly, while 52% of respondents in DFA reported not having received a salary payment in over a year or receiving salary payments unpredictably in terms of frequency. **Overall, in relation to their income, 65% of respondents stated that it does not provide enough money to cover basic needs.**

Access to markets is another factor in measuring vulnerability to food insecurity. Up to 73% of respondents travel an hour or less by foot to reach the food market or food distribution areas. Long distances result in higher exposure to protection risks, especially for women and girls. **The high price of fuel is an additional factor often leading to constraints accessing food supplies, both by increasing the cost of transporting goods throughout the country and by making it more expensive for consumers to travel to reach food markets.**

The increased cost of food in the country, combined with limited income generating opportunities, has led people to make difficult decisions in relation to food consumption. **Consumption of meat, poultry, fish and fruits and vegetables has significantly decreased for a vast majority of people in Yemen. Most households are reducing the amount of food per meal or how often they can eat. While the cost of living has continued to increase, households have had to rearrange the allocation of their budget to be able to cover essential needs.** To afford food, 27% of respondents also reported that they had to reduce other expenses, primarily clothing (reported by 93% of respondents), followed by health costs, including medicines (65%), education expenses and fuel (both chosen by 61% of respondents).

Nearly 52% of the respondents in the survey reported having taken on substantial debt as an indirect result of the war, with an additional 23% who took on moderate debt and 7% who only have very little debt. Social connections enable a network of support where tangible and intangible resources are shared, including food, money, shelter, livelihood opportunities, as well as emotional support. Attending life-cycle events and celebrations is a way for people to create and maintain social capital defined as the 'circumstances in which individuals can use membership in groups and networks to secure benefits'. **The economic challenges Yemenis are facing mean that social connections – and therefore maintaining social capital – are changing; informal support networks are being stretched with the exhaustion of households' ability to mobilise resources.**

Displaced people, Muhamasheen and female-led households were cited by survey respondents as the members of the community most affected by food insecurity. Displaced people are more likely to experience acute food insecurity due to loss of resources, including depletion of financial assets that increase their reliance on humanitarian assistance, and therefore their vulnerability to shocks. Muhamasheen are by definition 'marginalised people', who have experienced centuries of discrimination that have limited their access to education, healthcare, housing and work. The war has compounded the Muhamasheen's vulnerabilities, including food insecurity. Female-headed households are reportedly among the most vulnerable groups in Yemen. While the difficulties brought by the war have pushed more women to enter the workforce, higher protection-related risks for women and the requirement of a mahram, or male guardian, in areas under DFA control, mean that women face considerable difficulties in terms of access to job opportunities and overall freedom of movement.

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List of Acronyms

CBY	– Central Bank of Yemen
CDMT	– Cost Driver Monitoring Tool
DFA	– De Facto Authorities (Ansar Allah/Houthis)
FCS	– Food Consumption Score
FIES	– Food Insecurity Experience Scale
FOB	– Free on Board Cost
HDDS	– Household Dietary Diversity Score
HSS	– Household hunger scale
IPC	– Integrated Food Security Phase Classification
IRG	– Internationally-Recognized Government of Yemen
MT	– Monthly food imports
SMEB	– Minimum expenditure basket
YETI	– Yemen Economic Tracking Initiative

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1. INTRODUCTION

This analytical report aims to outline the factors affecting people's access to food supplies across various geographies and population groups in Yemen. The analysis helps to identify vulnerability factors (including gender, age, disability, displacement status, ethnicity, employment) and location-specific constraints and inefficiencies related to access to key commodities and potential ways/opportunities to address them. The mentioned identity and vulnerability factors are incorporated into the different sections of the report. The geographical comparisons are based solely on the locations assessed in the household surveys and the main differences in this regard are highlighted when considered particularly relevant.

1.1. Methodology and limitations

The report is based on the following main data sources:

- **Findings from the Output 1 Desk Review:** findings from Output 1 supported the structuring of the research questions and the subsequent analysis related to understanding food access constraints. This desk review included recent research and analysis about Yemen's food system and its inefficiencies, including socioeconomic and political factors contributing to food insecurity in Yemen. Sources included primary datasets, policy-oriented reports and analysis/reports produced by UN agencies, other international organisations, humanitarian and development INGOs and NGOs, the Yemeni government, think tanks, and media reports.
- **Household surveys:** the results from Output 2 were integrated into the in-depth analysis. The household surveys explored how food insecurity affects different people disproportionately in Yemen. The goal was also to identify ways which can enable increased and more equitable access to food for commonly marginalised groups including women and girls, IDPs, persons with disabilities and other groups as identified during the assessment.
- **Key informant interviews (KIIs):** Assessment of the various systems and costs of food production and distribution (imported and domestic) through semi-structured KIIs with key commercial and non-commercial stakeholders were conducted. This element assessed a selection of a few selected value chains and associated cost elements, including factors that have contributed to increases in costs and factors that can lead to their decrease. An in-depth analysis was executed that identified gatekeepers at various levels (e.g., national, governorate, etc.) and categories (e.g., government, private sector, NGOs, etc.) who may play an important role in the resolution of the existing inefficiencies, while protecting informants' identities in line with Do-no-harm and duty of care principles.
- **A quantitative review of key commodity cost drivers** along the supply chain from point of origin to point of sale. Quantitative analysis was supported by the ACAPS Yemen Economic Tracking Initiative (YETI) Cost Driver Monitoring Tool (CDMT), which is currently in development. The CDMT aims to quantify, monitor, and analyse a variety of cost drivers along the supply chain of imported goods into Yemen. Through utilising the capabilities of the CDMT it was possible to better model the key cost drivers for key commodities enabling the analysis to better understand food access constraints and options for improving access across various geographies.

The research for the in-depth analysis presents a number of limitations mostly related to the accessibility of data and some regarding the household surveys.

- Small survey sample size means that findings should not be generalised

The survey included 500 households in six districts in Al Hodeidah and Ta'iz governorates (3 districts per governorate). Because of this relatively small number of surveys, it is difficult to extrapolate the survey findings to other parts of the country or other populations. Nonetheless, the survey activity allowed to observe differences in food access and basic services in DFA and IRG territories, as well as the experiences of marginalised communities, which were well-represented in the survey.

- High number of Muhamasheen respondents

The household sample for the survey included over 100 respondents who belong to the Muhamasheen community—black Yemenis who are a marginalised minority and are restricted to low wage jobs, and who typically do not benefit from tribal protections. Most of these surveyed Muhamasheen households were based in districts of Al Hodeidah. Their inclusion in the survey provides valuable insights into their access to food supplies and basic services, as well as the unique challenges that their community faces. However, coupled with the small total survey sample size, their disproportionately large participation in the primary quantitative research means that the survey cannot be considered representative of Yemen as a whole. The high rate of Muhamasheen participation was attributed by the primary data collection firm to the fact that Muhamasheen are more accustomed to participating in surveys than other Yemenis and because they hope that the research will lead to them receiving assistance in the future. Security concerns or general reluctance to participate in surveys among non-Muhamasheen is high in the targeted districts held by the DFA.

- Some inexplicable indicators for food security, possibly due to issues of access

Some indicators from the survey are inconsistent and not conducive to broader research findings. These inconsistencies are likely due to surveying the neighbourhoods that were the most accessible and therefore targeted by enumerators. The example above about the Muhamasheen is one such instance, but another indicator showing a relatively high level of food security in DFA-held Al Taizziya district in Ta'iz may be another example. A majority (61%) of respondents in this district reported that they do not face any difficulty accessing food. This is likely due to the fact that the neighbourhoods and households accessible to enumerators were slightly more well-off, and other survey responses from Al Taizziya suggest that this is the case, as many also reported a relatively high income and sufficient household amenities.

- Biased answers in relation to self-representation and sensitive questions

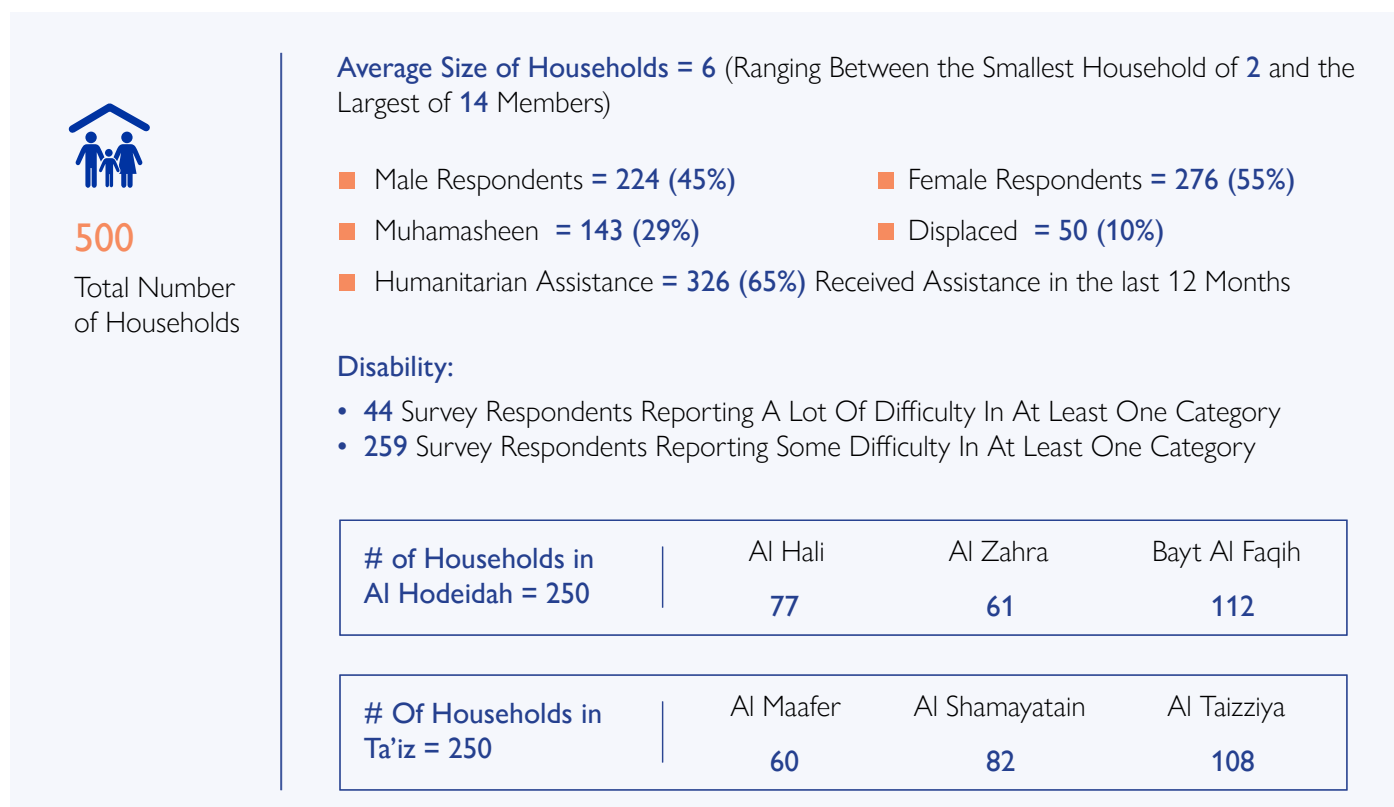
Some of the answers to the household survey might be misrepresentative as respondents might have tried to depict a worse household situation, or report that their 'group' or 'category' is the most impacted by food insecurity. Also, questions related to the effectiveness of local authorities' response to food insecurity might be inflated and tending on the positive side for possible fear of retaliation or other consequences by the authorities.

1.1.1. Household survey sample and targeted locations

To understand the current food security challenges facing Yemenis, the Yemen-based research company Responsiveness for Relief and Development Foundation (RRDF) conducted a quantitative survey with 500 households in six administrative districts in the two governorates of Al Hodeidah and Ta'iz. Survey questions examined the following issues: access to, and affordability of, food; perceptions of local authorities' role in ensuring food security and basic services; the status of, and unique challenges facing, marginalised communities, including IDPs and Muhamasheen; gender dynamics; and the impact of food insecurity on women and children.

These districts and governorates were selected to reflect the experiences of households in different geographies and under different governing structures. For example, all surveyed districts in Al Hodeidah (Al Hali, Bayt Al Faqih, and Al Zahra), as well as Al Taizziya district, fall under DFA control, while Al Shamayatin and Al Maafer districts in Ta'iz fall under IRG control. The targeting of these specific districts ensured the inclusion of marginalised populations, such as IDPs and Muhamasheen, many of whom live in these areas. Some women-led households were also targeted in the survey. Although the sample size was relatively small (500 households), these surveys captured a diverse cross section of Yemeni society.

Figure 1: Household survey details



1.1.2. Cost Driver Monitoring Tool

As part of the YETI, ACAPS, in collaboration with Mercy Corps, are developing the CDMT. The tool aims to identify, monitor and analyse the different cost drivers – from the port of loading to delivery to end users – impacting consumer prices for imported goods that make up an estimated 90% of Yemen's domestic food demand. Currently the commodities tracked in the CDMT include bulk wheat, petrol and diesel. The ability to quantify the different cost drivers of these commodities allows a better and more effective planning and implementation of policies that aim to reduce the cost for the consumer and ultimately improve levels of food security in Yemen.

Cost drivers have been separated into different categories which are listed below. Each category represents different parts of the supply chain and consist of multiple cost drivers:

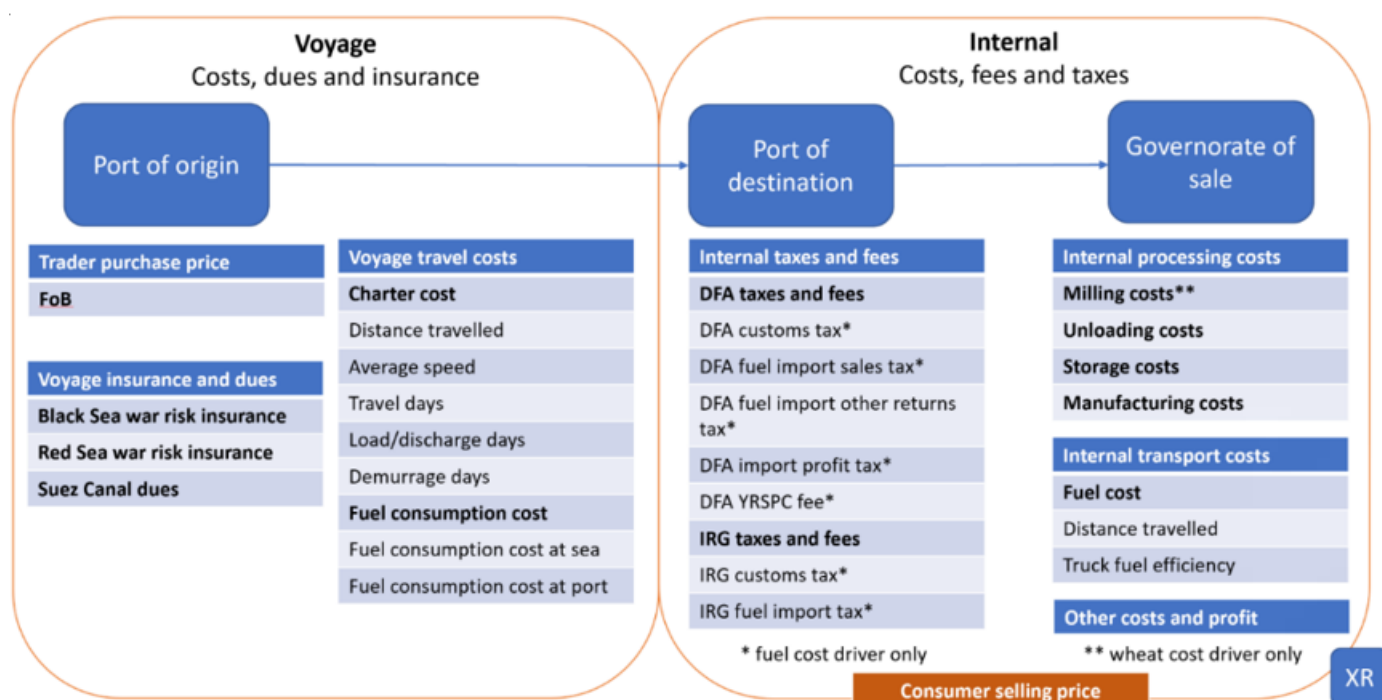
- Categories:
- Consumer selling price
 - Trader purchase price
 - Voyage travel costs
 - Voyage insurance and dues
 - Internal taxes and fees
 - Internal processing costs
 - Internal transport costs
 - Other costs and profits

A number of variables are also taken into account when calculating cost drivers. These include:

- Cost driver variables
- Import country of origin
 - Import port of call
 - Import date
 - Governorate of sale including whether under DFA or IRG area of control
 - Yemeni rial to USD exchange rate adjusted to CBY Aden or CBY Sana'a exchange rate

Figure 2 below provides a simplified overview of the categories and related cost drivers.

Figure 2: Cost driver journey. Source [ACAPS 2023](#).



2. FACTORS CONTRIBUTING TO DIFFICULTIES ACCESSING FOOD SUPPLIES

The main factors reported by the surveyed households as contributing to difficulties in accessing food supplies include lack of money, lack of assistance and distance from food supplies. These factors are a result of and/or have been aggravated by the conflict and the related economic warfare. Conversely, availability of food supplies does not seem to be an issue affecting people's food security and imports into the country remain strong.

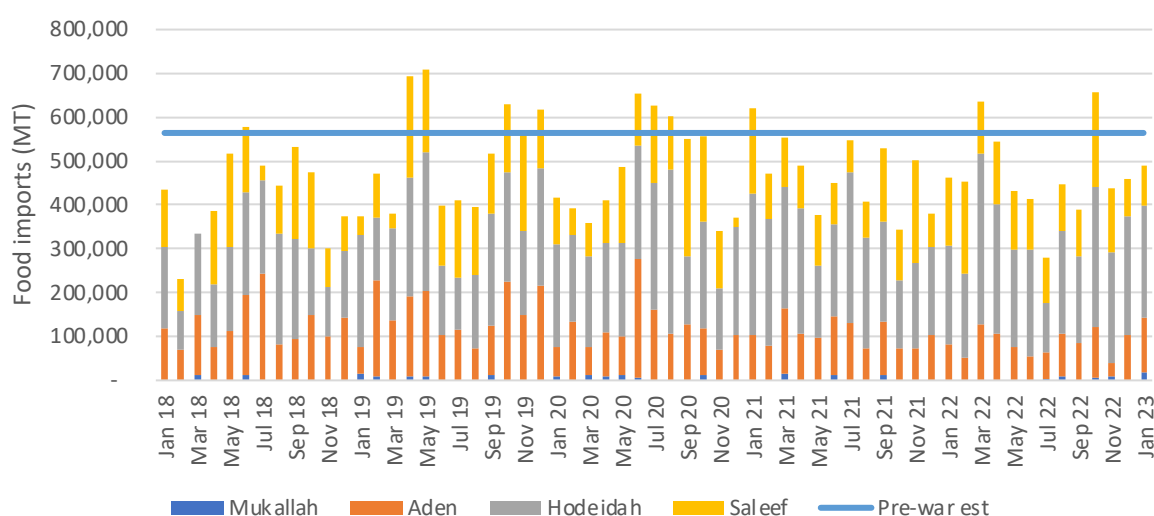
In IRG controlled districts in Ta'iz governorate, 52% of survey respondents also reported that while they can access most food supplies, some important products or ingredients are unaffordable. This is reported as an issue only by 5% of the households in DFA controlled areas. In Al Taizziya district, in Ta'iz governorate, under the control of the DFA, 61% of households report not facing any challenges accessing food supplies, and 18% selected that none of the answers applied. Lack of assistance or money is reported as a challenge only by 10% and 6% of the surveyed households in Al Taizziya respectively. This striking disparity between DFA-controlled Al Taizziya district and IRG-controlled Al Shamayatin and Al Maafer districts may not necessarily mean that residents of DFA areas are more food secure, but rather that the households that were accessible for such a survey were more likely to be located in well-to-do areas or belong to a higher economic status; other survey findings reflected this, as respondents in Al Taizziya were the most likely to have access to basic services and report a relatively high income. As we can see in the DFA-held districts of Al Hodeidah, surveys could only be conducted with specific communities, which inevitably leads to skewed findings that should not be seen as necessarily representative of DFA territories in general.

2.1. Availability of food supplies

The availability of food supplies does not seem to be an issue affecting people's food security, in fact goods have remained largely available on the market. While domestic production decreased after the beginning of the war, imports have remained stable, including humanitarian food aid that has partly covered reduced food demand due to lower consumer purchasing power.

2.1.1. Food import trends

Figure 3: Monthly food imports (MT). Source: ACAPS discussions with stakeholders



Port	Mukallah	Aden	Hodeidah	Saleef	Red Sea ports	Southern ports	Total ports	Pre-war est
Monthly average (MT)	3,519	115,766	223,613	129,186	352,799	119,285	468,119	565,000

Analysis shows food import trends over the past 5 years are stable, although slightly below the pre-war average. As imports now account for about two-thirds of available food by volume, and about four-fifths by calorific value ([ODI 02/2022](#)), stability of imports is vital to food security in Yemen. Between January 2018 and January 2023, average monthly imports into Yemen amounted to 468k MT, which account for 83% of the pre-war import estimate. However, despite the stability of imports, population growth has raised demand, which will increase food security issues over time. Based on HNO population figures and World Bank population growth estimates, the population of Yemen has an average growth rate of 2.3% and is expected to increase from 29.3 million in 2018 to 32.9 million in 2023, an increase of 2.6 million or 12.1%.

Figure 4: Population grown 2018 to 2023. Source: [HNO 2020](#), [World Bank population growth](#).

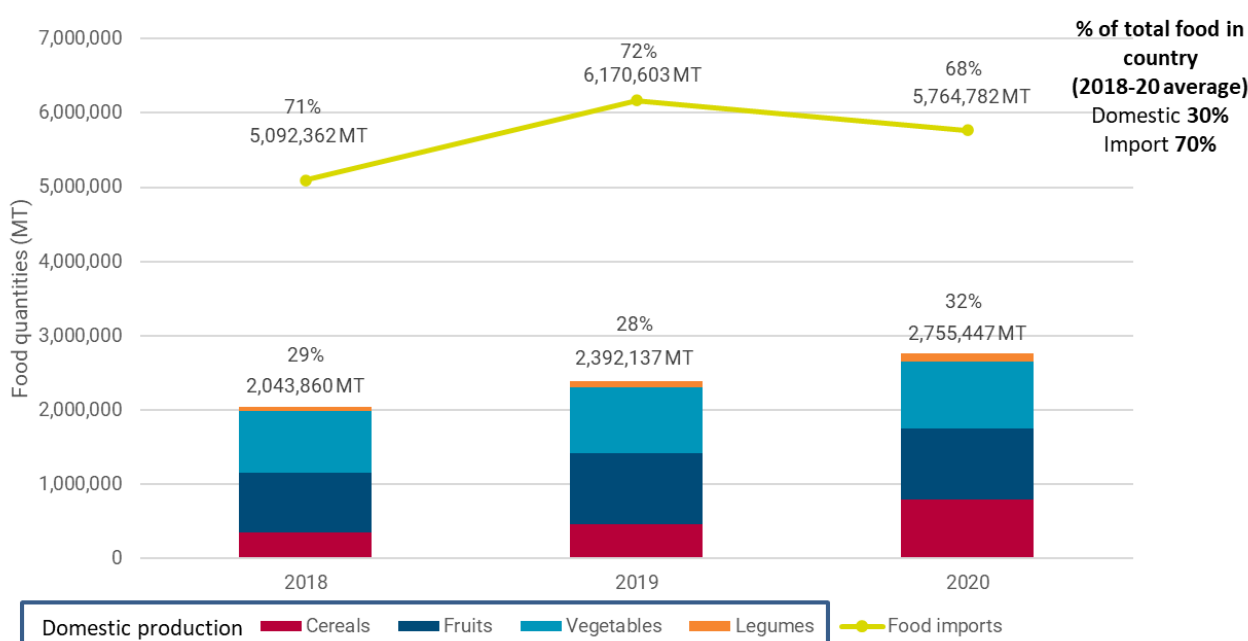
Year	Total population (% growth)
2018	29,331,895
2023 (estimated)	32,879,828
Change 2018 – 2023	3,547,933 (12.1%)

Over the coming years, as Yemen's population continues to grow at an average rate of 2.3% per year, maintaining imports and domestic production at the same levels will no longer be able to meet the calorific needs of the population. This population increase needs to be considered when designing new food security interventions.

2.1.2. Domestic food production trends

According to national figures, between 2018 and 2020, domestic food production on average accounted for 30% of total food in country (Figure 5). However, locally produced food only contributed 17% to the daily calories consumption in Yemen during the same period ([IFPRI 23/03/2022](#)).

Figure 5: Domestic food production compared to food imports between 2018 and 2020. Source: [Agristat \(2020\)](#), ACAPS discussions with stakeholders.



Before the current conflict started in 2015, the agri-food system – including direct production, input production, and trade and services – made up one third of the jobs and a quarter of the GDP, with agricultural production alone accounting for 14% of GDP and 22% of employment ([IFPRI 01/2020](#)). In 2021, the percentage contribution by the agricultural sector to the GDP was estimated at 16.3% ([MoPIC 30/09/2021](#)). Vegetables, fruits, qat and fishing are reported as the main contributors to agricultural GDP.

The conflict has had a detrimental impact on agriculture in Yemen. While all food production saw a decline because of the conflict, grain crops have been the most affected. Between 2012-2018, the area cultivated with cereals decreased by 41% and cereals production declined by 62% ([GeoGlam 09/11/2021](#)). Official data from the Ministry of Agriculture reports a recovery in cereals production starting in 2019, with total production volumes further increasing in 2020 and 2021, by 42% and 48% respectively compared to 2019.¹ Among the many factors was the reduction of cultivated land by around 2.1% ([MoPIC 30/09/2021](#)).

Despite the conflict's destructive impacts on the agriculture sector and Yemen's reliance on imported food, farming remains the backbone of most rural Yemeni livelihoods. About 73% of Yemenis depend on agriculture and fisheries for food and income, and the sector employs around 29% of the national workforce. Despite decreased production, agriculture was still the main source of income in 2017 for about 60% of Yemeni households, with 65% of the total population living in rural areas in the same year and 30% being employed in agriculture ([SIPRI 12/2021](#); [World Bank 10/2015](#)).

An ILO survey conducted in 2013-2014 reported that half of the female labour force was engaged in agriculture, either as dairy and livestock producers or field crop and vegetable growers, while around one third were employed in the service industry ([ILO 26/10/2015](#)). The impact of the conflict on agriculture and the loss of income for women is likely to make them more vulnerable to gender-based violence generating from tension within the household and to other risks related to negative coping strategies to meet their needs and those of their dependants, especially for female-headed households ([CARE, OXFAM, GenCap 11/2016](#)).

The high level of employment within the agriculture sector combined with the impact of the high cost of domestic commodities compared to imported commodities is explored in the following sections.

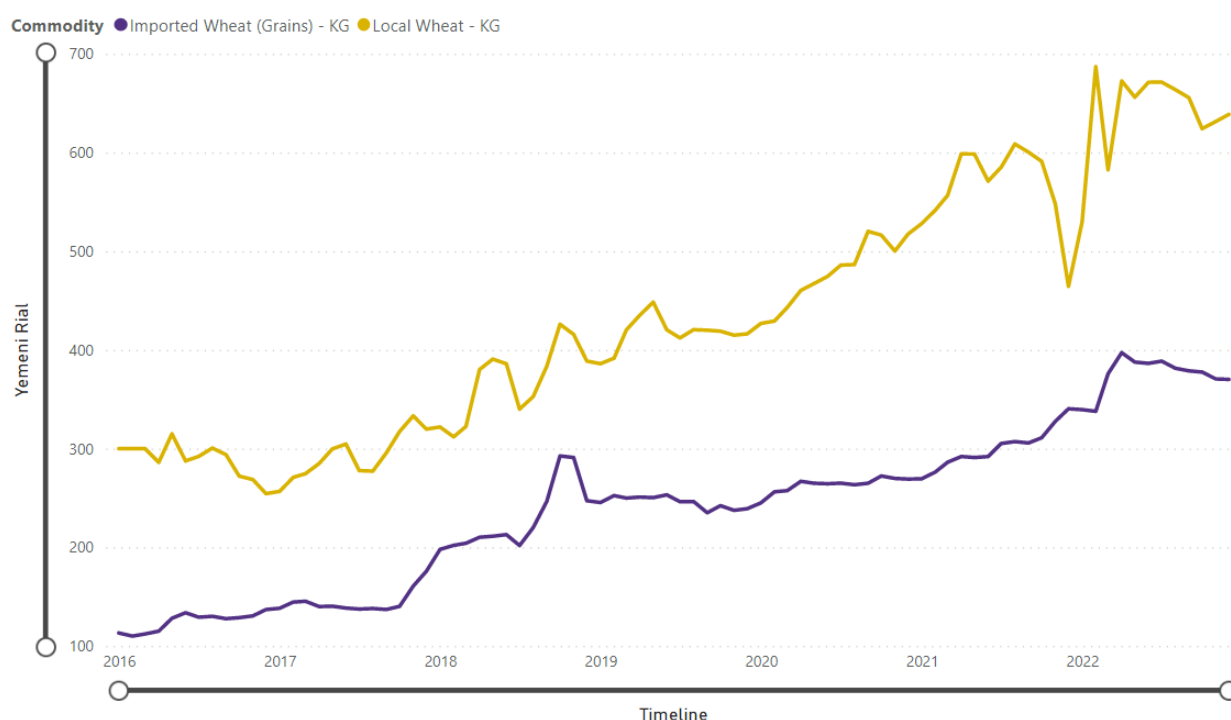
2.1.3. Presence and prices of local vs imported food on the market

FAO food price analysis also shows that between 2018 and 2023, locally produced wheat is, on average, 37% more expensive than imported wheat in DFA areas (Figure 6) and 48% more expensive in IRG areas (Figure 8). Household survey results also showed a significant presence of imported goods within the market, with 75% of respondents in DFA areas (188/250) (Figure 7) and 93% of respondents in IRG areas (132/142) (Figure 9) reporting that about half or most of goods at local food markets are imported.

The high price of locally produced wheat compared to imported wheat suggests that Yemeni farmers are being undercut by the cost of imported foods, which makes crops unaffordable to locals and further decreases farmers' income and purchasing power. High production costs in Yemen are the main factor behind the high price of locally produced cereals. In the household survey, fuel, water and fertiliser have been reported by 72%, 71% and 67% of households respectively as being the main items impacting production costs in the past year.

The impact of high productions costs of locally produced products is explored in the Section 3.2 of the report.

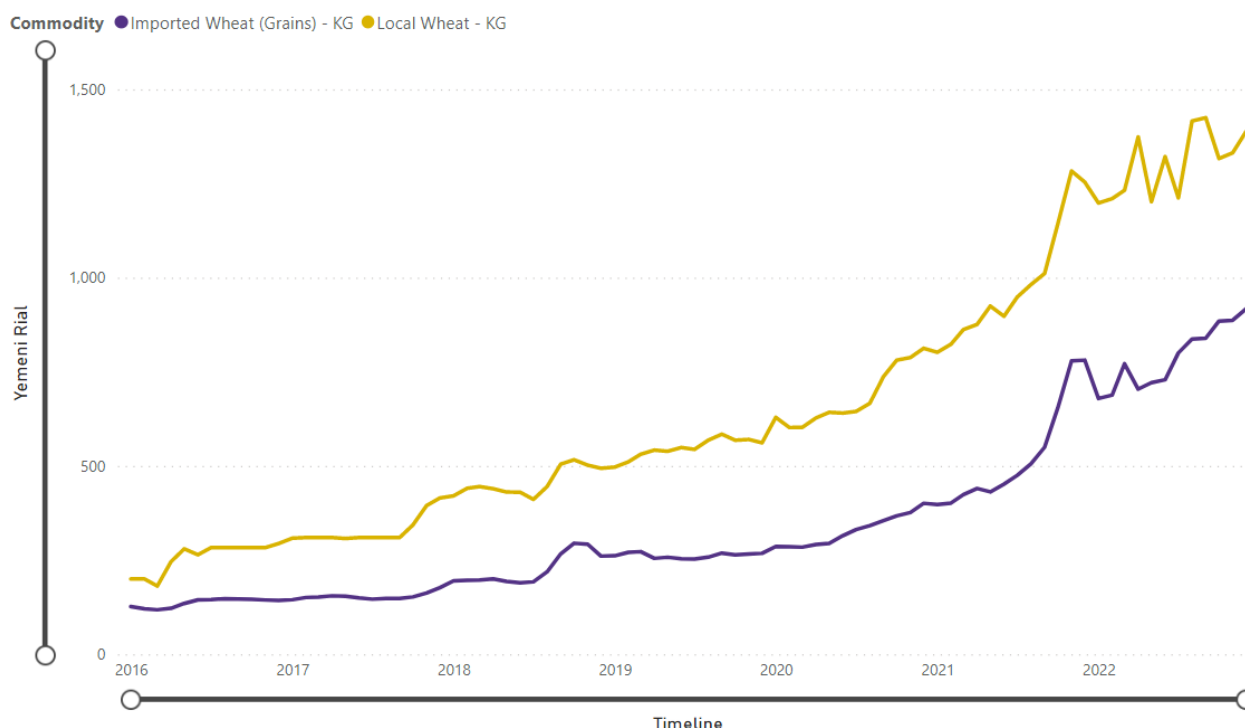
1. FAO data on cereals production does not report the same increase for 2019 and 2020. In fact, total cereal production in 2020 was estimated to be 365,000 tonnes, a 5% decrease from 385,000 tonnes in 2019 and 23% below the five-year average estimated at 475,000 tonnes (between 2015-2019) ([GIEWS 03/2021](#)).

Figure 6: Imported wheat vs local wheat price comparison in DFA areas. Source: [FAO](#)

Year	Imported Wheat Flour	Local Wheat (Grain)	% difference between local and imported wheat
2018	YER 262	YER 371	34%
2019	YER 278	YER 417	40%
2020	YER 294	YER 472	47%
2021	YER 355	YER 578	48%
2022	YER 471	YER 659	33%
2023	YER 468	YER 587	23%
Average	YER 355	YER 514	37%

Figure 7: In DFA areas, how would you evaluate the presence of locally produced goods versus imported goods at your local food market (n=250)?

Answer	Imported Wheat Flour
Most of the goods are imported	58
About half are the goods are locally produced and half are imported	130
Most of the goods are local produced	41

Figure 8: Imported wheat vs local wheat price comparison in IRG areas. Source: [FAO](#)

Year	Imported Wheat Flour	Local Wheat (Grain)	% difference between local and imported wheat
2018	YER 258	YER 465	57%
2019	YER 283	YER 551	64%
2020	YER 358	YER 704	65%
2021	YER 604	YER 1,009	50%
2022	YER 868	YER 1,339	43%
2023	YER 938	YER 1,318	34%
Average	YER 551	YER 898	48%

Figure 9: In IRG areas, how would you evaluate the presence of locally produced goods versus imported goods at your local food markets (n=142)?

Answer	Imported Wheat Flour
Most of the goods are imported	69
About half are the goods are locally produced and half are imported	63
Most of the goods are local produced	7

2.1.4. Relevance of humanitarian assistance for household food security

As of December 2022, 17 million people in Yemen were estimated to be food insecure and in need of food assistance, including 6.1 million in acute Emergency IPC phase 4 ([IPC 16/11/2022](#)).² In 2022, the WFP assisted on average 8.6 million people per month through both in kind and cash distribution ([WFP reports accessed 14/03/2023](#)). The impact of the conflict, compounded by economic deterioration, has increased people's reliance on food assistance. This high reliance means a higher vulnerability to shocks such as reduced food assistance, increased prices, disruption to imports that can directly impact on food consumption and overall humanitarian needs.

In the household survey, 65% of respondents affirmed that a member of the household received assistance in the previous 12 months. Of these, 41% stated that the assistance they received was not an important source of funds, against 4% for whom assistance was the only source of household income. The remaining 55% answered that without assistance they could not afford to cover all the basic family needs. Overall, among those households who received assistance, 87% also stated that they do not have enough money to afford food supplies, and 77% also declared that assistance is not sufficient or regular.

The survey shows a higher percentage of people receiving assistance among the Muhamasheen community, where 94% of all Muhamasheen households received assistance in the previous 12 months. This contradicts other information regarding the Muhamasheen community facing more challenges to accessing assistance. However, the sample is not large enough to generalise findings.

2.2. Affordability of food supplies

The inability to afford food is largely reported as the main factor affecting people's food security in Yemen. Changes to the international price of main staples and currency depreciation in IRG areas are the main reasons for food price increases in Yemen. Yemen is a net importer and 90% of its domestic food demand is imported, with bulk wheat (and, to a lesser extent, wheat flour) making up the biggest single food item imported into the country. ACAPS research on coping strategies based on household surveys also confirmed that the main reason behind the challenges in meeting basic needs is related to economic changes that occurred during the war.

2.2.1. Changes in prices of food commodities over the last 5 years

To better understand how food prices have changed over the last 5 years, an in-depth study on how, and to what extent, different cost drivers shape the end consumer price is required. Using previous research and the ACAPS CDMT, it is shown that several cost drivers make up the end consumer price. For this research, cost driver analysis focused on wheat flour as a large portion of the Yemeni population's caloric intake is based on wheat products. A household survey from 2014 revealed that the poorest households relied on wheat and other grains for 71% of their total caloric intake (Kurdi et al. 23/03/2022). Similarly, bulk wheat makes up an average of 57% of all food imports monthly (ACAPS, 2022). As a key staple, wheat was therefore deemed a suitable commodity for cost driver analysis. The key cost drivers making up the majority of the consumer price of wheat are defined below:

- International purchase price of commodities paid to the exporter
- Voyage cost
- External insurance and fees (e.g., war risk insurance)
- DFA fees and taxes
- IRG fees and taxes
- Manufacturing costs (e.g., milling)
- Overland distribution costs
- Other distribution costs and profits (e.g., unknown informal taxes at checkpoints within country)
- Importer, wholesaler and retailer margins

2. In the HNO 2023, it is reported 17.3 million facing acute food insecurity based on updated UN validated population figures ([HNO 20/12/2022](#)).

Figure 10: Wheat flour cost breakdown in IRG areas: comparison between 2017, 2019 and 2023 (YER/KG). Source: World Bank May 2018, ACAPS Food Supply Chain 2020, ACAPS Cost Driver Monitoring Tool 2023. Note: These numbers are estimates and should be taken as high-level reference values only.

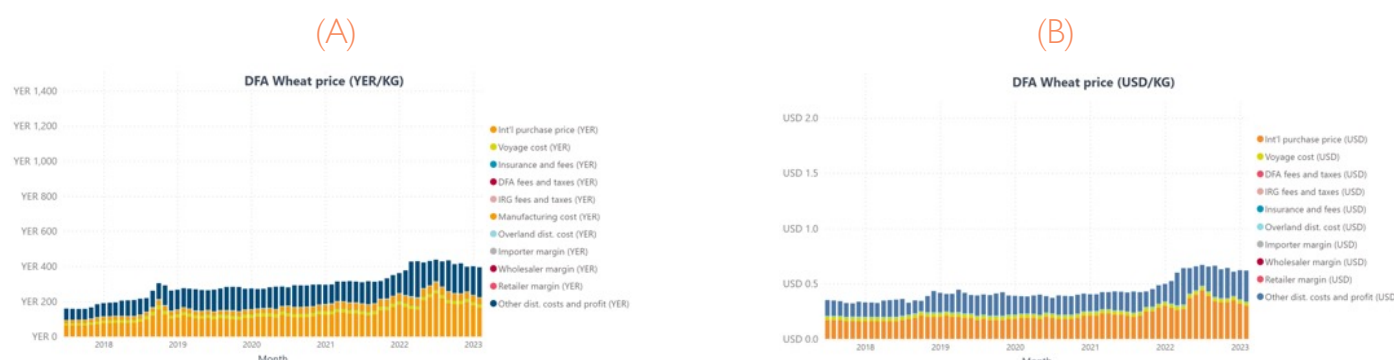
Details	World Bank April 2017		ACAPS December 2019		ACAPS CDMT December 2022	
Commodity	Wheat		Wheat		Wheat	
Governorate of sale	n/a		Ta'iz		Ta'iz	
Country of origin	n/a		n/a		Ukraine	
Port of destination	n/a		Aden		Aden	
XR (YER/USD)	360		580		1,154	
	YER/KG	% retailer sale price	YER/KG	% retailer sale price	YER/KG	% retailer sale price
International purchase price paid to exporter	73	42%	123	50%	410	49%
Voyage and insurance costs	14	8%	21	8%	36	4%
Cost of demurrage per day in Aden	-	n/a	27	11%	-	n/a
Importer's silo mills cost	-	n/a	7	3%	-	n/a
Overland distribution cost	8	5%	10	4%	22	3%
Average cost to importer	95	54%	188	76%	468	55%
Importer margin	22	13%	21	8%	118	14%
Milling cost	21	12%	16	6%	38	4%
Importer sale price	138	79%	225	91%	624	74%
Wholesaler margin	2	1%	7	3%	18	2%
Wholesaler sale price	140	80%	232	94%	642	76%
Retailer margin	35	20%	16	6%	136	16%
Other distribution costs and profit	-	n/a	-	n/a	67	8%
Retailer sale price wheat flour	175	100%	248	100%	845	100%

Figure 10 shows the breakdown of the key cost drivers for a kilogram of wheat flour in Yemeni rials in IRG areas and the percentage breakdown against the final consumer price. The price of wheat has increased significantly in IRG areas between 2017 and 2022 due to the depreciation of the Yemeni rial in IRG areas. Throughout this period, the proportion split for each cost driver remains consistent between 2017 and 2022. Commodity prices in Yemen, in both IRG and DFA areas, are largely driven by the external import factors as a result of a high reliance on imports, specifically the Free on Board (FOB)³ cost of goods which are largely driven by the international commodity price. Other significant cost drivers include the retailer margin (16%), importer margin (14%) and voyage and insurance costs (4%).

The price of wheat in both IRG and DFA areas has significantly increased in the last 5 years. For a kilogram of wheat, in IRG areas the Yemeni rial price has increased 357% from YER 202 to YER 923, whilst in DFA areas the Yemeni rial price has increased 110% from YER 213 to YER 448. The US dollar price of wheat has also increased 97% from USD 0.38 to USD 0.75 in IRG areas and 108% from USD 0.39 to USD 0.81 in DFA areas. In IRG areas, the Yemeni rial price of wheat is mainly driven by the exchange rate, whilst in DFA areas the consumer price is driven by the FOB and international commodity prices.

For commodities in both DFA and IRG areas, international market dynamics are a significant driver of the final cost to the consumer. Between 2018 and 2023, the international price of wheat makes up on average 43% of the consumer price in both IRG and DFA areas. This high reliance on imports makes Yemen more susceptible to the impacts of external food security shocks such as the war in Ukraine and reduces local and international actors' ability to mitigate the country's vulnerability to such shocks. The international oil price also has a significant impact on the consumer price, as increased fuel costs have an impact throughout the supply chain from shipping to Yemen, to manufacturing and milling costs, to overland distribution costs. All imported major food staples defined by the minimum expenditure basket (SMEB) are significantly impacted by both international commodity and fuel prices.

Figure 11: Consumer wheat price changes in DFA areas between January 2018 and January 2023 (a) YER per kilogram, b) USD per kilogram). Source: ACAPS Cost Driver Monitoring Tool



Year	Average consumer price (YER)	Average international price
2018	YER 213	YER 96
2023	YER 448	YER 178
Change 2018-2023	YER 235 (+195%)	YER 82 (+174%)
Year	Average consumer price (USD)	Average international price
2018	USD 0.39	USD 0.18
2023	USD 0.81	USD 0.32
Change 2018-2023	USD 0.42 (+113%)	USD 0.14 (+78%)

In DFA areas, the Yemeni rial price for a kilogram of wheat has increased 195% from YER 213 to YER 448. The US dollar pricing of wheat has also increased 113% from USD 0.39 to USD 0.81 in DFA areas (Figure 11).

3. Free on Board costs refers to costs associated with transportation of the goods to the port of shipment, loading the goods onto the shipping vessel, freight transport, insurance, and unloading and transporting the goods from the arrival port to the final destination (<https://www.investopedia.com/terms/f/fob.asp>).

Figure 12: Consumer wheat price changes in IRG areas between January 2018 and January 2023 (a) YER per kilogram, b) USD per kilogram). Source: ACAPS Cost Driver Monitoring Tool

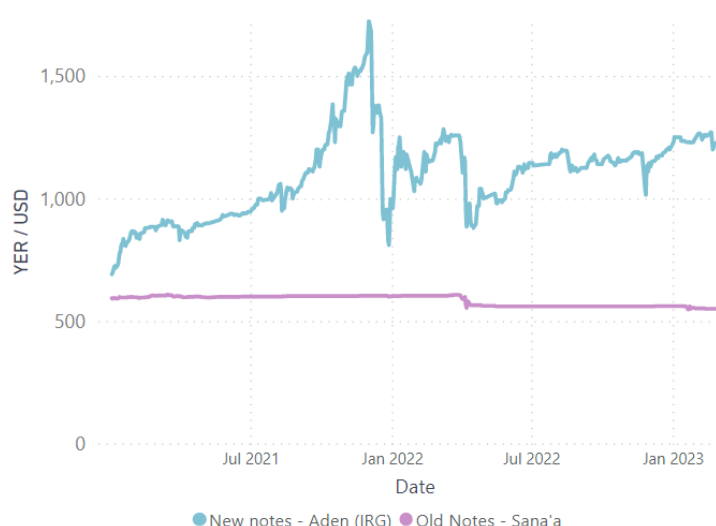


Year	Average consumer price	Average international price
2018	YER 202	YER 96
2023	YER 923	YER 396
Change 2018-2023	YER 721 (+357%)	YER 300 (+312%)
Year	Average consumer price	Average international price
2018	USD 0.38	USD 0.18
2023	USD 0.75	USD 0.32
Change 2018-2023	USD 0.37 (+97%)	(+78%)

In IRG areas, the Yemeni rial price for a kilogram of wheat has increased 357% from YER 202 to YER 923. The US dollar pricing of wheat has also increased 97% from USD 0.38 to USD 0.75 in IRG areas (Figure 12).

This significant increase of the cost of wheat in IRG areas is mainly due to the high depreciation of the CBY-Aden Yemeni rial, which has dropped by 133% between 2018 and 2023 (Figure 13). The divergent import financing mechanisms have added to the complexity of food supply chains, resulting in additional costs to final consumer prices. Similarly, the subsequent depreciation of the Yemeni rial in IRG areas reduces people's purchasing power, including their ability to access food readily available on the domestic market.

Figure 13: Exchange rate depreciation in DFA and IRG areas between January 2018 and January 2023



Year	Average CBY Aden exchange rate (USD/YER)	Average CBY Sana'a exchange rate (USD/YER)
2018	YER 533	YER 533
2023	YER 1,242	YER 553
Change 2018-2023	YER 709 (+133%)	YER 20 (+4%)

Based on the historic analysis of cost drivers along the supply chain, there are opportunities to focus policy making on reducing the proportional impact of certain cost drivers on the final consumer price. One medium to long term focus could be to increase domestic production in country to reduce the reliance on imports and therefore reduce the influence of international commodity prices on the final consumer price. Domestic production is central to both the development and humanitarian agendas. Such focus will support Yemen in escaping the structural food insecurity which arises in an import-dependent food system prone to international shocks. Although markets have a role in developing domestic production, policy makers need to approach the development with care. There are several main challenges which are impacting the development of domestic food production within the country. These include the high cost of production, such as the high cost of seeds and high fuel prices, resulting in uncompetitive pricing when compared to imported goods, an erosion of agricultural knowledge and capital as a result of migration and conflict, and a lack of trust between suppliers and farmers regarding the reliability of the supply chain. Similarly, domestic production should focus on sustainable development including ensuring sustainable water usage, usage of drought resistant crops and ensuring domestic production can become competitive against imported goods.

In the short to medium term, other lower impact cost drivers can be targeted to support the reduction in consumer prices. A reduction in voyage and insurance costs, such as war risk insurance, easing the movement of goods into Yemeni ports, and reducing travel times between Yemeni ports and retailers through supporting projects such as road infrastructure investment, can all have a positive impact on the final consumer price. Similarly, measures to remove double taxation could also support the reduction in consumer price. Smaller wholesalers and retailers play an important role in getting domestically produced food from farmers to markets. Through designing programmes which support the reduction in distribution costs and increasing the efficiency along the supply chain, wholesalers and retailers will be able to maintain their margins (averaging ~2% margin for wholesalers, ~16% margin for retailers), whilst also reducing the consumer price. Although these cost drivers only make up a small proportion of the final consumer price (around 7%), efforts to reduce distribution costs will have a positive impact on the consumer.

Such approaches will prove more sustainable than other attempts to reduce consumer prices such as the implementation of price caps on commodities.

Continued monitoring of cost drivers will also support efforts to monitor the impact of any changes along the supply chain and help ensure the consumer price is maintained at a fair and sustainable level. Such monitoring could also support efforts to limit profiteering, whilst also taking into account the margins of importers, wholesalers and retailers in order to support livelihoods.

2.2.2. Employment status and income sources

The conflict has impacted people's access to livelihoods and overall job opportunities. Among the respondents to the survey, 15% declared to be unemployed, including 65% looking for a job. Female respondents only account for 1.4% of the unemployed, with 77% of all female respondents (and 43% of the total) identifying as housewives. Only 20% of the total respondents reported to be employed by someone else (74% male and 26% female). Among male respondents, 30% are employed in farming or self-employed (13% of total), against 8% among female respondents (4.6% of total).

Household income sources

Even before the war, Yemeni households have relied on multiple income sources ([ACAPS 22/05/2022](#)). An assessment led by REACH and published in February 2023 also reported that two-thirds of the assessed households relied on two or more sources of income. It also found that diversification of income is higher among households who received multi-purpose cash assistance (MPCA) in the 30 days prior to the assessment ([REACH 16/02/2023](#)). Results from the household survey carried out for this project show that among people who have received assistance in the previous 12 months, 66% of the households only have one member receiving an income.⁴

In our survey, 69% of respondents stated that only one member of the household receives an income, out of which 63% have received assistance in the last 12 months. Households where two members receive an income are 18% of the total, while those with three or more members receiving an income are only 3%. Among them, 67% and 40% respectively received assistance in the last 12 months. Of those that responded that no one in the household receives an income (9% of the total), 86% receive humanitarian assistance. The number of members of the households receiving an income is directly proportional to the average number of household size. For example, those that have three or more members receiving an income also have more members in the household (9 people on average), comparing to an average of 7 members for those with two income sources and 6 for households with one member receiving an income. Among the households who do not receive any income, they also have a higher percentage of household members under the age of 18 compared to other households.

The survey also highlighted that, for 65% of the respondents, it is the male head of the household who receives an income, and it is also the male head of the household who decides how to spend the household income for 67% of the respondents. This suggests that sometimes the male head decides how to spend the household income even when he is not the primary income earner (for example, when the sons receive an income). However, when the female head of the household receives an income, she is also the one deciding how to spend it; this is true for 90% of the cases (9 out of 10 female income earners decide how to spend their income). The female head of the household also decides how to spend the income even when she is not the income earner. In relation to their income, 65% of respondents stated that it does not provide enough money to cover basic needs; of this, 73% are in Al Hodeidah.

Household income and frequency of payment

The survey also highlighted differences between IRG and DFA areas in terms of estimated monthly household income and frequency of income payments.

A main issue affecting people's purchasing power is the inconsistency of payment of public sector salaries, particularly in DFA areas. In DFA areas, salary payments continue to be irregular, with many public sector employees in DFA areas receiving only half of their backdated monthly salary payments. The latest round of backdated payments for April 2018 was made in January 2022 (Boqash in Telegram 09/01/2022). Conversely, IRG payments to civil servants (i.e., non-military public sector employees, such as those working in the health and education sectors) are regular across IRG areas (ACAPS discussions with key stakeholders).

The survey showed respondents in IRG areas are paid more regularly than respondents in DFA areas. Sixty eight percent of respondents in IRG areas reported receiving salary payments at least every month. Conversely, 52% of respondents in DFA areas reported not having received a salary payment in over a year or receiving salary payments unpredictably in terms of frequency.

From a household income perspective, salaries vary significantly between IRG and DFA areas. In IRG areas, the survey reports that salaries are higher to cater for the currency depreciation and higher Yemeni rial food prices. Sixty six percent of respondents in DFA areas reported having a monthly household income of YER 39,000 or less, whilst no respondents reported having a monthly household income of YER 40,000 or more. In contrast, 74% of respondents in IRG areas reported having an income of YER 40,000 or more.

4. The results from the different surveys are not comparable since they assess different locations, and the questions are formulated differently. In the REACH survey households have been asked how many sources of income they receive, whereas in our survey we asked how many members of the households receive an income (which might not capture if one member receives more than one income).

2.2.3. Reliance on agriculture and livestock for selling and bartering

While in the survey only 18% of respondents reported being employed in farming or self-employed, 45% of the total number of households still rely on agriculture and livestock to meet the household's own food needs or as a livelihood.

The household survey reports a high prevalence of humanitarian aid reliance within the farming community. Results show:

- 89% of agriculture sector workers (108 of 121) have received food aid in the last 12 months.
- 84% of agriculture sector workers (102 of 121) have taken substantial debt as an indirect result of the war.
- 93% of agriculture sector workers (113 of 121) reported their family do not have enough money to afford food supplies.
- 93% of agriculture sector workers (112 of 121) say increased food aid should be distributed.

The recent High Frequency Monitoring released by FAO (FAO, 2023) also found agricultural households have slightly higher prevalence of food insecurity than non-agricultural households as measured by the five food security indicators: Food Insecurity Experience Scale (FIES), Household hunger scale (HSS), Food Consumption Score (FCS), Household Dietary Diversity Score (HDDS). Agricultural wage labourers and livestock sellers, and producers are the second most vulnerable group. Many of these income source groups resort to crisis or emergency coping strategies because of lack of food or money (Figure 14).

Figure 14: Food insecurity by main income source groups. (FAO, 2023).

Main income sources	FIES RFI Moderate + severe	FIES RFI IPC 3+	HHS Moderate + Severe	FCG Borderline + Poor	HDDS Medium + Lowest	rCSI Often/ [>=19]	LCSI Crisis or Emergency
No income sources	78.7%	53.4%	55.0%	67.0%	59.7%	70.3%	89.4%
Daily wage in agriculture sector (farm and other casual employment in agriculture)	71.2%	42.6%	40.8%	61.5%	58.4%	50.6%	88.0%
Production and sale of livestock and livestock products	68.3%	42.3%	42.9%	58.4%	60.4%	39.0%	84.3%

Those working in the agriculture sector are therefore more vulnerable to food insecurity than those working in other sectors. As highlighted in the domestic production section of this report, locally produced wheat is 37% more expensive than imported wheat. This has resulted in higher food insecurity for workers in the agricultural sector and a shift towards the cultivation of cash crops such as qat, as these provide increased income, higher purchasing power and a reduction in food insecurity. Qat now represents much of the market value of agriculture and plays a complex and sometimes counter-productive role in developing and commercialising agricultural goods.

2.2.4. Influence of humanitarian assistance on local market dynamics

Between October–December 2022, 17 million people (over half the population) were estimated to be acutely food insecure, including 6.1 million in IPC Phase 4 (Emergency). Humanitarian food assistance provided by WFP saw a significant decrease in 2022. At the beginning of the year, the UN agency was forced to reduce the monthly ration for 8 million people, who started receiving only half of their caloric requirement. On average, Yemenis have started to reduce the consumption of fresh fruits, vegetables, meat and dairy, therefore reducing the nutritional variation of their diets with long-term impacts on their health. The reliance on humanitarian assistance is another factor of vulnerability for Yemenis, especially as donor funding decreases, operational costs increase, and activities are constrained by reduced humanitarian access to certain areas. For actors such as the WFP, the needs of people with high food insecurity are always prioritised. Procurement rules for humanitarian organisations working in food aid distribution require that the most efficient and cost-effective source of food is purchased to ensure the highest number of beneficiaries are reached with the available funding. Currently, no food aid is procured from local producers. Several reasons have been highlighted:

- Locally produced food is too expensive when compared to imported food prices.
- Low production within Yemen means supply is not guaranteed and prices are higher.
- A lack of experience within the farming community has lowered trust in the reliance of the supply chain.
- There is a need to build trust with farmers, local supply chain actors and humanitarian actors.

Promotion of domestic food production in Yemen is essential to long term food security and rural livelihoods. However, the ongoing conflict and the reasons outlined in this report make it difficult for the sector to develop. Without dedicated efforts to promote domestic food production, Yemen will continue to become more reliant on humanitarian aid, farmers will continue to face severe food insecurity and the production of counter-productive and unsustainable cash crops such as qat will continue to grow.

2.3. Access to food markets

Access to food markets is a key component of measuring vulnerability to food insecurity. From the household survey, 73% of respondents travel an hour or less by foot to reach the food market or food distribution areas. The majority of those travelling by foot were located in DFA areas.

2.3.1. Distance to markets and impact of fuel and transport to reach food markets

As a result of the increased fuel prices, a significant number of survey respondents also reported difficulties accessing basic goods to meet family needs due to travel constraints. 133 respondents (27%), 112 in DFA and 21 in IRG areas, reported that these basic goods are too far away to access, and that they do not have necessary transportation whilst 33 respondents (7%), 30 in DFA and 3 in IRG areas, reported that the family's needs are too far away to access, and that they do not have necessary fuel for transport. Of those travelling an hour or less by foot to reach food markets, 46% (132/287) reported having difficulties accessing basic goods due to travel constraints, 98% of whom were located in DFA areas.

Such results suggest that the consumer price of fuel does have a significant impact on food security which couples with the significant increase in fuel prices in the last 5 years in both DFA and IRG areas. As with wheat, fuel prices in Yemen are largely driven by the international price of oil in DFA areas and the international price of oil and the exchange rate in IRG areas. In country fuel prices have an impact on the consumer both by increasing the cost of transporting goods throughout the country and by making it more expensive for consumers to travel to reach food markets.

Between 2018 and 2023, IRG areas have seen a 161% increase in petrol prices (YER 350 to YER 914) and 201% increase in diesel prices (YER 355 to YER 1069), whilst DFA areas have seen a 28% increase in petrol prices (YER 416 to YER 531 per litre) and 55% increase in diesel prices (YER 413 to YER 641 per litre) (Figure 15). In US dollars, IRG areas have seen a 14% increase in petrol prices (USD 0.65 to USD 0.74) and 31% increase in diesel prices (USD 0.66 to USD 0.86) whilst DFA areas have seen a 25% increase in petrol prices (USD 0.76 to USD 0.95 per litre) and 51% increase in diesel prices (USD 0.76 to USD 1.15 per litre). The prices in both areas are largely driven by the international oil price. However, several other factors including fuel supply issues caused by disruption at Al Hodeidah port, increased distribution costs and profits and the impact of the war in Ukraine all have an impact on the final consumer price of fuel ([ACAPS 12/09/2022](#); [ACAPS 17/08/2021](#)).

Figure 15: Petrol prices in IRG and DFA areas 2018 to 2023. (a) IRG petrol price YER/L, b) DFA petrol price YER/L. Source: ACAPS Cost Driver Monitoring Tool



Although international prices continue to have a significant impact on the final consumer price, international market volatility also offers actors along the supply chain opportunities to increase revenues and profits at the cost of the consumer. As a result of the onset of the war in Ukraine, it is likely both actors in IRG and the DFA areas made significant revenues and profits from 24 February to April 2022, when international market volatility and international oil prices were at their highest ([ACAPS 12/09/2022](#)). As such, the price of fuel increased significantly, impacting both the cost of fuel to the consumer and distribution costs for key commodities.

This example once again highlights Yemen's vulnerability to external market shocks because of the country's high reliance on imports. This has left Yemenis in both IRG and DFA areas struggling with low purchasing power and unable to meet their food needs both through high prices and inability to travel to food markets. To mitigate against such external shocks, mechanisms and monitoring could be developed to manage market volatility, ensure the consumer is protected and reduce opportunities for profiteering along all parts of the supply chain in both DFA and IRG areas.

War and direct exposure to violence have reduced people's freedom of movement, including limiting access to livelihoods and to food markets, among other things. The broader conflict and especially its impact on the economy are also a major factor contributing to people's reduced access to food supplies. Sixty-six percent of households responded that the conflict significantly reduced their ability to access food supplies, of which 70% are households living in Al Hodeidah.

3. COPING STRATEGIES

All of the factors discussed so far, especially in terms of affordability, have led people to make difficult choices to adapt to the changes around them. An ACAPS report from January 2023 (restricted) found that households are using coping strategies with consequences that are more difficult to reverse and more likely to be detrimental over time, when compared to previous research led by ACAPS in 2022. The research also highlighted that the challenges households face are mostly related to meeting basic needs, suggesting an exhaustion of coping strategies. Previous findings from the ACAPS study in 2022 based on in-depth conversations with 17 Yemeni households highlighted some of the ways Yemeni households met their essential needs while continuing to participate in life-cycle events and celebrations. The conversations emphasised the continuing importance of social life in Yemen and its role in establishing, maintaining, and reinforcing social capital.

3.1. Support networks

The importance of maintaining social connections as a coping strategy was also highlighted by a study led by Mercy Corps, published in January 2022. Social connections are influenced by kinship, political affiliation, place of origin and residence, and mediated by factors such as age, gender, social class, and livelihood ([Mercy Corps 31/01/2022](#)). Social connections enable a network of support where tangible and intangible resources are shared, including food, money, shelter, livelihood opportunities, as well as emotional support (Ibid). Geographic proximity is a key element to maintain support networks ([ACAPS 22/05/2022](#)). Attending life-cycle events and celebrations is a way for people to create and maintain social capital defined as the “circumstances in which individuals can use membership in groups and networks to secure benefits” ([Claridge 15/01/2020](#)). The economic challenges Yemenis are facing mean that socialising – and therefore maintaining social capital – are changing, as people visit each other less, people hold fewer gatherings and celebrations are more modest ([ACAPS 22/05/2022](#)). Informal support networks are being stretched with the exhaustion of households’ ability to mobilise resources ([Mercy Corps 31/01/2022](#)). Understanding and monitoring of social connections/support networks and their dynamics as a source of coping is critical for aid actors. Reinforcing those social connections and understanding the risks that might lead to their collapse can help prevent the worsening of humanitarian conditions ([Mercy Corps 1/01/2022](#)).

3.2. Debt accumulation

Yemenis are embedded in a network of debts and credits, which in itself form and maintain the social networks and social capital ([ACAPS 22/05/2022](#); [Mercy Corps 31/01/2022](#)). The lending and borrowing of money is used as a coping strategy. Nearly 52% of the respondents in the survey reported having taken on substantial debt as an indirect result of the war with an additional 23% who took on moderate debt and 7% who only have very little debt. This is similar to REACH’s assessment, whereby 90% of households reported outstanding debt ([REACH 16/02/2023](#)). Geographically, surveyed households in Al Hodeidah – in our survey – all reported having contracted some level of debt, with substantial debt being more prominent (82% of households). In IRG controlled districts in Ta’iz, 47% of households reported having taken on moderate debt, against 34% with substantial debt and 14% only very little debt. There are no differences between male and female respondents in terms of who has contracted substantial debt, as they both constitute 52% of the respective sample sizes. Levels of debt are also high among Muhamasheen, where 86% of Muhamasheen respondents reported having taken on substantial debt.

Cash assistance is often used to repay debts ([World Bank 21/03/2018](#)). Our survey results show that among those households who have received assistance in the last 12 months, 95% have taken on some level of debt.

3.3. Changes in food consumption and reduction of other expenses

Although import data showed a continued flow of food supply to Yemen, and sustained humanitarian assistance despite some funding gaps, food insecurity levels have remained severely high throughout the years. Malnutrition also remains one of the most significant humanitarian impacts. While the cost of life has continued to increase, households have had to rearrange the allocation of their budget to be able to cover essential needs. Consumption patterns of Yemenis have been impacted by the conflict and the increasing costs. When asked about what coping strategies the household implements, 66% of respondents stated that their family rations all food supplies and they eat less than they would like, while 21% have to ration some food supplies, which has led to a change in their normal diet. In surveyed districts in Al Hodeidah, 86% of respondents stated they ration all food supplies, against only 37% of respondents from IRG controlled districts in Ta’iz. In Al Hali and Bayt Al Faqih districts, in Al Hodeidah governorate, 100% and 97% of respondents respectively answered they ration all food supplies, with 90% and 98% not having enough money to afford food supplies.

Consumption of meat, poultry, fish, fruits and vegetables has significantly decreased for a vast majority of people in Yemen. Also, the amount and overall quality of food eaten has decreased and certain members of the family – like children – are prioritised when food is scarce, while women are often the last to eat and/or eat less. Changes – mostly reduction – in the consumption of meat and poultry is a pattern that was confirmed also by the results of the household survey: 74% of respondents reported that they can now rarely afford to purchase meat or poultry, with an additional 17% reporting to eat 'somewhat less' meat and poultry than before. Only 7% of households, and all from the surveyed districts in Ta'iz, reported that they eat about the same amount of meat and poultry as they did five years ago, of these 85% are in Al Taizziya.

In order to afford food, 27% of respondents also reported that they had to reduce other expenses. When asked about which expenses they have had to deprioritise in order to buy food supplies, 93% answered clothing, followed by health costs, including medicines (65%), education expenses and fuel (both chosen by 61% of respondents). Reducing the purchase of fuel to afford food is reportedly higher among men (76%). Among IDPs, reduction of health costs including medicine comes before the reduction in clothing expenses, reported by 92% and 83% of respondents respectively. Of the Muhamasheen households, only 16% responded to the question and all of them stated they are reducing clothing and health expenses.

3.4. Household expenditure: food, cooking gas, rent, qat

Spending on food continues to take the highest percentage of total household budget expenditure: 73% of the respondents allocate between 50-75% of their total monthly income on food. Another 13% spend between 25-50% of the monthly income on food, followed by 2% that spend more than 75%. Spending on fuel or cooking gas accounts for the second highest expense. Up to 32% of the respondents allocate between 25-50% of their monthly income on fuel or cooking gas, although the majority of respondents (51%), declared to spend less than 25%. The percentage of total monthly income spent on rent and on qat also accounts for less than 25% for the majority of respondents (excluding 'Don't know' and 'No response' answers). In relation to the percentage of total monthly income spent on qat, 9% of the households reported spending between 25-50% on qat. Within this 9%, 32 respondents (68%) are located in Al Hodeidah and 64% are female respondents. Of the female respondents, only one is a female headed household. The answer does not suggest that women spend more on qat than men, since the question refers to the overall household expenditure, and for 57% of the female respondents to the question, it is the male head of the household who decides how to spend the income.

3.5. Community perceptions: most impacted groups and suggested steps to improve access to food

The surveyed households were asked who they thought were the members most impacted by food insecurity in their community. The answers are not surprising: IDPs have been named by 75% of the respondents, followed by Muhamasheen (63% of respondents) and female-led households (62%). Among the Muhamasheen respondents, 99% reported they are the most impacted by food security, a similar tendency to IDPs, where 98% responded IDPs are the most affected. However, only 8 out of 13 (62%) female respondents answered they are the most affected members of the community.

Internally Displaced People (IDPs) in Yemen are 4.5 million, including 3.1 considered to be people in need ([HNO 20/12/2022](#)). Every year, flooding and conflict continue to displace hundreds of thousands of people all over the country, both newly displaced and IDPs. The continuous displacement often leads to the disruption of livelihoods, limited access to new income-generating opportunities and loss of access to basic services. Displaced persons are more likely to experience acute food insecurity due to loss of resources, including depletion of financial assets that increase their reliance on humanitarian assistance, and therefore their vulnerability to shocks (*Ibid*).

Muhamasheen constitute between 10-12% of the population of Yemen, or up to 3.5 million people according to a UN report ([Human Rights Council 28/01/2016](#)). They are mostly located in Aden, Lahj, Abyan, Al Hodeidah, Ta'iz and Ibb, but there are Muhamasheen in every governorate in Yemen ([As Safir Al Arabi 10/06/2022](#)). Muhamasheen are by definition 'marginalised people', also known as Al Akhdam, the servants, in Yemeni society. They have experienced discrimination and poverty for centuries. Even prior to the current conflict, this discrimination limited Muhamasheen's access to education, healthcare, housing and work. Muhamasheen usually take on jobs that other Yemenis wouldn't, like garbage collectors, shoe-tailors, car washers, etc. The economic impact of the war on livelihoods however has created competition for lower-paid jobs.

Many Yemenis are starting to consider jobs previously linked to a low social status as acceptable work; a societal change that has increased coping strategies for those with a high social status but has had a negative impact on low-status groups ([ACAPS 22/05/2022](#)). Many Muhamasheen do not hold identification documents, obstructing access to livelihoods and services, among others. The war has compounded Muhamasheen's vulnerabilities including to food insecurity ([Sanaa Center 04/06/2019](#)). During the conflict, women and girls from the Muhamasheen community have been more vulnerable than others to sexual violence and harassment by fighters, particularly at checkpoints ([Equal Rights Trust 06/2018](#)). In terms of humanitarian assistance, Muhamasheen also reportedly face more difficulties accessing aid, and displaced Muhamasheen also find it harder to find shelter, being often excluded by host communities. All these factors make the Muhamasheen community more likely to face higher levels of food insecurity as they struggle to generate enough income, access assistance, find support from the rest of the community they live in and lacking access to health and other basic services.

Female-headed households are reportedly among the most vulnerable groups in Yemen. Half of the female-led households in the survey reported that someone in the households received assistance in the previous 12-months, and 60% are employed by someone else.

People with disabilities, migrants and refugees have been mentioned by fewer respondents as being members of the community most impacted by food insecurity. However, it is reported in a number of sources that these people face challenges that make them vulnerable to higher levels of food insecurity. People with a disability in Yemen – estimated to be over 4.9 million people – often face more difficulties accessing livelihood opportunities, basic and specialised services, and they remain highly reliant on other members of the family to cover basic needs ([HNO 20/12/2022](#)).

Migrants, refugees and asylum seekers are among the most marginalised groups in Yemen. They face significant challenges accessing public services, and a number of serious protection risks such as the risk of abduction, torture, detention, violence and exploitation. Children, women and girls are disproportionately more at risk with minors exposed to military recruitment, child labour and exploitation and women and girls experiencing sexual violence by smugglers ([HNO 20/12/2022](#)). The risks and discrimination they face compound their vulnerability to food insecurity as they struggle to access job opportunities or assistance.

Households were also asked what steps should be taken to improve access to food supplies for the groups most impacted by food insecurity in their opinion. Increased food aid distribution was reported by 87% of people, followed by provision of job opportunities (67%) and financial assistance (49%).

When asked the same question reflecting on their own household as being impacted by food insecurity, answers remain similar: 76% of survey respondents think more food aid should be distributed, 61% suggest more job opportunities should be provided, while the establishment of organisations or local committees and provision of financial assistance are both mentioned by 43% of respondents.

As seen in a previous section, total reliance on humanitarian assistance as the main source of income is only reported by a small percentage of households in the survey (3%). More assistance can be an emergency solution in the short term, however further interventions should be prioritised to address needs in a broader approach. Provision of more job opportunities would positively contribute to an increase in households' purchasing power. The end of the conflict would allow for improved population movement, foreign investments and, overall, for several sectors to flourish. Financial assistance in the form of cash-based programmes faces several limitations that need to be taken into consideration, but the challenges that Yemenis face in terms of access to food supplies are diverse and certain locations allow for more opportunities to increase financial assistance. In the long term, an end to the conflict would also allow for the re-establishment of social safety programmes to continue to support the most vulnerable groups.

4. POLICY RECOMMENDATIONS

- Supply chain and logistics: bring down the cost of transporting food overseas to Yemen and overland inside Yemen
- Increasing the capacity of key seaports in Yemen to pre-conflict levels would improve capacity to import food commodities and reduce wait times.
 - Additional installation of the cranes should be authorised to enhance the capacity of ports by accelerating the speed with which food can be unloaded. Donors could look to provide or secure financial, technical, and logistical support to help ensure that all Yemen's seaports are able to enhance their capacity, and at the very least restore their capacity to pre-conflict levels.
- Enhancing Yemen's internal storage capacity would increase the country's robustness against the level of volatility surrounding international wheat supply and prices deriving from global dynamics, as experienced following the Russia-Ukraine war since February 2022.
 - Yemen's current storage capacity corresponds to 20% of annual demand, therefore resulting in stocks sufficient for 2.4 months before new stocks must be imported. Increased storage and milling capacity will enable a larger quantity of wheat to be purchased at once and subsequently stored when international wheat prices are favourable.
 - One major wheat importer in Yemen is already planning expansion of storage and milling capacities at their own facilities. Authorities should continue to support these efforts to increase storage capacity.
- Reducing the impact of double taxation caused by overland trucking from Aden to Sana'a would reduce distribution costs and have a positive impact on the final consumer price.
 - Reduced container traffic at Al Hodeidah port has pushed traders to import containers via Aden and then truck them overland to Sana'a. This results in double taxation, which has an impact on the final consumer price of goods.
 - Stakeholders should increase efforts to reduce the impact of double taxation (formal and informal) on traders.
- For domestic commodity distribution, fuel is the biggest driver of cost inputs in the food supply chain. Reducing the price of fuel would lower food transportation and local food production costs.
 - Monitoring and regulation could help limit erratic fuel price spikes, as seen during the onset of the Russia-Ukraine war in February 2022.
 - Reduction in the official price of fuel would lower food transportation and local food production costs.
 - Conduct more in-depth research and analysis of fuel import data and internal distribution trends – and acknowledge the different actions taken by both IRG and DFA that result in reduced availability of fuel and higher fuel prices.
- Local governing authorities should look to avoid, where possible, the introduction and imposition of price caps
 - Although price caps are beneficial to consumers in the short term, a preferable approach would be to focus on policies that tackle the reduction of costs along the supply chain.
 - Policies should focus on reducing the impact of the growing affordability problem caused by global price hikes for key commodities, including wheat, whilst also working to improve consumer purchasing power in the country.
- Humanitarian aid: reassess humanitarian response with a goal of shifting away from emergency programmes towards livelihood and development programming, keeping in mind the geographical limitations and opportunities.
- While recognising the ongoing constraints enforced by the conflict and the level of emergency need, identify areas more conducive to a shift away from emergency and towards transitional, livelihoods and development programming. This should be done with a strong understanding of the macro-economic challenges facing the country and focus on import substitution and export potential agriculture and businesses.
- Where the conditions are favourable, increase the number of conditional cash-based transfer programmes to strengthen the level of liquidity of Yemeni households and help stabilise the currency, reducing where possible in-kind food distribution. Conditional cash transfer modalities for households should relate to macroeconomic policy outcomes, especially for development funded initiatives. Conditional cash transfers will also support sustainable development goals through supporting a cultural change away from humanitarian assistance reliance.

- Funding remains a critical element for the sustenance of life-saving humanitarian assistance. New emerging crises should not result in the deprioritisation of protracted crises. Decline in donor funding risks pushing more people toward higher levels of food insecurity.
- Social cohesion: incentivise maintenance of traditional support systems within the communities.
- Understanding and monitoring of social connections/support networks and their dynamics as a coping source is critical for aid actors.
 - Reinforcing those social connections and understanding the risks that might lead to their collapse can help prevent the worsening of humanitarian conditions (Mercy Corps 21/01/2022).
- Local food production: explore various ways of supporting local food production endeavours.
- Local and international stakeholders, from the humanitarian, governmental and private sectors need to come together to find solutions to incentivise investment and assistance towards sustainable local food production.
 - Addressing simultaneously access constraints and the effects of climate change, while considering gender dynamics to not deprioritise or negatively impact the role of women in agriculture and food production.
 - Investment opportunities will vary between governorates and districts. These geographical constraints must be considered when designing programmes.
 - A focus in improving trust between suppliers and traders is required. Private sector investment will require guarantees to support the development and strengthening of domestic value chains within Yemen.
 - Stakeholders should increase engagement with CSOs and local initiatives. Existing platforms such as social innovation labs aimed at improving local food production and food and nutrition security should be supported (ScalingUp Nutrition, 2022). Such platforms should also ensure engagement with women and youth.
- Increase investment in local food production for the local market through investment in rural finance, seed banks, community level water projects, local value chains and food storage and transport.
 - One potential food sector that could be expanded is the local livestock sector, which is viewed as being more underdeveloped than other sectors such as perishable items – e.g., hard vegetables, green vegetables, fruit – that are available on the market at relatively affordable prices and more luxury food items such as honey and coffee that are export commodities sold on international markets.
 - Focus domestic production improvement on not only reducing import dependence, especially on perishable foods, but also towards potential export options that could go towards addressing Yemen's current trade imbalances. Focus on developing new and strengthening existing value chains to support sustainable food production and longer-term food exports.
 - Diversify forms of support to local farmers, including reactivating government offices that provide a) trainings on effective irrigation/crop rotation; b) improved and sustainable access to water; c) alternative energies (where appropriate); d) access to fertiliser, pesticides, seeds, etc.
 - Explore changes in legislation which could support more sustainable and productive farming practices. Relaxation or removal of restrictions on imports such as seeds, fertilisers and pesticides will reduce costs and increase agricultural productivity. Such legislative changes will support the development of a competitive domestic production market.
- Increased trust and reliability in local producers through supporting and strengthening the local supply chain.
 - Increase trust and reliability in local producers will support the creation of favourable market conditions that could eventually incentivise local food procurement by humanitarian organisation involved in food distribution.
- Convert arable land from qat to food by investigating alternative value chain crops and more sustainable industries.
 - Support farmer coops to build infrastructure and in the long term explore 'buy-back' programs and develop new value chains for sustainable food production.
 - Learn from previous examples such as FAO's greenhouse Qat conversion project (FAO, 2018) and value chain studies by UNDP (UNDP 09/08/2020, UNDP 06/07/2020, UNDP 15/08/2020, UNDP 26/06/2020) to support sustainable development of value chains within the agriculture sector.

- Support the development of an integrated water resource management plan in response to climate change and water scarcity.
 - Yemen's inability to properly capture and preserve floodwaters means that water scarcity continues to be one of the most pressing environmental problems, with Yemen ranking as one of the most water scarce countries in the world.
 - Development of domestic production should ensure sustainable and water efficient agricultural practices such as effective irrigation/crop rotation and sustainable groundwater extraction.
 - Development of an integrated water resource management plan will help support the implementation of sustainable water management practices and help mitigate against the impact of climate change and decreasing groundwater table.
- Economic file: pause and scale back competing monetary, fiscal, and economic policies that are politicising and dividing the economy in Yemen.
 - The presence of two competing food import financing regulations is a major contributing factor distorting the food supply chain in Yemen and the market.
 - The intensification of the economic warfare between IRG and DFA since September 2016 and from December 2019 onwards (following DFA ban on the use of newly printed YER banknotes in their controlled territories) is prompting a separation of the market.
 - Better utilise foreign currency inflows to the market aiming to stabilise the Yemeni rial exchange rate, reduce food prices and maximise the benefit from any monetary interventions for the average household.
 - Better harness the significant remittances flowing into Yemen by bringing remittances into the formal banking sector and support importers accessing hard currency. Better access to efficient financial service providers will potentially bring billions out of informal and high-cost financial networks, allowing Yemenis to send more money home to their families and reduce risks around money laundering and terrorism financing.
 - There should be increased efforts to address the reduction of purchasing power in Yemen. Increasing consumer purchasing power will result in the increased affordability of imported wheat sold on the local market.
 - An agreement on the payment of public sector salaries would have a positive impact on the purchasing power of public sector employees who have had to live with either the non-payment or delayed payment of salaries.
- Data, research, and monitoring: all actors working in the food security space should support a common operational data and analysis ecosystem to support more informed decision making by the food security response.
 - Coordination of different stakeholders working within the food security space – including humanitarian, development, government and private sector – to support improved data sharing, monitoring and analysis of indicators relevant to food security.
 - A more coordinated and improved data sharing, and analysis ecosystem will support all actors in making better informed decisions whilst ensuring a common operational picture for the food security response in Yemen.
 - Improve statistical capacities within country on all sides of the conflict.
 - Humanitarian and development actors working within the food security space should engage with the central statistical organisations and support the long-term ambition of integrating and eventually handing over data and analysis to Yemeni authorities. Fully operational central statistics will enable a clearer operational picture of the food security response and a clearer understanding of the demographics and needs within the country.
 - It is important that capabilities are built with post-peace-agreement development in mind. All sides of the conflict need to ensure that statistical capacity is developed with a common approach to support future integration of statistics within one central body.