



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



MEASURING PROGRESS TOWARD EMPOWERMENT

WOMEN'S EMPOWERMENT IN AGRICULTURE INDEX: BASELINE REPORT

Hazel Jean Malapit, Kathryn Sproule, Chiara Kovarik, Ruth Meinzen-Dick,
Agnes Quisumbing, Farzana Ramzan, Emily Hogue, and Sabina Alkire



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FROM THE AMERICAN PEOPLE



ON THE COVER

Jane Chisi stands in her maize field in Malawi.

Photo: Panos/Frederic Courbet



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Please visit www.feedthefuture.gov for more information.

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A farmer harvesting wheat in Nepal.

Photo: Panos/G.M.B. Akash



Habiba Tukhtaeva displays vegetables she has grown in Tajikistan. Photo: USAID

EXECUTIVE SUMMARY

This report provides a comprehensive analysis of the Women's Empowerment in Agriculture Index (WEAI) baseline survey results, summarizing both findings from the WEAI survey and the relationships between the WEAI and various outcomes of interest to the US Government's Feed the Future initiative. These poverty, health, and nutrition outcomes include both factors that might affect empowerment and outcomes that might result from empowerment.

The analysis includes thirteen countries from five regions and compares their baseline survey scores. WEAI scores range from a high of 0.98 in Cambodia to a low of 0.66 in Bangladesh. Within Africa, West African countries have the lowest WEAI scores, followed by southern Africa with higher scores, and then East Africa, with the highest scores. These numbers provide an important measure of future progress, as baseline surveys for the remainder of Feed the Future countries are completed and additional rounds of data are collected during the midline and endline surveys.

A closer examination of the baseline results reveals a number of additional findings. First, across the majority of countries and regions, the greatest constraints on empowerment among women in agriculture are a lack of access to credit and the power to make credit-related decisions; excessive workloads; and a low prevalence of group membership. Second, in comparing men's and women's empowerment scores across countries, on average women are twice as disempowered as men; at the extremes, women are about three times as disempowered as men in Tajikistan and Ghana, and slightly less disempowered than men in Cambodia.¹ Across countries, women are almost twice as disempowered as men in their ability to access and make decisions regarding credit, and over one and a half times as disempowered with respect to workload and group membership. Third, while the magnitude of women's disempowerment is greater, men are also disempowered in these domains. Fourth, specific constraints dominate certain regions; group membership is the primary constraint in Asia, while access to and decisions on credit and workload are more severe constraints in East Africa and southern Africa, respectively.

Regarding the WEAI and various poverty, health and nutrition outcomes, the WEAI score is most strongly associated with household educational achievement, income, and maternal behavior (that is, the prevalence of exclusive breastfeeding and children receiving a minimum acceptable diet). Higher women's empowerment scores are associated with greater rates of secondary school completion as the highest educational achievement within the household. Higher rates of both breastfeeding and children achieving a minimum acceptable diet are also associated with greater women's empowerment scores. Although negative, the relationship between income and women's empowerment may be a result of the index measuring agricultural activities, which tend to decline in importance as per capita incomes rise. Findings do not reveal clear relationships between women's empowerment and either women's dietary diversity or children's nutritional outcomes. Note, however, that these are Zone of Influence-level correlations representing broad geographic areas within a country; examination of household-level data may show clearer patterns. Further, no regressions were run in this analysis, and regression analysis may illuminate causal relationships between women's empowerment and various outcomes of interest to the Feed the Future initiative.

It is key to remember that the WEAI is embedded within the larger Feed the Future initiative, the goals of which are to sustainably reduce global poverty and hunger through the dual objectives of stimulating inclusive agricultural growth and improving the nutritional status of women and children. There is consistent and credible evidence that when

"On average women are twice as disempowered as men; at the extremes, women are about three times as disempowered as men."

¹ Note that this is an unweighted average.

“There is consistent and credible evidence that when the status of women is improved, agricultural productivity increases, poverty is reduced, and nutrition improves, making the WEAI a crucial tool for monitoring progress towards these objectives.”

the status of women is improved, agricultural productivity increases, poverty is reduced, and nutrition improves, making the WEAI a crucial tool for monitoring progress towards these objectives. Given the Feed the Future initiative objectives and resource constraints, the results from the WEAI and this analysis may be used to prioritize and target activities that can foster the largest improvements in reaching program goals.



Mercy Chitwanga is a dairy farmer in Malawi.

Photo: United States African Development Foundation

FEED THE FUTURE GOAL: SUSTAINABLY REDUCE GLOBAL POVERTY AND HUNGER

Prevalence of poverty

Prevalence of underweight children

High Level Objective
INCLUSIVE AGRICULTURE
SECTOR GROWTH

Agriculture Sector GDP
Per capita expenditures in rural
households

**Women's Empowerment in
Agriculture Index**

High Level Objective
IMPROVED NUTRITIONAL STATUS
ESP. OF WOMEN & CHILDREN

Prevalence of stunted children
Prevalence of wasted children

Prevalence of underweight women

HOW TO UNDERSTAND THE WEAI IN THIS REPORT

The Women's Empowerment in Agriculture Index (WEAI, or the Index) is the first comprehensive and standardized measure to directly capture women's empowerment and inclusion levels in the agricultural sector. It was developed jointly by the United States Agency for International Development (USAID), the International Food Policy Research Institute (IFPRI), and the Oxford Poverty and Human Development Initiative (OPHI).

Launched in February 2012, the WEAI has since been used widely by various organizations and individuals. USAID, for example, is using the WEAI to determine whether its Feed the Future programs are having the intended effects on women's empowerment. This report details the baseline findings from 13 of the 19 Feed the Future focus countries.

The Index can also be used in other ways. Importantly, the WEAI can serve as a diagnostic tool for identifying areas in which women and men in a particular geographic region are disempowered. Policy and programming can then be targeted toward these areas. For example, if results from one country show that women and men are extremely disempowered with regard to access to credit, there may be a general lack of opportunities to access credit in the area, a finding that practitioners can take into consideration when developing future projects.

In addition, the WEAI can be a research tool. Researchers could, for instance, explore the linkages between the WEAI and well-being outcomes for households, women, and children; assess the WEAI's validity across different countries and cultures; and test alternative indicators to measure the different domains of empowerment.

How the WEAI Is Constructed

The WEAI is composed of two sub-indexes: the five domains of empowerment index and the gender parity index (Alkire et al. 2013).

FIVE DOMAINS OF EMPOWERMENT

The first sub-index—the five domains of empowerment (5DE) index—assesses women's empowerment in five general areas, or domains:

1. Decisions about agricultural production ("Production decisionmaking"): Sole or joint decisionmaking power over food or cash-crop farming, livestock, and fisheries, as well as autonomy in agricultural production.
2. Access to and decisionmaking power over productive resources ("Access to productive resources"): Ownership of, access to, and decisionmaking power over productive resources such as land, livestock, agricultural equipment, consumer durables, and credit.
3. Control over use of income: Sole or joint control over income and expenditures.
4. Leadership in the community ("Community leadership"): Membership in economic or social groups and being comfortable speaking in public.
5. Time allocation: Allocation of time to productive and domestic tasks, and satisfaction with the time available for leisure activities (IFPRI, USAID, and OPHI 2012).

These five domains are measured using 10 indicators; their corresponding weights are given in Table 1. Each indicator is given a value of 1 if the respondent has exceeded a

"Importantly, the WEAI can serve as a diagnostic tool for identifying areas in which women and men in a particular geographic region are disempowered."

given threshold for the indicator and a value of 0 if the respondent falls below the threshold. The weighted sum of these 10 indicators is the empowerment score or 5DE score of the individual. A person is defined as “empowered” if her or his score is 80 percent or higher.

TABLE I. THE FIVE DOMAINS OF EMPOWERMENT IN THE WEAI

Domain	Indicator	Weight
Production decision-making	Input in productive decisions	1/10
	Autonomy in production	1/10
Access to productive resources	Ownership of assets	1/15
	Purchase, sale, or transfer of assets	1/15
Control over use of income	Access to and decisions on credit	1/15
	Control over use of income	1/5
Community leadership	Group member	1/10
	Speaking in public	1/10
Time allocation	Workload	1/10
	Leisure	1/10

Source: Alkire et al. (2013).

GENDER PARITY INDEX

The second sub-index—the gender parity index (GPI)—measures women’s empowerment relative to that of men by comparing the 5DE profiles of women and men in the same households. A woman is assumed to achieve gender parity if her achievements in the five domains are at least as high as those of the primary adult male in her household. The GPI reflects the percentage of women who have achieved parity and, in cases of gender disparity, the average empowerment gap that women experience relative to their male counterparts. While the 5DE score is calculated using all women in the sample, the GPI score is not calculated for women living in a household where no adult male is present.

WOMEN’S EMPOWERMENT IN AGRICULTURE INDEX

The overall WEAI is constructed by calculating the weighted average of the 5DE and GPI as follows:

$$\text{WEAI} = (0.90 \times \text{5DE}) + (0.10 \times \text{GPI})$$

It thus gives a broad picture of women’s empowerment by showing not only the proportion of women who are empowered and have gender parity but also, for the remainder of women, the depth of their disempowerment and gender disparity. Values for the WEAI and its sub-indexes range between 0 and 1, with higher numbers indicating greater empowerment.

Limitations of the WEAI

While the WEAI provides a rigorous measure of empowerment relevant to agriculture, it is subject to some limitations:

- WEAI results may not be representative of the empowerment of all adult women in a country, because respondents in the WEAI survey are primary decisionmakers and may be more empowered than other women in their households.
- Women who are not involved in agricultural decisions may appear disempowered even if they are engaged in decision-making on nonagricultural activities.
- Women in households that do not have a male decisionmaker are likely to be identified as empowered because of the WEAI’s focus on decisionmaking questions.
- Other domains of empowerment not captured in the WEAI, which focuses solely on agriculture, may be more relevant to specific desired outcomes, such as nutritional status.

For more information on the WEAI methodology and piloting, visit the online WEAI Resource Center.¹

This Report

This report provides a comprehensive overview of the WEAI results from 13 of the 19 Feed the Future baseline surveys.² In each of the 19 Population Based Surveys, the WEAI was included as one of the modules.³

The report begins with the findings for each of the 13 countries; these country summaries are standardized for easy comparison

¹ The WEAI Resource Center is located at www.ifpri.org/book-9075/ourwork/program/weai-resource-center. The discussion paper and slide presentation on this site provide good introductions to the WEAI.

² Because of differing timelines for project rollout, only 13 of the 19 countries are included in this report. Ethiopia, Guatemala, Mali, Mozambique, Senegal, and Tanzania are not included here. Summaries for these countries will be made available online at the WEAI Resource Center when data collection and analysis are completed.

³ Population Based Survey refers to a type of survey sampling methodology that selects a sample of households that is representative of the entire population of interest, in this instance, of the Feed the Future Zone of Influence for each country.

across countries. Details are provided below on how to understand the tables and statistics presented in the summaries. The report continues with a comparison of findings across countries, focusing in particular on the indicators that emerged as contributing greatly to empowerment. It also looks at how empowerment is correlated with other health and nutrition-related outcomes.

Understanding the Country Summaries

Each country summary includes a map showing the Zone of Influence (the area within the country where the USAID/Feed the Future initiative operates) and a box that shows the country's color-coded WEAI score. The countries are ranked according to their WEAI scores and divided into low, middle, and high groups. Green indicates a high score (WEAI = 0.85 or higher); yellow indicates a medium score (WEAI = 0.73–0.84); and red indicates

a low score (WEAI = 0.72 or lower). Also included in the box are the 5DE and GPI scores for that country, as well as the three indicators for which women are the most disempowered.

To help explain the data provided in the country summaries, we present here a sample table for Rwanda, one of the 13 countries for which summaries are available. Note that all numbers currently reported as proportions—including the 5DE score, disempowerment score ($I - 5DE$), mean 5DE score for not yet empowered women, mean disempowerment score ($I - 5DE$) for not yet empowered women, GPI score, average empowerment gap, and the WEAI score—may also be converted to percentages, whereby the 5DE score may be read as 90 percent, the average empowerment gap as 15 percent, and so on. Read as a percentage, the disempowerment score formula becomes $100 - 5DE$.

TABLE I. WEAI SCORE

Indicator	Baseline value	
5DE score	0.90	The 5DE sub-index assesses the extent of women's empowerment in the five domains. A higher number reflects greater empowerment.
Disempowerment score ($I - 5DE$)	0.10	Percentage of women with 5DE scores of 80% or more
N (number of observations)	1,481	Percentage of women with 5DE scores of less than 80%
% of women achieving empowerment	70.21	
% of women not achieving empowerment	29.79	
Mean 5DE score for not yet empowered women	0.67	
Mean disempowerment score ($I - 5DE$) for not yet empowered women	0.33	The GPI sub-index measures the inequality in 5DE scores between the primary adult male decisionmakers and primary adult female decisionmakers in the households. A higher number reflects greater gender parity.
GPI score	0.96	Percentage of women who have 5DE scores lower than those of the men in their households
N (number of dual-adult households)	878	For women lacking parity, the average percentage shortfall they experience relative to the males in their household
% of women achieving gender parity	73.46	
% of women not achieving gender parity	26.54	
Average empowerment gap	0.15	
WEAI score	0.91	The WEAI score is composed of 90% 5DE and 10% GPI.



Harvesting squash in Honduras. Photo: Panos/Sean Sprague

COUNTRY PROFILES

Bangladesh

Cambodia

Ghana

Haiti

Honduras

Kenya

Liberia

Malawi

Nepal

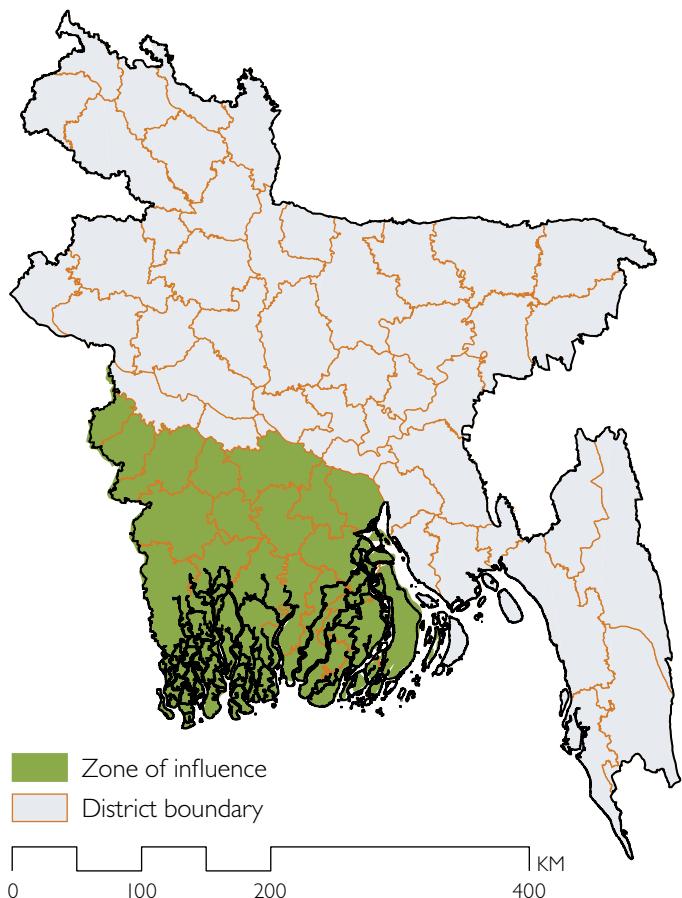
Rwanda

Tajikistan

Uganda

Zambia

BANGLADESH



Note: Zone of Influence = the area where the USAID/Feed the Future initiative operates within a country. All maps reflect the zone of influence and areas where WEAI data was collected at the time of publication.

Bangladesh's baseline WEAI score: **0.66**

5DE score: 0.65

GPI score: 0.80

Key constraints for women:

Group membership, public speaking opportunities, control over use of income

Since 2000, Bangladesh's gross domestic product has grown at an average rate of 6 percent. Rice production has tripled over the past 30 years, and the poverty rate has declined by 10 percent over the past decade. At the same time, Bangladesh faces serious challenges. It is the most densely populated large country in the world, with 150 million people living in an area roughly the size of the US state of Iowa. Poverty, lack of access to agricultural land, and inadequate diets contribute to a high rate of undernutrition. Forty percent of the population lives below the poverty line, and the country's rate of child stunting is among the highest in the world. Almost half of Bangladeshis are employed in the agriculture sector, and a large majority of the rural population is involved in fisheries. However, population growth, urbanization, and soil and natural resource depletion have resulted in the degradation of land, water bodies, wetlands, and forests and pose a significant threat to the agriculture sector. Food insecurity is further complicated by gender-related factors—women are heavily engaged in agriculture but are largely unrecognized, have very low levels of land and asset ownership, and do not have access to extension services or other inputs, such as seeds and fertilizer. The Feed the Future Bangladesh Zone of Influence targets *upazilas* (subdistricts) in the southern part of the country, identified by the green shaded areas on the country map.

Methodology: The sample for the Bangladesh Feed the Future baseline consists of 2,040 households in 102 villages belonging to 73 *upazilas* that make up the Zone of Influence. Bangladesh is the only country in this WEAI study where the data are nationally representative of rural areas. Data collection was completed in October and November 2011 by Data Analysis and Technical Assistance Ltd.

WEAI score: The overall WEAI score for Bangladesh is 0.66. The 5DE and GPI scores are presented in Table I and discussed below.

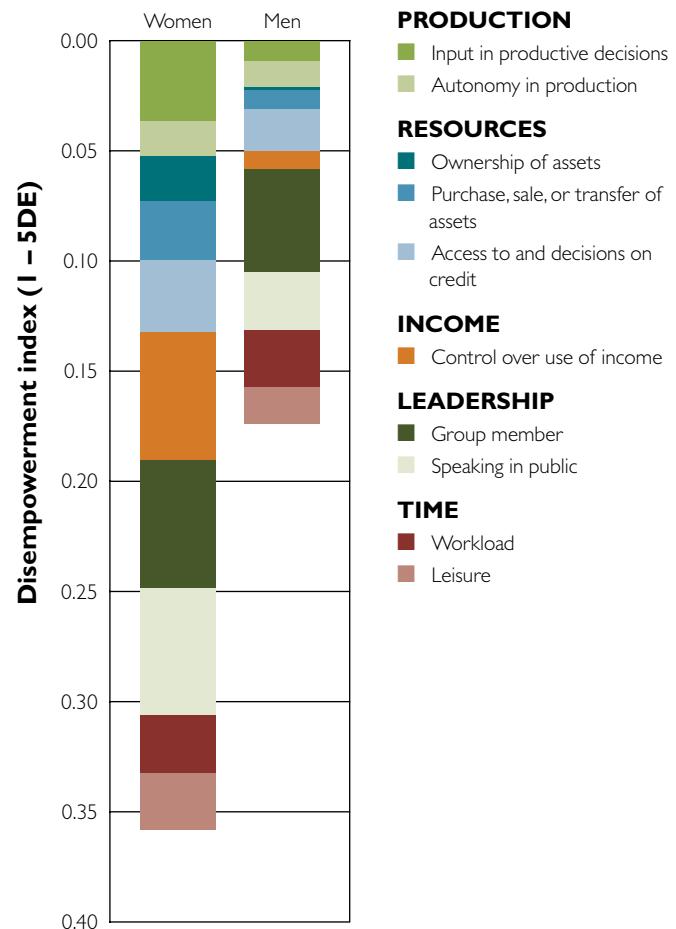
- **5DE score:** The 5DE index value is 0.65. Overall, about 25 percent of women have achieved adequate empowerment. Those who are not yet empowered (about 75 percent) have a mean 5DE score of 0.53.
- **GPI score:** The GPI is 0.80, and 38.78 percent of the women in the survey have achieved gender parity. The average empowerment gap between the 61.22 percent of women without gender parity and the adult males in their household is 0.33, which is relatively high.

TABLE I. WEAI SCORE

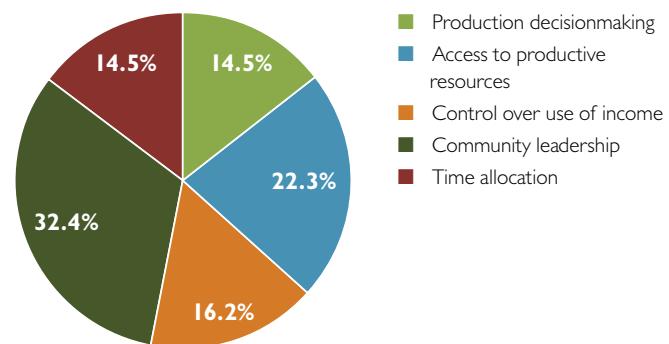
Indicator	Baseline value
5DE score	0.65
Disempowerment score ($1 - 5DE$)	0.35
<i>N (number of observations)</i>	1,938
% of women achieving empowerment	25.01
% of women not achieving empowerment	74.99
Mean 5DE score for not yet empowered women	0.53
Mean disempowerment score ($1 - 5DE$) for not yet empowered women	0.47
GPI score	0.80
<i>N (number of dual-adult households)</i>	1,657
% of women achieving gender parity	38.78
% of women not achieving gender parity	61.22
Average empowerment gap	0.33
WEAI score	0.66

Source: IFPRI (2012a).

Figure 1 compares male and female disempowerment and illustrates the contribution of each indicator to disempowerment. The figure reveals that women are about twice as disempowered as men overall. Across 9 of the 10 indicators, men fare better than women. The exception is workload, where men and women fare equally. The indicators that make a major contribution to disempowerment for both women and men are group membership and speaking in public. Women are additionally constrained in their control over use of income. The indicators contributing least to women's disempowerment are autonomy in production and ownership of assets, while for men the least disempowering indicators are ownership of assets and control over use of income. The indicators exhibiting the greatest gap in male versus female achievement are speaking in public and ownership of assets, with men's achievements being greater than women's for both. Figure 2 provides a breakdown of women's disempowerment by domain and shows that community leadership and access to productive resources account for more than 50 percent of women's disempowerment.

FIGURE 1. CONTRIBUTION OF EACH INDICATOR TO DISEMPOWERMENT

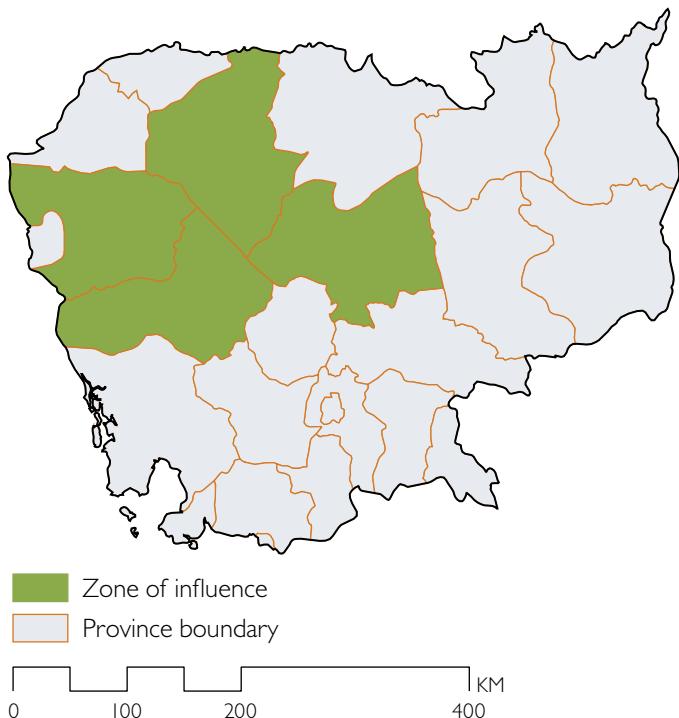
Source: IFPRI (2012a).

FIGURE 2. CONTRIBUTION OF EACH OF FIVE DOMAINS TO THE DISEMPOWERMENT OF WOMEN

Source: IFPRI (2012a).

Note: Because of rounding, percentages do not add up exactly to 100.

CAMBODIA



Note: Zone of Influence = the area where the USAID/Feed the Future initiative operates within a country. All maps reflect the zone of influence and areas where WEAI data was collected at the time of publication.

Cambodia's baseline WEAI score: **0.98**

5DE score: **0.98**

GPI score: **0.99**

Key constraints for women:
Group membership, workload

Cambodia is primarily rural, with more than 70 percent of its people relying on agriculture for their livelihoods. Food production, food availability, and health indicators have improved steadily in the past decade, but challenges remain. Cambodia has a rural poverty rate of roughly 24 percent and poor malnutrition indicators, including a stunting rate of 40 percent for children younger than five years old.

The Feed the Future strategy in Cambodia targets four provinces in the rural Tonle Sap region: Battambang, Kampong Thom, Siem Reap, and Pursat. Together, these provinces make up the Zone of Influence. This region has the highest poverty rate in the country (28 percent) and includes about one-third of all food-insecure households (1 million people during the lean season). It also contains the highest concentration of child stunting and undernutrition.

Methodology: The survey sample comprises 2,100 households located in 84 villages across 17 districts in the provinces that make up the Zone of Influence. The survey data serve as the baseline of an impact evaluation of the Helping Address Rural Vulnerabilities and Ecosystem Stability program, and includes 1,500 treatment and 600 control households. Cambodia is the only country in this report where the module on speaking in public was excluded from the survey, as it was deemed culturally inappropriate for the country. The Cambodia Development Resource Institute conducted the field work from August to October 2012 with support from Michigan State University.

WEAI score: The overall WEAI score for Cambodia is 0.98. The 5DE and GPI scores are presented in Table I and discussed below.

- **5DE score:** The 5DE index value is 0.98. Overall, a striking 92.6 percent of women have achieved adequate empowerment. Those who are not yet empowered (only 7.4 percent) have a mean 5DE score of 0.68.
- **GPI score:** The GPI is 0.99, and 94.7 percent of the women in the survey have achieved gender parity. The average empowerment gap between the 5.3 percent of women without gender parity and the adult males in their households is 0.15, which is relatively large.

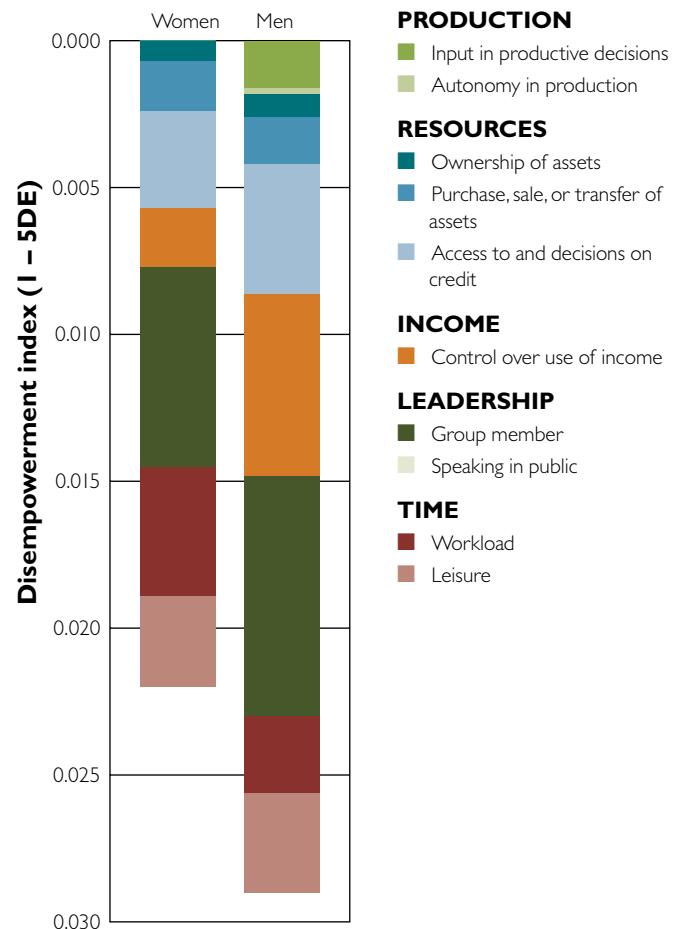
TABLE I. WEAI SCORE

Indicator	Baseline value
5DE score	0.98
Disempowerment score ($I - 5DE$)	0.02
<i>N (number of observations)</i>	<i>n.a.</i>
% of women achieving empowerment	92.6
% of women not achieving empowerment	7.4
Mean 5DE score for not yet empowered women	0.68
Mean disempowerment score ($I - 5DE$) for not yet empowered women	0.32
GPI score	0.99
<i>N (number of dual-adult households)</i>	<i>n.a.</i>
% of women achieving gender parity	94.7
% of women not achieving gender parity	5.3
Average empowerment gap	0.15
WEAI score	0.98

Source: Cambodia Development Resource Institute (2012).

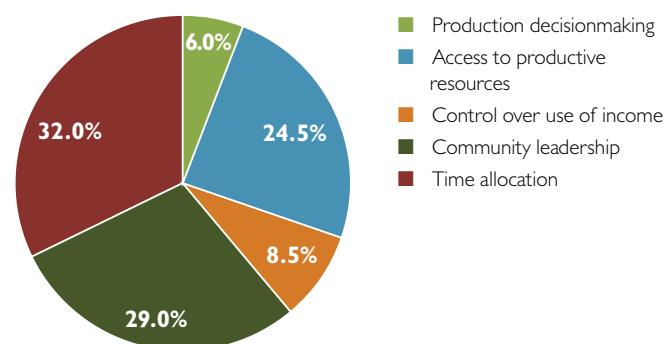
Note: *n.a.* = not available.

Figure I compares male and female disempowerment and illustrates the contribution of each indicator to disempowerment. Cambodia differs from the other countries in this report in that men fare worse than women for 8 of the 9 indicators (2.9 percent disempowerment for men compared with 2.3 percent for women). Men fare better than women for only two of the indicators (purchase, sale, or transfer of assets, and workload). For women, the indicators that contribute least to disempowerment are autonomy in production, ownership of assets, and control over use of income. For men, the indicators that contribute least to disempowerment are autonomy in production, ownership of assets, and input in productive decisions. The indicator that makes the greatest contribution to disempowerment for both men and women is group membership—though women have higher achievement than men for this indicator. Women also face constraints regarding workload, while control over use of income also contributes to men's disempowerment. The indicators exhibiting the greatest gap in male versus female achievement are control over use of income, workload, and access to and decisions on credit. Men's achievements are greater than women's for workload, but women's achievements are greater than men's for control over use of income and access to and decisions on credit. Figure 2 provides a breakdown of women's disempowerment by domain and shows that community leadership and time allocation contribute more than 60 percent to women's disempowerment.

FIGURE I. CONTRIBUTION OF EACH INDICATOR TO DISEMPOWERMENT

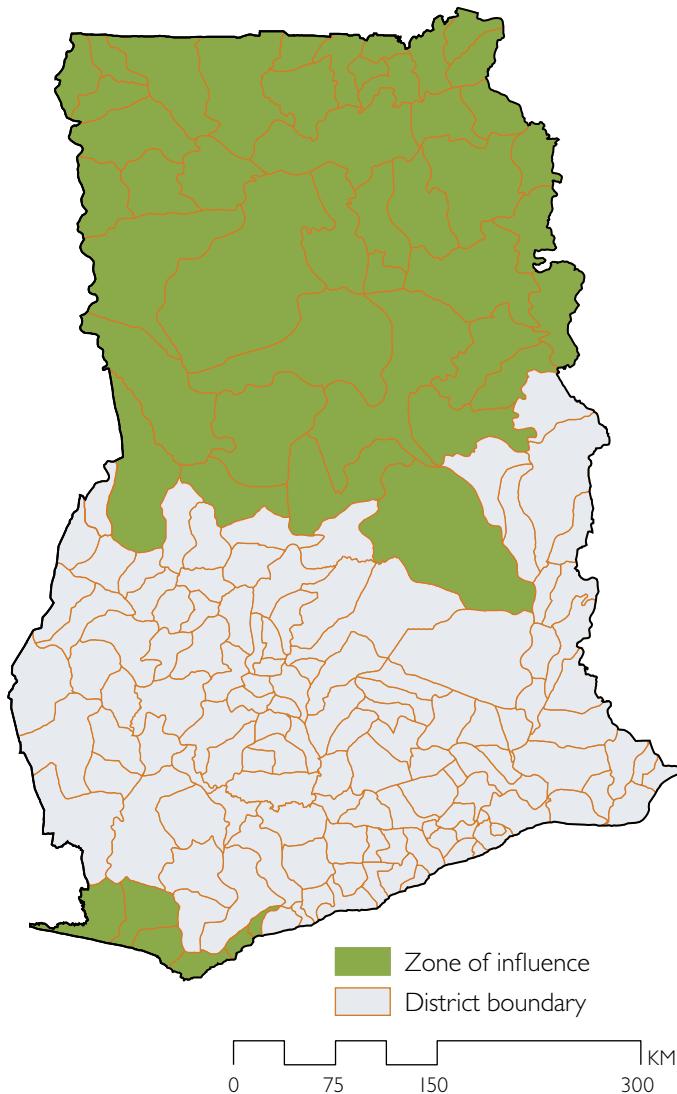
Source: Cambodia Development Resource Institute (2012).

Note: Data on speaking in public could not be collected because of Cambodia's historical and cultural context.

FIGURE 2. CONTRIBUTION OF EACH OF FIVE DOMAINS TO THE DISEMPOWERMENT OF WOMEN

Source: Cambodia Development Resource Institute (2012).

GHANA



Note: Zone of Influence = the area where the USAID/Feed the Future initiative operates within a country. All maps reflect the zone of influence and areas where WEAI data was collected at the time of publication.

Ghana's baseline WEAI score:	0.71
5DE score: 0.70	
GPI score: 0.81	
Key constraints for women:	
Access to and decisions on credit; control over use of income; purchase, sale, or transfer of assets	

During the past 20 years, Ghana's impressive economic growth and poverty reduction have made it an African success story. Despite the general success of reducing overall poverty levels in Ghana, significant intra-regional divergences in poverty levels and in the speed of poverty reduction remain. In Ghana, Feed the Future focuses on the country's northern savanna area, which includes four regions where poverty and malnutrition levels have remained strikingly high—parts of the Brong-Ahafo, Northern, Upper East, and Upper West regions.

Methodology: The baseline survey was conducted in July and August 2012, under the auspices of the Economic Growth Office of USAID/Ghana, in the designated Zone of Influence. This zone was defined to encompass 45 districts that fall above the eighth parallel in the Brong-Ahafo, Northern, Upper East, and Upper West administrative regions of Ghana. A sample of 4,410 households in total was drawn with the help of Ghana Statistical Services and the Institute of Statistical, Social, and Economic Research. The University of Ghana was contracted to conduct the survey enumeration.

WEAI score: The overall WEAI score for Ghana is 0.71. The 5DE and GPI scores are presented in Table I and discussed below.

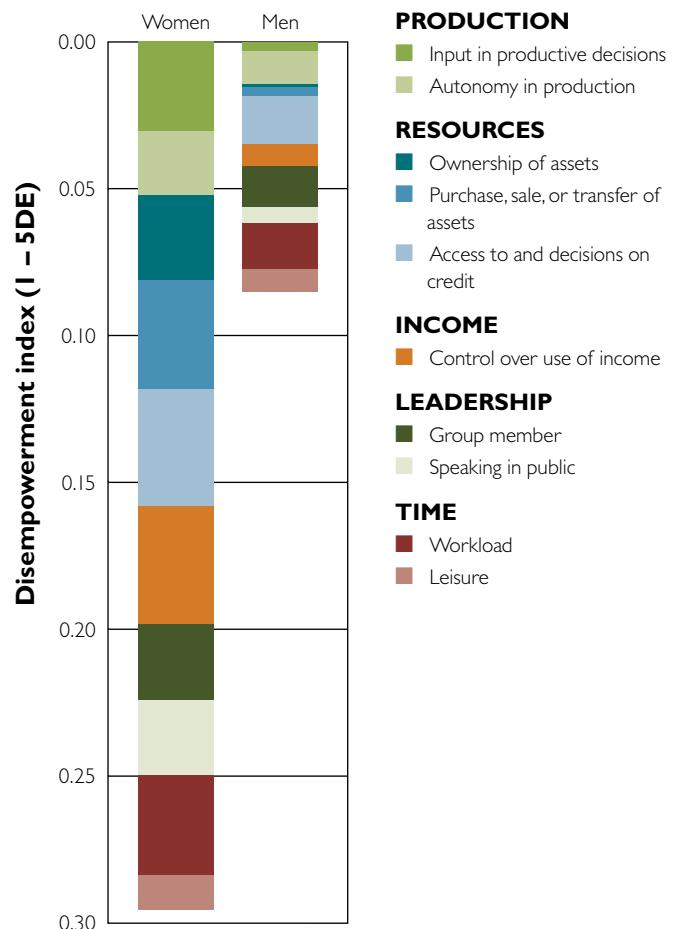
- **5DE score:** The 5DE index value is 0.70. Overall, 27.50 percent of women have achieved adequate empowerment. Those who are not yet empowered (72.50 percent) have a mean 5DE score of 0.59.
- **GPI score:** The GPI is 0.81, and 29.60 percent of the women in the survey have achieved gender parity. The average empowerment gap between the 70.40 percent of women without gender parity and the males in their household is 0.27.

TABLE I. WEAI SCORE

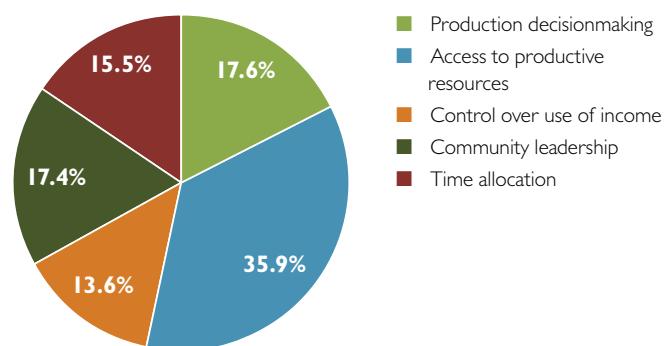
Indicator	Baseline value
5DE score	0.70
Disempowerment score ($I - 5DE$)	0.30
<i>N (number of observations)</i>	2,316
% of women achieving empowerment	27.50
% of women not achieving empowerment	72.50
Mean 5DE score for not yet empowered women	0.59
Mean disempowerment score ($I - 5DE$) for not yet empowered women	0.41
GPI score	0.81
<i>N (number of dual-adult households)</i>	2,556
% of women achieving gender parity	29.60
% of women not achieving gender parity	70.40
Average empowerment gap	0.27
WEAI score	0.71

Source: Kansas State University, Department of Agricultural Economics (2012).

Figure 1 compares male and female disempowerment and illustrates the contribution of each indicator to disempowerment in Ghana. Across all 10 indicators, men fare better than women. Women are more than three times as disempowered as men. The indicator that contributes the most to both female and male disempowerment, and thus presents the greatest constraints, is access to and decisions on credit; women face additional constraint with regard to control over use of income and purchase, sale or transfer of assets. For women, the indicators that contribute least to disempowerment are leisure and autonomy in production. For men, the indicators that contribute least to disempowerment are ownership of assets, input in productive decisions and purchase, sale, or transfer of assets. The indicators exhibiting the greatest gap in male versus female achievement are purchase, sale, or transfer of assets, ownership of assets, and control over use of income, with men's achievements greater than women's for all three indicators. Figure 2 provides a breakdown of women's disempowerment by domain and further illustrates that indicators pertaining to resources—ownership of assets; purchase, sale, or transfer of assets; and access to and decisions on credit, all of which fall under access to productive resources—are the major contributors to disempowerment among Ghanaian women in the survey and contribute more than one-third to women's disempowerment.

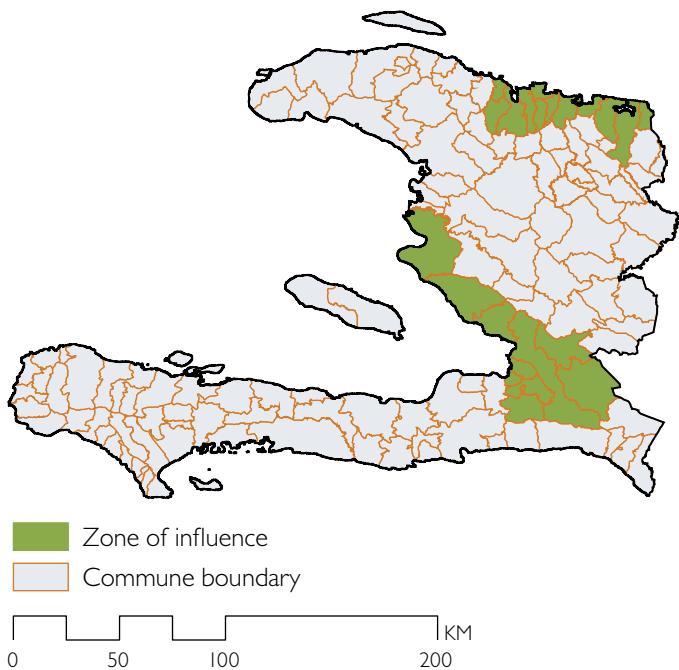
FIGURE 1. CONTRIBUTION OF EACH INDICATOR TO DISEMPOWERMENT

Source: Kansas State University, Department of Agricultural Economics (2012).

FIGURE 2. CONTRIBUTION OF EACH OF FIVE DOMAINS TO THE DISEMPOWERMENT OF WOMEN

Source: Kansas State University, Department of Agricultural Economics (2012).

HAITI



Note: Zone of Influence = the area where the USAID/Feed the Future initiative operates within a country. All maps reflect the zone of influence and areas where WEAI data was collected at the time of publication.

Haiti's baseline WEAI score:

0.85

5DE score: 0.83

GPI score: 0.94

Key constraints for women:

Group membership, workload, and access to and decisions on credit

The challenges facing the agriculture sector in Haiti are significant and well documented, and although they largely pre-date the January 2010 earthquake, the earthquake further threatened the country's food security. Agriculture is central to the Haitian economy, employing approximately 60 percent of the population and serving as the primary source of income in rural areas. Haiti's agriculture sector is characterized by small plots, highly diversified polyculture, and many microclimates. In Haiti, Feed the Future focuses on different value chains in the three US government development corridors: 14 communes in the Northern Corridor, 4 communes in the Saint-Marc Corridor, and 10 communes in the Cul-de-Sac Corridor (including Port-au-Prince). Feed the Future interventions are focused in rural areas, and the measurement of the WEAI took place only in these areas.

Methodology: The sample selection of 1,550 households was performed in two stages: first, sampling of geographic clusters and then sampling of households within the clusters. The first-stage sample of 144 clusters was selected from the three corridors, with 48 clusters allocated to each corridor. Creating the second-stage sample involved selection of 25 households within each sampled cluster. The WEAI was administered from October to December of 2012 by Institut Haïtien de l'Enfance (ICF).

WEAI score: The WEAI score for Haiti is 0.85. The 5DE and GPI scores are presented in Table I and discussed below.

- **5DE score:** The 5DE index value is 0.83. Haiti is split relatively evenly between empowered and not empowered women; 50.40 percent of women have achieved empowerment, while 49.60 percent have not. Those who are not yet empowered have a mean 5DE score of 0.66—that is, they have achieved adequate empowerment on two-thirds of the indicators.
- **GPI score:** The GPI is 0.94, and 62.90 percent of women have achieved gender parity. The average empowerment gap between the 37.10 percent of women with no gender parity and the adult males in their household is 0.16.

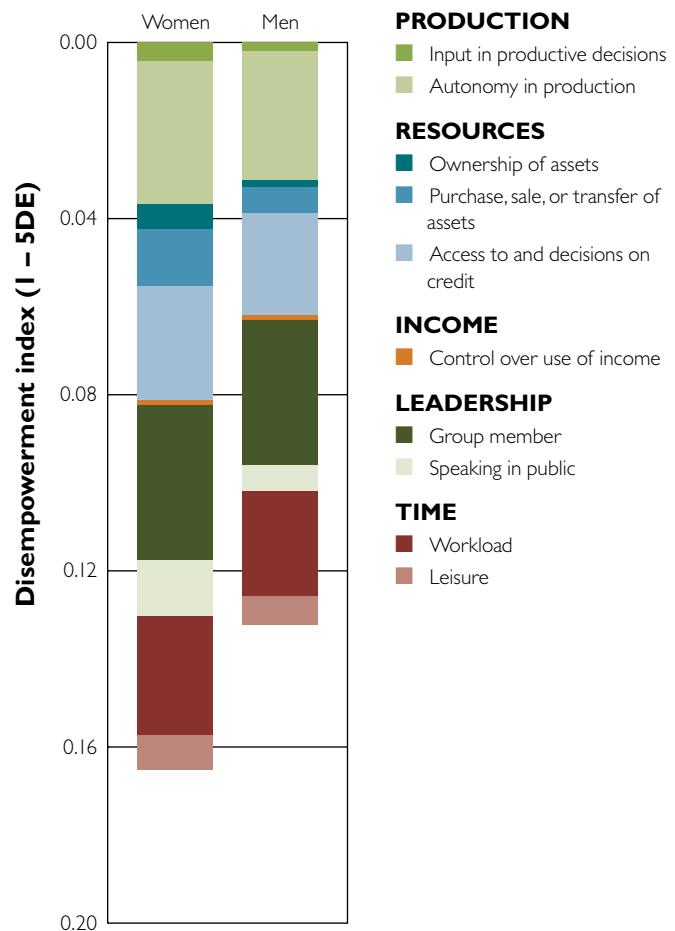
TABLE I. WEAI SCORE

Indicator	Baseline value
5DE score	0.83
Disempowerment score ($I - 5DE$)	0.17
<i>N (number of observations)</i>	1,383
% of women achieving empowerment	50.40
% of women not achieving empowerment	49.60
Mean 5DE score for not yet empowered women	0.66
Mean disempowerment score ($I - 5DE$) for not yet empowered women	0.33
GPI score	0.94
<i>N (number of dual-adult households)</i>	1,014
% of women achieving gender parity	62.90
% of women not achieving gender parity	37.10
Average empowerment gap	0.16
WEAI score	0.85

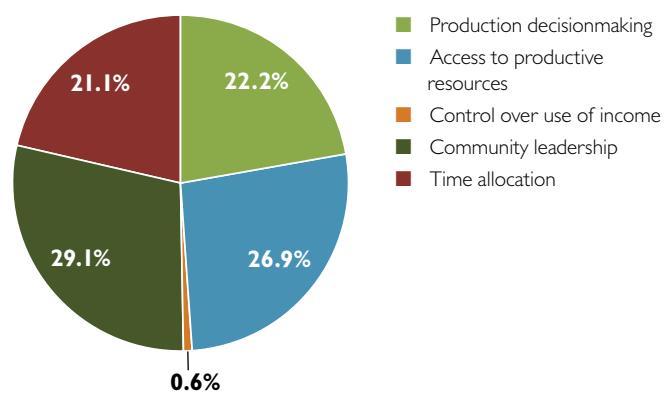
Source: ICF International (2012).

Note: Because of rounding, not all the numbers equal 100.

Figure 1 compares male and female disempowerment and illustrates the contribution of each indicator to disempowerment. Across 9 of the 10 indicators, men fare better than women. The exception is control over use of income, where both men and women fare equally. Perhaps most interesting are the strikingly similar results in the configuration of women's disempowerment relative to men's. These trends show that the composition of disempowerment for men and women is the same, though the depth is greater for women. The indicators that contribute the most to both female and male disempowerment, and thus present the greatest constraints, are autonomy in production, group membership, and workload. The indicators contributing least to both female and male disempowerment are control over use of income, input in productive decisions, and ownership of assets. The indicators exhibiting the greatest gap in male versus female achievement are purchase, sale, or transfer of assets; speaking in public; and ownership of assets, with men's achievements greater than women's for all three indicators. Figure 2 provides a breakdown of women's disempowerment by domain and shows that community leadership and access to productive resources contribute more than 50 percent to women's disempowerment, while control over use of income contributes less than 1 percent.

FIGURE 1. CONTRIBUTION OF EACH INDICATOR TO DISEMPOWERMENT

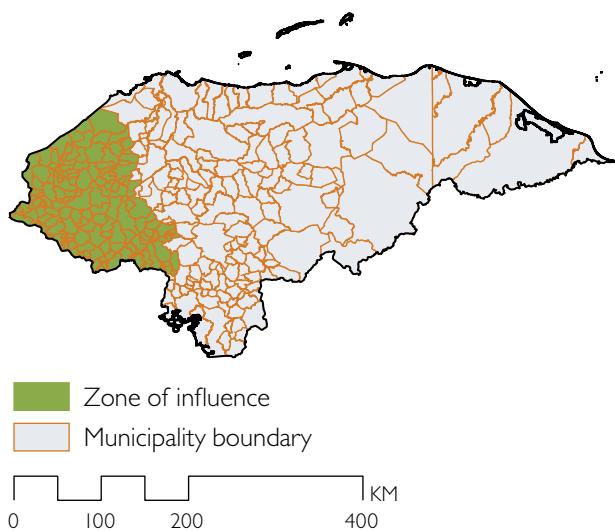
Source: ICF International (2012).

FIGURE 2. CONTRIBUTION OF EACH OF THE FIVE DOMAINS TO THE DISEMPOWERMENT OF WOMEN

Source: ICF International (2012).

Note: Because of rounding, percentages do not add up exactly to 100.

HONDURAS



Note: Zone of Influence = the area where the USAID/Feed the Future initiative operates within a country. All maps reflect the zone of influence and areas where WEAI data was collected at the time of publication.

Honduras's baseline WEAI score: **0.75**

5DE score: 0.74

GPI score: 0.87

Key constraints for women:

Control over use of income, access to
and decisions on credit

Honduras is the second-poorest country in the Western Hemisphere, with a poverty rate of 66 percent. Approximately 73 percent of extremely poor Hondurans—2.6 million people—live in rural areas, where the majority of farm households cultivate traditional crops on small plots. Their access to markets is hindered by poor roads and long distances. Additionally, the use of traditional agricultural practices produces poor yields, depletes soil of nutrients, and leads to forest encroachment. One million extremely poor people are concentrated in six departments in Copan, the western region of Honduras—La Paz, Intibucá, Lempira, Ocotepeque, and Santa Barbara. These six departments also have the country's highest chronic undernutrition rates for children younger than five years old, averaging more than 50 percent. Feed the Future therefore concentrates its programming in Honduras on these western departments, which make up the Zone of Influence.

Methodology: The sample, which was surveyed in June and July 2012 by the International Food Policy Research Institute, comprises 3,326 households distributed across 162 villages in the Zone of Influence.

WEAI score: The WEAI score for Honduras is 0.75. The 5DE and GPI scores are presented in Table I and discussed below.

- **5DE score:** The 5DE index value is 0.74. A mere 31.5 percent of women have achieved adequate empowerment. Those who are not yet empowered (68.5 percent) have a mean 5DE score of 0.61.
- **GPI score:** The GPI is 0.87, and 41.9 percent of women have achieved gender parity. The average empowerment gap between the 58.1 percent of women without gender parity and the adult males in their households is 0.22.

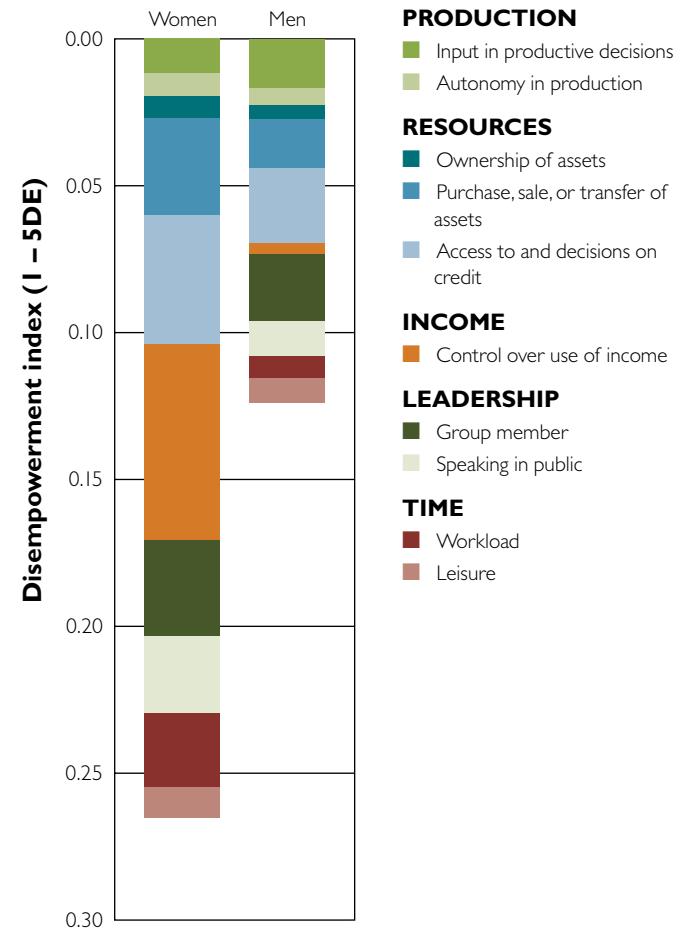
TABLE I. WEAI SCORE

Indicator	Baseline value
5DE score	0.74
Disempowerment score ($I - 5DE$)	0.26
<i>N (number of observations)</i>	<i>n.a.</i>
% of women achieving empowerment	31.50
% of women not achieving empowerment	68.50
Mean 5DE score for not yet empowered women	0.61
Mean disempowerment score ($I - 5DE$) for not yet empowered women	0.39
GPI score	0.87
<i>N (number of dual-adult households)</i>	<i>n.a.</i>
% of women achieving gender parity	41.90
% of women not achieving gender parity	58.10
Average empowerment gap	0.22
WEAI score	0.75

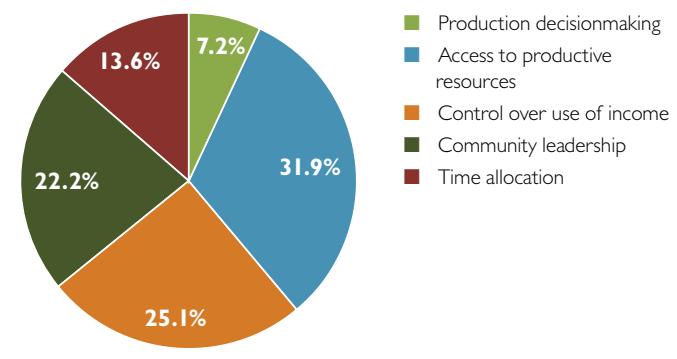
Source: IFPRI (2012b).

Note: n.a.=not available.

Figure 1 compares male and female disempowerment and illustrates the contribution of each indicator to disempowerment. Honduran women are more than twice as disempowered as Honduran men. Across 9 of the 10 indicators, men fare better than women. The exception is input in productive decisions, where women fare better than men. The indicators that contribute the most to female disempowerment, and thus present the greatest constraints, are control over use of income; access to and decisions on credit; and purchase, sale, or transfer of assets. The indicators that contribute the most to male disempowerment are access to and decisions on credit, group membership, and input in productive decisions. The indicators that contribute the least to both female and male disempowerment are autonomy in production and ownership of assets. The indicators exhibiting the greatest gap in male versus female achievement are control over use of income, access to and decisions on credit, and workload, with men's achievements greater than women's for all three indicators. Figure 2 provides a breakdown of women's disempowerment by domain and shows that access to productive resources accounts for almost one-third of women's disempowerment, with control over use of income and community leadership contributing roughly 25 percent and 22 percent, respectively.

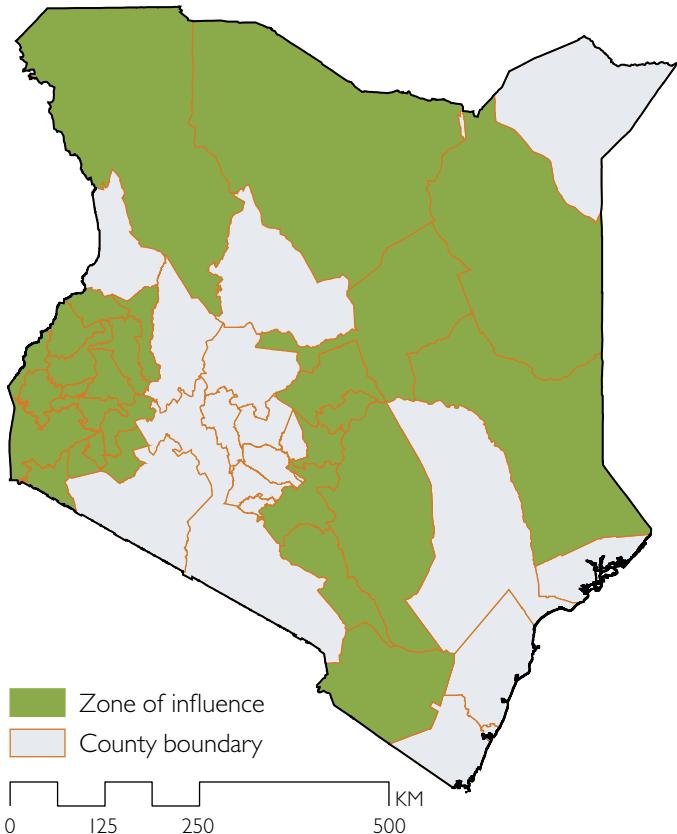
FIGURE I. CONTRIBUTION OF EACH INDICATOR TO DISEMPOWERMENT

Source: IFPRI (2012b).

FIGURE 2. CONTRIBUTION OF EACH OF THE FIVE DOMAINS TO THE DISEMPOWERMENT OF WOMEN

Source: IFPRI (2012b).

KENYA



Note: Zone of Influence = the area where the USAID/Feed the Future initiative operates within a country. All maps reflect the zone of influence and areas where WEAI data was collected at the time of publication.

Kenya's baseline WEAI score:

0.72

5DE score: 0.71

GPI score: 0.81

Key constraints for women:

Access to and decisions on credit, workload, and control over use of income

Kenya's Feed the Future Zone of Influence is composed of two strata: one that comprises districts in semi-arid lands, and one that comprises districts in the northern arid lands. The nine counties in the northern arid lands were added to Kenya's Zone of Influence following a severe drought in 2011. The Feed the Future programming in these northern arid lands focuses on building resilience to recurrent crises, including drought. This summary provides baseline results for only the Zone of Influence in the northern arid lands.

The northern arid lands are remote and have little infrastructure. Decades of underinvestment in the region have left residents highly vulnerable to the challenges of climate change, food insecurity, and conflict. Between 40 and 60 percent of the region's people have never attended school, and less than one in four girls completes primary school.

Methodology: The Kenya National Bureau of Statistics selected the sample of 1,760 households. For security reasons, Garissa, Mandera, and Wajir counties were removed from the sample frame but will be added in future rounds if security improves. Fieldwork was conducted between January and February 2013 by Ronto Research Company, with assistance from TANGO International and Westat.

WEAI score: The overall WEAI score for Kenya is 0.72. The 5DE and GPI scores are presented in Table I and discussed below.

- **5DE score:** The 5DE index value is 0.71. Overall, 31.7 percent of women have achieved adequate empowerment. Those who are not yet empowered (68.4 percent) have a mean 5DE score of 0.57, well below the 0.80 empowerment threshold.
- **GPI score:** The GPI is 0.81, and 36.20 percent of the women in the survey have achieved gender parity. The average empowerment gap between the 63.80 percent of women without gender parity and the adult males in their household is 0.29, which is relatively large.

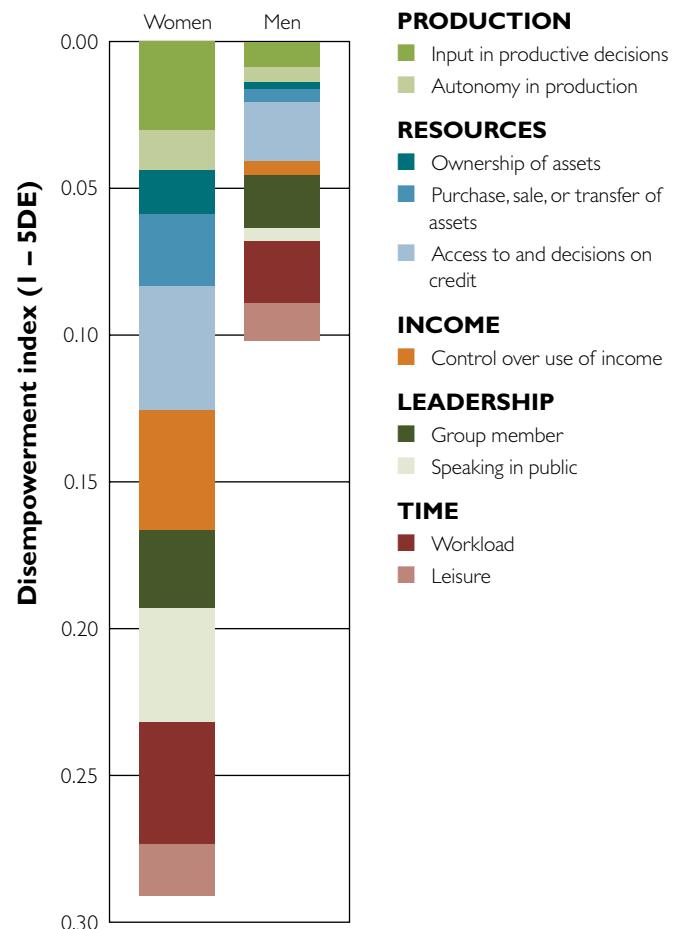
TABLE I. WEAI SCORE

Indicator	Baseline value
5DE score	0.71
Disempowerment score ($I - 5DE$)	0.29
<i>N (number of observations)</i>	669
% of women achieving empowerment	31.70
% of women not achieving empowerment	68.40
Mean 5DE score for not yet empowered women	0.57
Mean disempowerment score ($I - 5DE$) for not yet empowered women	0.43
GPI score	0.81
<i>N (number of dual-adult households)</i>	254
% of women achieving gender parity	36.20
% of women not achieving gender parity	63.80
Average empowerment gap	0.29
WEAI score	0.72

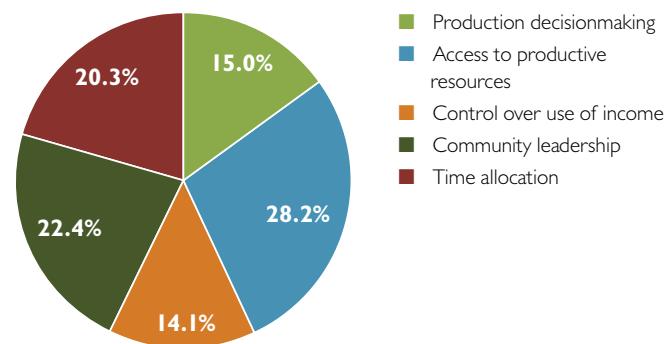
Source: Westat (2013b).

Note: Table includes women only.

Figure 1 compares male and female disempowerment and illustrates the contribution of each indicator to disempowerment. It shows that Kenyan women are almost three times as disempowered as Kenyan men. For all 10 indicators, men fare better than women. The indicators that contribute the most to female disempowerment, and thus present the greatest constraints, are access to and decisions on credit, workload, and control over use of income. The indicators that contribute the most to male disempowerment are workload, access to and decisions on credit, and group membership. The indicators that contribute the least to female disempowerment are autonomy in production, ownership of assets, and leisure, while the indicators that contribute the least to male disempowerment are ownership of assets, autonomy in production, and speaking in public. The indicators exhibiting the greatest gap in male versus female achievement are control over use of income, speaking in public, and input in productive decisions, with men's achievements greater than women's for all three indicators. Figure 2 provides a breakdown of women's disempowerment by domain and shows that access to productive resources accounts for almost 30 percent of women's disempowerment, while time allocation and community leadership each contribute about 20 percent.

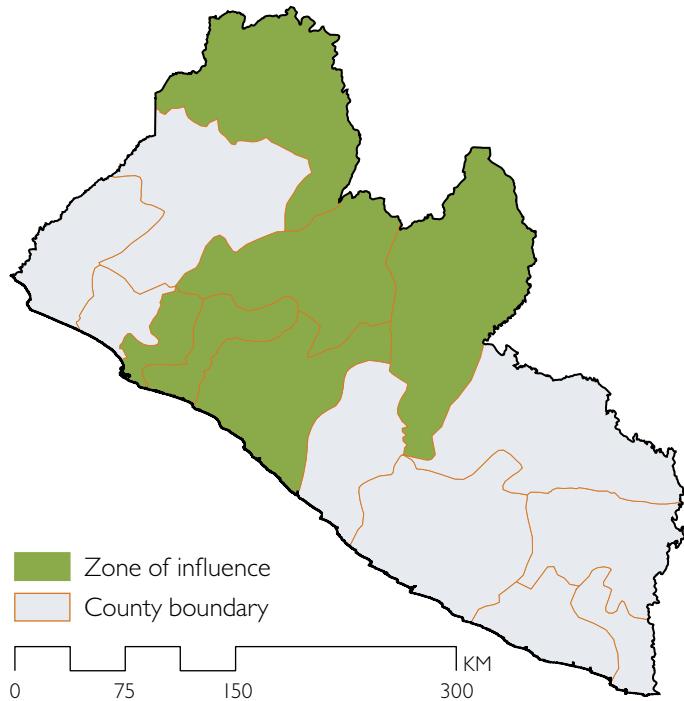
FIGURE 1. CONTRIBUTION OF EACH INDICATOR TO DISEMPOWERMENT

Source: Westat (2013b).

FIGURE 2. CONTRIBUTION OF EACH OF THE FIVE DOMAINS TO THE DISEMPOWERMENT OF WOMEN

Source: Westat (2013b).

LIBERIA



Note: Zone of Influence = the area where the USAID/Feed the Future initiative operates within a country. All maps reflect the zone of influence and areas where WEAI data was collected at the time of publication.

Liberia's baseline WEAI score:

0.69

5DE score: 0.66

GPI score: 0.95

Key constraints for women:

Input in productive decisions, autonomy in production, and access to and decisions on credit

Liberia's prolonged civil wars have left a legacy of devastation, mismanagement, and neglect evident today in the economic, education, and social sectors. But perhaps no sector was more badly hit than agriculture. Agriculture is Liberia's principal sector of activity, accounting for 61 percent of the country's gross domestic product and involving 70 percent of its workforce. Liberia remains one of the most food-insecure countries in Africa: only 9 percent of the country's rural population is food secure. In addition to food insecurity, the country faces widespread poverty, high unemployment, and low human capital. As the agricultural sector has slowly begun to recover in recent years, production has increased, but yields are still well below the regional average and food insecurity remains high. There is, however, recognition of the importance of agriculture in kick-starting the economy.

The Feed the Future Zone of Influence includes the following six counties: Bong, Grand Bassa, Lofa, Margibi, Montserrado, and Nimba. These counties are located along Liberia's main economic development corridors and collectively include around 75 percent of all Liberian households, more than 66 percent of all farming households, and nearly 70 percent of the country's population living below the poverty line.

Methodology: From November 2012 through January 2013, approximately 2,400 households were selected for the baseline survey, from an area composed of 5,358 enumeration areas and 525,306 households in the six focus counties. The enumeration areas were identified through the National 2008 Census, with support from the Liberian Institute for Statistical and Geo-Information Services.

WEAI score: The overall WEAI score for Liberia is 0.69. The 5DE and GPI scores are presented in Table I and discussed below.

- **5DE score:** The 5DE index value is 0.66. Only 30.0 percent of women have achieved adequate empowerment. Those who are not yet empowered (70.0 percent) have a mean 5DE score of 0.51.
- **GPI score:** The GPI is 0.95. No additional information is available on the percentage of women achieving gender parity or the average empowerment gap.

TABLE I. WEAI SCORE

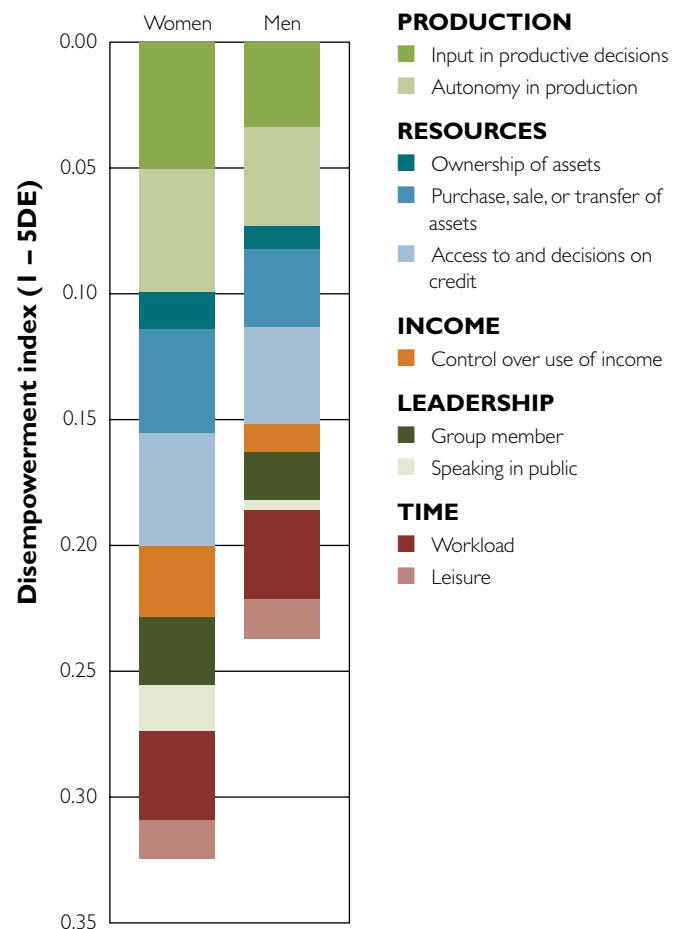
Indicator	Baseline value
5DE score	0.66
Disempowerment score ($I - 5DE$)	0.33
<i>N (number of observations)</i>	1,590
% of women achieving empowerment	30.00
% of women not achieving empowerment	70.00
Mean 5DE score for not yet empowered women	0.51 ^a
Mean disempowerment score ($I - 5DE$) for not yet empowered women	0.49
GPI score	0.95
<i>N (number of dual-adult households)</i>	n.a.
% of women achieving gender parity	n.a.
% of women not achieving gender parity	n.a.
Average empowerment gap	n.a.
WEAI score	0.69

Source: Optimal Solutions Group, LLC (2013).

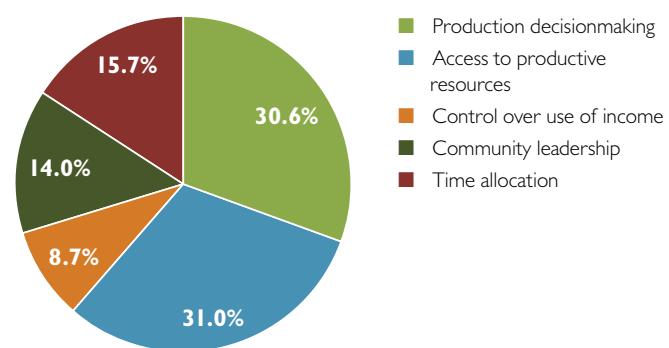
Note: n.a.=not available. Because of rounding, baseline values do not always add up to 100.

^aThis score was adjusted for consistency with the reported overall 5DE index score.

Figure 1 compares male and female disempowerment and illustrates the contribution of each indicator to disempowerment. It shows that Liberian women are more disempowered than Liberian men. For 9 of the 10 indicators, men fare better than women; women fare better than men for the workload indicator. It is interesting to note that the configuration of women's disempowerment is strikingly similar to that of men's, though for women the depth is greater. The indicators that contribute the most to female disempowerment, and thus present the greatest constraints, are input in productive decisions, autonomy in production, and access to and decisions on credit. The indicators that contribute the most to male disempowerment are autonomy in production, access to and decisions on credit, and workload. The indicators that contribute the least to female disempowerment are ownership of assets, leisure, and speaking in public, while the indicators that contribute the least to male disempowerment are similar, with speaking in public and ownership of assets among them. The indicators exhibiting the greatest gaps in male versus female achievement are control over use of income, input in productive decisions, and speaking in public, with men's achievements greater than women's for all three indicators. Figure 2 provides a breakdown of women's disempowerment by domain and illustrates that production decisionmaking and access to productive resources account for more than 60 percent of women's disempowerment.

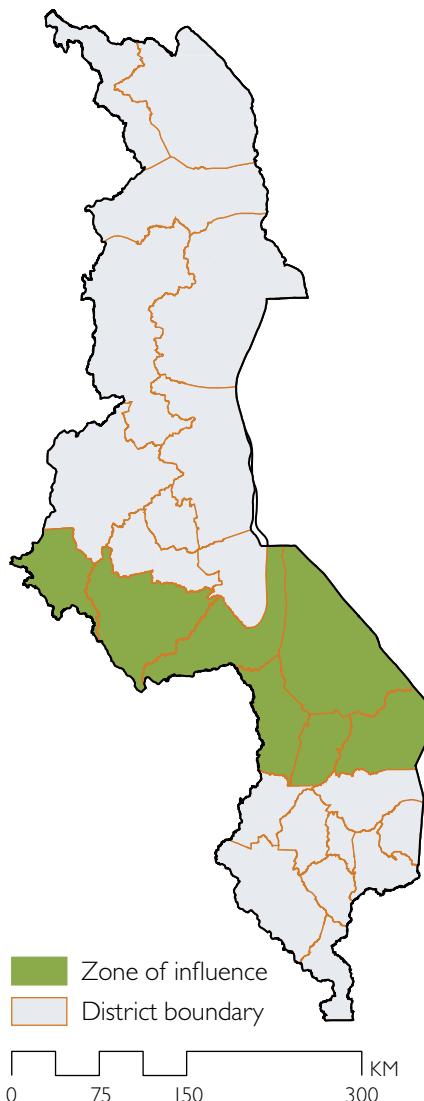
FIGURE 1. CONTRIBUTION OF EACH INDICATOR TO DISEMPOWERMENT

Source: Optimal Solutions Group, LLC (2013).

FIGURE 2. CONTRIBUTION OF EACH OF FIVE DOMAINS TO THE DISEMPOWERMENT OF WOMEN

Source: Optimal Solutions Group, LLC (2013).

MALAWI



Note: Zone of Influence = the area where the USAID/Feed the Future initiative operates within a country. All maps reflect the zone of influence and areas where WEAI data was collected at the time of publication.

Malawi's baseline WEAI score:

0.84

5DE score: 0.83

GPI score: 0.91

Key constraints for women:

Workload, access to and decisions on credit,
and speaking in public

Malawi is divided into the northern, central, and southern Regions. The regions are further subdivided into a total of 28 districts: 6 districts in the northern region, 9 in the central region, and 13 in the southern region. These districts are composed of traditional authorities presided over by chiefs, and each traditional authority contains villages—the smallest administrative unit in the country—that are led by village headmen. The Feed the Future Zone of Influence includes 7 districts situated across the boundary of the Central and Southern Regions: Balaka, Dedza, Lilongwe, Machinga, Mangochi, Mchinji, and Ntcheu. The green areas on the country map indicate the 7 districts of the Zone of Influence.

Methodology: The sample for the Malawi population-based survey baseline consists of 3,528 households across the seven highlighted districts. Sampling was based on a two-stage methodology in 126 rural standard enumeration areas (SEAs). The sample focuses on rural areas only and is stratified by district, with SEAs distributed evenly among districts and 28 households randomly selected from each SEA. The survey questionnaires were developed using the Feed the Future baseline survey guidelines and include indicators for the WEAI, the prevalence of households with moderate or severe hunger, and women's dietary diversity.

WEAI score: The overall WEAI score for Malawi is 0.84. The 5DE and GPI scores are presented in Table I and discussed below.

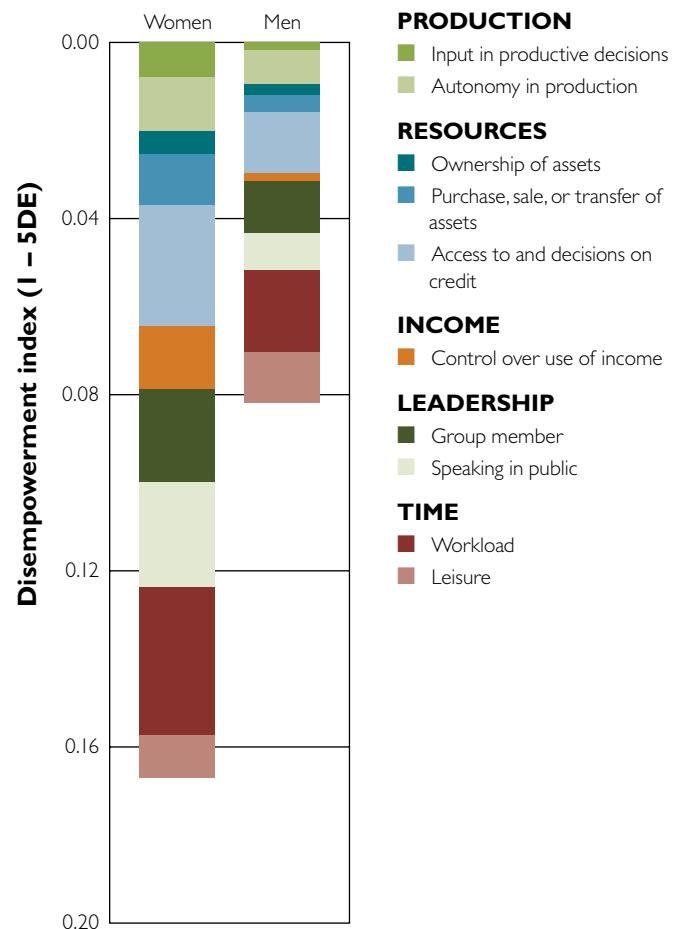
- **5DE score:** The 5DE index value is 0.83. Close to 52 percent of women have achieved adequate empowerment. Those who are not yet empowered (about 48 percent) have a mean 5DE score of 0.65—that is, they have achieved adequate empowerment in close to two-thirds of the indicators.
- **GPI score:** The GPI is 0.91, and about 53 percent of women have achieved gender parity. The average empowerment gap between the 46.74 percent of women without gender parity and the males in their household is 0.19.

TABLE I. WEAI SCORE

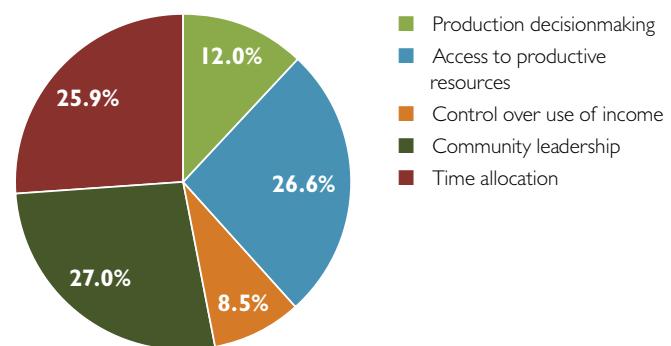
Indicator	Baseline value
5DE score	0.83
Disempowerment score ($I - 5DE$)	0.17
<i>N (number of observations)</i>	2,926
% of women achieving empowerment	51.79
% of women not achieving empowerment	48.21
Mean 5DE score for not yet empowered women	0.65
Mean disempowerment score ($I - 5DE$) for not yet empowered women	0.35
GPI score	0.91
<i>N (number of dual-adult households)</i>	1,557
% of women achieving gender parity	53.26
% of women not achieving gender parity	46.74
Average empowerment gap	0.19
WEAI score	0.84

Source: Westat (2012a).

Figure 1 compares male and female disempowerment and illustrates the contribution of each indicator to disempowerment. The figure shows that overall women are about twice as disempowered as men. For 9 of the 10 indicators, men fare better than women. The exception was the leisure indicator. The indicators that make a major contribution to disempowerment for both women and men are workload, access to and decisions on credit, and speaking in public. For Malawian men leisure is also one of the primary contributors to disempowerment. For both men and women, ownership of assets and input in productive decisions contribute the least to disempowerment. The indicators displaying the largest gap between male and female disempowerment are speaking in public, workload, and access to and decisions on credit, with men's achievements being greater than women's for all three. Figure 2 provides a breakdown of women's disempowerment by domain and shows that access to productive resources, time allocation, and community leadership each contribute about 25 percent to women's disempowerment.

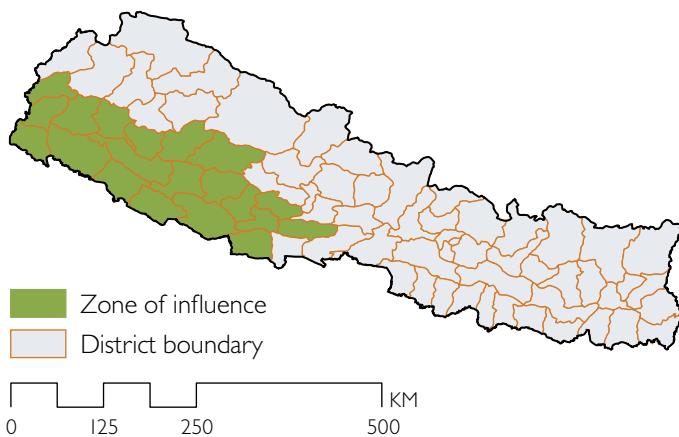
FIGURE 1. CONTRIBUTION OF EACH INDICATOR TO DISEMPOWERMENT

Source: Westat (2012a).

FIGURE 2. CONTRIBUTION OF EACH OF FIVE DOMAINS TO THE DISEMPOWERMENT OF WOMEN

Source: Westat (2012a).

NEPAL



Note: Zone of Influence = the area where the USAID/Feed the Future initiative operates within a country. All maps reflect the zone of influence and areas where WEAI data was collected at the time of publication.

Nepal's baseline WEAI score:

0.80

5DE score: 0.79

GPI score: 0.89

Key constraints for women:

**Group membership, workload, autonomy
in production**

NePAL is a landlocked country divided into three ecological sectors running east to west: the Terai in the south, the hill area in the middle, and the mountain area in the north. Crop production and poverty rates vary significantly by region and district. The far western, midwestern, and western regions have higher subregional hunger indexes, incidence of asset sales as a coping strategy, levels of outmigration, and numbers of female-headed households.

Consequently, the far western and midwestern regions were prioritized by the government of Nepal as areas for investment, and USAID/Nepal has aligned its programming with these priorities. Nepal's Feed the Future program targets 20 districts located in the country's three farthest-west regions and in the Terai and lower hill ecological sectors. These districts are where the most arable land and fertile soil are available and where about 25 percent of the population lives. Feed the Future focuses on 6 districts in the far western region: Achham, Baitadi, Dadeldhura, Doti, Kailali, and Kanchanpur; 10 districts in the midwestern region: Banke, Bardia, Dailekh, Dang, Jajarkot, Pyuthan, Rolpa, Rukum, Salyan, and Surkhet; and 4 districts in the western region: Arghakhachi, Gulmi, Kapilvastu, and Palpa. Together, all these districts make up the Zone of Influence.

Methodology: New Era, a local research firm, interviewed a total of 2,000 households in the Zone of Influence for the baseline data collection activity from April 15 to May 28, 2013. These households were spread across 100 clusters in the 20 targeted districts.

WEAI score: The WEAI score for Nepal is 0.80. The 5DE and GPI scores are presented in Table I and discussed below.

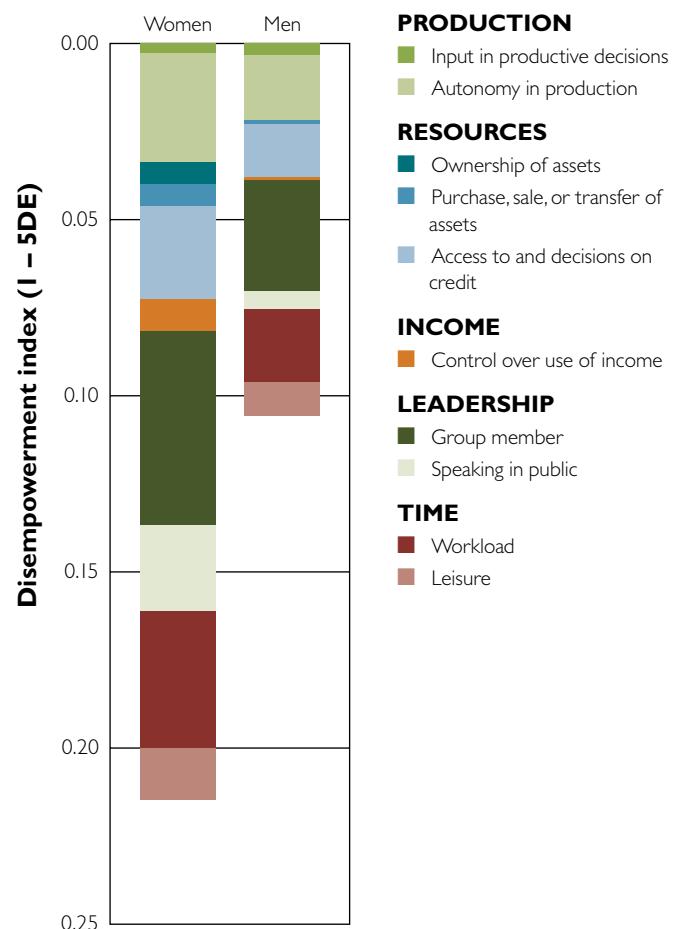
- **5DE score:** The 5DE index value is 0.79. About 41 percent of women have achieved adequate empowerment. Those who are not yet empowered (about 59 percent) have a mean 5DE score of 0.64—that is, they have achieved adequate empowerment in close to two-thirds of indicators.
- **GPI score:** The GPI is 0.89. The average empowerment gap between the 53.2 percent of women without gender parity and the adult males in their household is 0.22.

TABLE I. WEAI SCORE

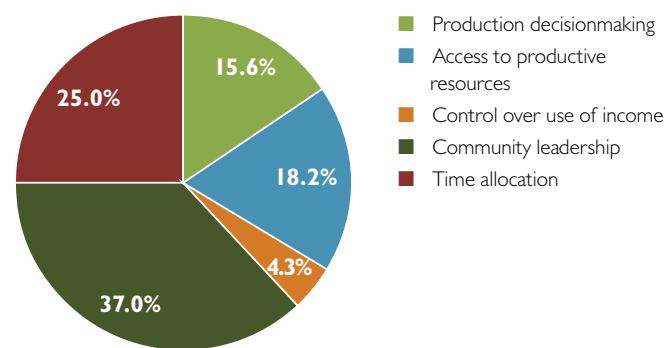
Indicator	Baseline value
5DE score	0.79
Disempowerment score ($I - 5DE$)	0.21
<i>N (number of observations)</i>	1,654
% of women achieving empowerment	41.15
% of women not achieving empowerment	58.85
Mean 5DE score for not yet empowered women	0.64
Mean disempowerment score ($I - 5DE$) for not yet empowered women	0.36
GPI score	0.89
<i>N (number of dual-adult households)</i>	1,136
% of women achieving gender parity	46.80
% of women not achieving gender parity	53.20
Average empowerment gap	0.22
WEAI score	0.80

Source: Westat (2013a).

Figure 1 compares male and female disempowerment and illustrates the contribution of each indicator to disempowerment. The figure reveals that women are more than twice as disempowered as men. For 9 of the 10 indicators, disempowered men fare better than disempowered women. The exception is input in productive decisions, where disempowered men and disempowered women fare about equally. The indicators that contribute the most to both female and male disempowerment are group membership, workload, and autonomy in production. The indicators that contribute the least to female disempowerment are input in productive decisions; ownership of assets; and purchase, sale, or transfer of assets. The indicators that contribute the least to male disempowerment are ownership of assets; purchase, sale, or transfer of assets; and control over use of income. The indicators that display the greatest gap in male versus female disempowerment are group membership, speaking in public, and workload, with women showing higher levels of disempowerment for all indicators. Figure 2 provides a breakdown of women's disempowerment by domain and shows that community leadership accounts for more than one-third of women's disempowerment and that time allocation is responsible for 25 percent of women's disempowerment.

FIGURE 1. CONTRIBUTION OF EACH INDICATOR TO DISEMPOWERMENT

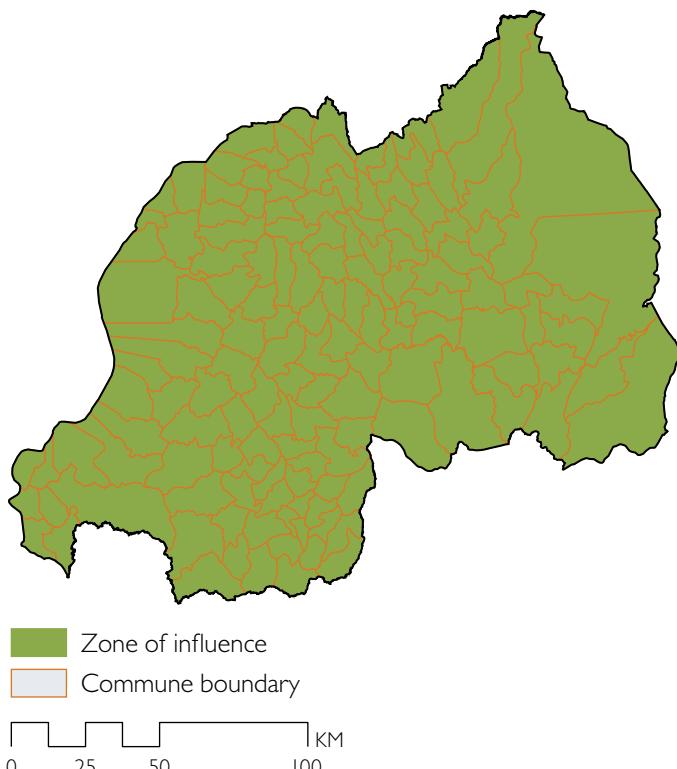
Source: Westat (2013a).

FIGURE 2. CONTRIBUTION OF EACH OF FIVE DOMAINS TO THE DISEMPOWERMENT OF WOMEN

Source: Westat (2013a).

Note: Because of rounding, the percentages do not add up to 100.

RWANDA



Note: Zone of Influence = the area where the USAID/Feed the Future initiative operates within a country. All maps reflect the zone of influence and areas where WEAI data was collected at the time of publication.

Rwanda's baseline WEAI score:	0.91
5DE score:	0.90
GPI score:	0.96
Key constraints for women: Workload, access to and decisions on credit, control over use of income	

Food security is of great concern in Rwanda; nearly half of all Rwandan agricultural households experience food insecurity, and female-headed households, which represent slightly less than one-third of all Rwandan households, are more likely to be food insecure than male-headed households. These conditions make increasing agricultural productivity a critical component of reducing poverty and promoting development in Rwanda. In this context, the Feed the Future Zone of Influence in Rwanda encompasses almost the entire country, including four of five provinces and all of rural Rwanda. The Zone of Influence comprises 27 of the 30 districts in Rwanda, with the exception of the 3 districts of Kigali City.

Methodology: The baseline survey reports on 13 Feed the Future indicators, including WEAI, the Household Hunger Scale, and women's dietary diversity. A total of 2,000 households were interviewed as part of the data collection. These households were spread across 100 enumeration areas drawn from all four provinces.

WEAI score: The overall WEAI score for Rwanda is 0.91. The 5DE and GPI scores are presented in Table I and discussed below.

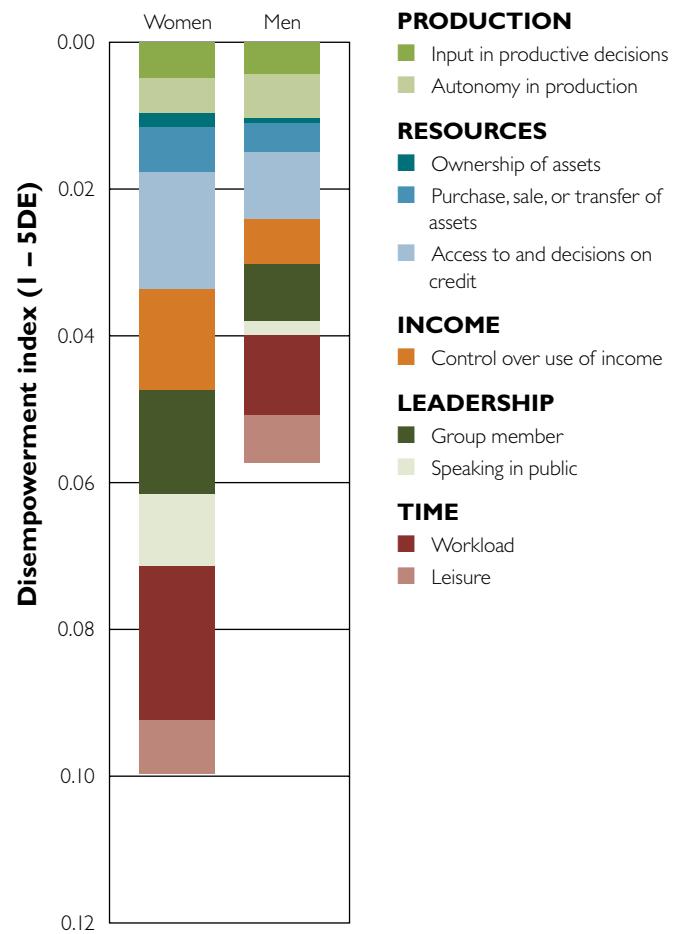
- **5DE score:** The 5DE index value is 0.90. About 70 percent of women have achieved adequate empowerment. Those who are not yet empowered (almost 30 percent of women) have a mean 5DE score of 0.67—that is, they have achieved adequate empowerment in two-thirds of the indicators.
- **GPI score:** The GPI is 0.96, and about 73 percent of women in the survey have achieved gender parity. The average empowerment gap between the 26.54 percent of women without gender parity and the adult males in their household is 0.15.

TABLE I. WEAI SCORE

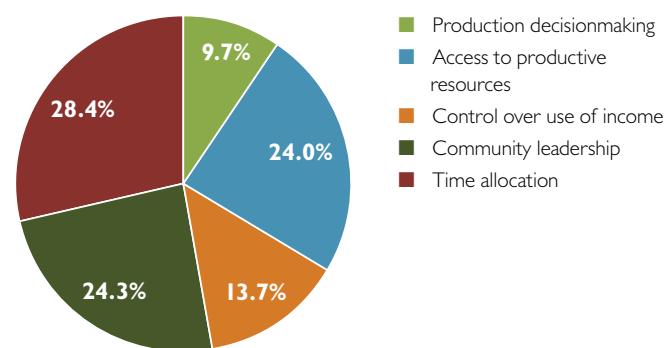
Indicator	Baseline value
5DE score	0.90
Disempowerment score ($I - 5DE$)	0.10
<i>N (number of observations)</i>	1,481
% of women achieving empowerment	70.21
% of women not achieving empowerment	29.79
Mean 5DE score for not yet empowered women	0.67
Mean disempowerment score ($I - 5DE$) for not yet empowered women	0.33
GPI score	0.96
<i>N (number of dual-adult households)</i>	878
% of women achieving gender parity	73.46
% of women not achieving gender parity	26.54
Average empowerment gap	0.15
WEAI score	0.91

Source: Westat (2013c).

Figure 1 compares male and female disempowerment and illustrates the contribution of each indicator to disempowerment. The figure shows that Rwandan women are more disempowered than Rwandan men. For 8 of the 10 indicators, men fare better than women. For autonomy in production, women fare slightly better; and for leisure, men and women fare the same. The indicators that contribute the most to women's and men's disempowerment are workload and access to and decisions on credit. For women, control over use of income is a large contributor, while for men group membership plays an important role. The indicators that contribute the least to women's disempowerment are ownership of assets, autonomy in production, and input in productive decisions. The indicators that contribute the least to men's disempowerment are ownership of assets and speaking in public. The indicators that show the greatest gap between men's and women's disempowerment are workload, speaking in public, and control over use of income. Figure 2 provides a breakdown of women's disempowerment by domain and further reveals that time allocation and community leadership account for over 50 percent of women's disempowerment.

FIGURE 1. CONTRIBUTION OF EACH INDICATOR TO DISEMPOWERMENT

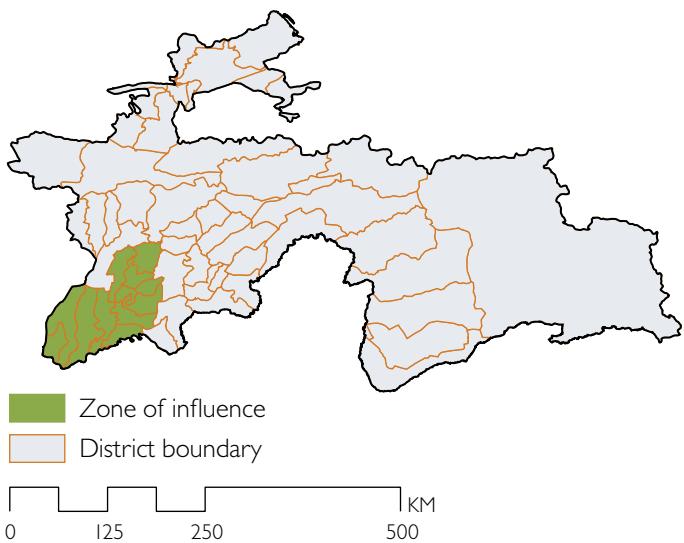
Source: Westat (2013c).

FIGURE 2. CONTRIBUTION OF EACH OF FIVE DOMAINS TO THE DISEMPOWERMENT OF WOMEN

Source: Westat (2013c).

Note: Because of rounding, the percentages do not add up to 100.

TAJIKISTAN



Note: Zone of Influence = the area where the USAID/Feed the Future initiative operates within a country. All maps reflect the zone of influence and areas where WEAI data was collected at the time of publication.

Tajikistan's baseline WEAI score:

0.69

5DE score: 0.68

GPI score: 0.79

Key constraints for women:

Group membership, autonomy in production, access to and decisions on credit

In Tajikistan, 73 percent of the population is rural, and agriculture accounts for 75 percent of total employment and 23 percent of gross domestic product. However, as a result of Tajikistan's mountainous topography, water shortages, and poor irrigation system, only 7 percent of Tajikistan's land surface is arable. These constraints, coupled with a history of conflict have left almost half the population living below the national poverty line, and many women and children undernourished.

To address these constraints, Feed the Future in Tajikistan focuses on 12 districts of Khatlon Province in the southwest region, along the border with Afghanistan. A major agricultural region, Khatlon has the highest rates of undernutrition in the country. However, its irrigated watersheds and cotton-dominated agricultural production make the region a promising place to demonstrate the effects of crop diversification and water and land reforms.

Methodology: A sample of 2,000 households from the 12 Zone of Influence districts was selected for the baseline survey. Fieldwork for the Feed the Future population-based survey took place in Tajikistan from December 2012 to January 2013. A noted methodological constraint was a higher-than-average rate of refusal to answer questions related to group membership. The field implementation teams attributed this reluctance to local and national political concerns.

WEAI score: The overall WEAI score for Tajikistan is 0.69. The 5DE and GPI scores are presented in Table I and discussed below.

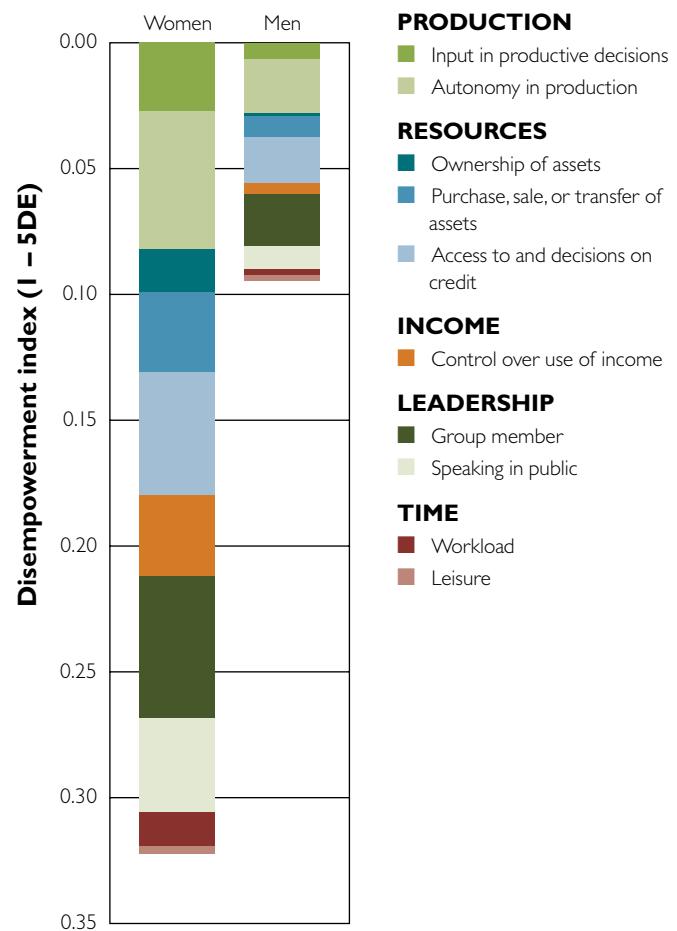
- **5DE score:** The 5DE index value is 0.68. Overall, about 21 percent of women have achieved adequate empowerment. Those who are not yet empowered (almost 79 percent) have a mean 5DE score of 0.59.
- **GPI score:** The GPI is 0.79, and about 28 percent of women in the survey have achieved gender parity. The average empowerment gap between the almost 72 percent of women without gender parity and the adult males in their household is 0.29.

TABLE I. WEAI SCORE

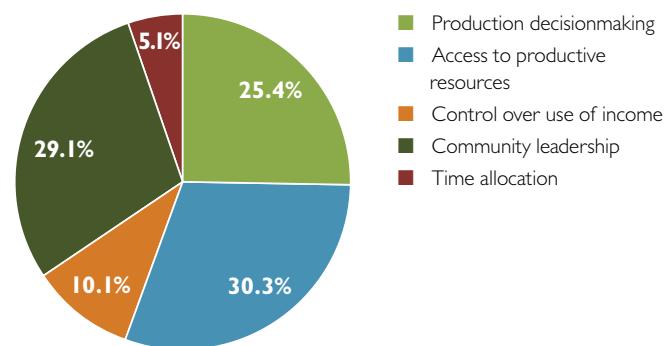
Indicator	Baseline value
5DE score	0.68
Disempowerment score ($I - 5DE$)	0.32
<i>N (number of observations)</i>	1,007
% of women achieving empowerment	21.04
% of women not achieving empowerment	78.96
Mean 5DE score for not yet empowered women	0.59
Mean disempowerment score ($I - 5DE$) for not yet empowered women	0.41
GPI score	0.79
<i>N (number of dual-adult households)</i>	551
% of women achieving gender parity	28.10
% of women not achieving gender parity	71.90
Average empowerment gap	0.29
WEAI score	0.69

Source: Westat (2013c).

Figure 1 compares male and female disempowerment and illustrates the contribution of each indicator to disempowerment. The figure shows that Tajikistani women are more than three times as disempowered as Tajikistani men. For all 10 indicators, men fare better than women. The indicators that contribute the most to both men's and women's disempowerment are group membership, autonomy in production, and access to and decisions on credit. The indicators that contribute the least to both men's and women's disempowerment are leisure, workload, and ownership of assets. The indicators that display the greatest gap between men's and women's disempowerment are group membership, access to and decisions on credit, and autonomy in production. Figure 2 provides a breakdown of women's disempowerment by domain and further illustrates that community leadership and access to productive resources account for almost 60 percent of women's disempowerment.

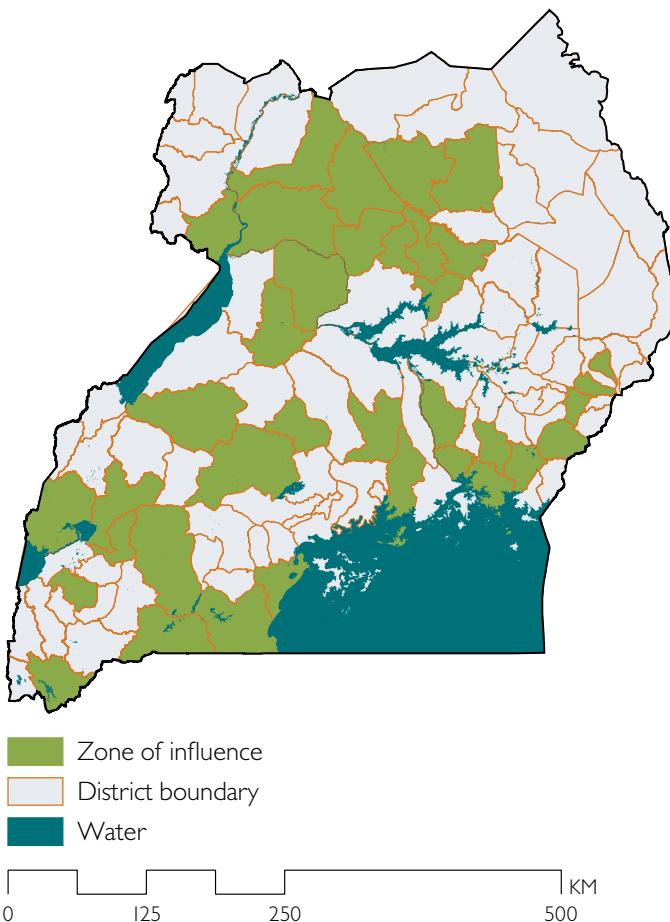
FIGURE 1. CONTRIBUTION OF EACH INDICATOR TO DISEMPOWERMENT

Source: Westat (2012b).

FIGURE 2. CONTRIBUTION OF EACH OF FIVE DOMAINS TO THE DISEMPOWERMENT OF WOMEN

Source: Westat (2012b).

UGANDA



Note: Zone of Influence = the area where the USAID/Feed the Future initiative operates within a country. All maps reflect the zone of influence and areas where WEAI data was collected at the time of publication.

Uganda has one of the most rapidly developing economies in Africa. With 2.9 percent annual growth in agriculture, Uganda is expected to meet the first Millennium Development Goal of halving poverty and hunger by 2015. Yet Uganda continues to suffer from chronic poverty and pervasive undernutrition, with 38 percent of children chronically undernourished or stunted. In this context, Feed the Future prioritized the selection of geographic areas according to the following criteria: number of smallholder farms, number of people living in poverty, number of underweight children, and the potential for commercialization of high-priority staple food crops and cash crops. The selected Zone of Influence comprises 38 districts distributed across eight regions.

Methodology: A total of 2,566 households were interviewed in 140 enumeration areas throughout the country. The baseline survey was designed and implemented through coordinated efforts by the Uganda Bureau of Statistics, Westat, and TANGO International. Data were collected in December 2012.

WEAI score: The overall WEAI score for Uganda is 0.86. The 5DE and GPI scores are presented in Table I and discussed below.

- **5DE score:** The 5DE index value is 0.85. About 58 percent of women have achieved adequate empowerment. Those who are not yet empowered (about 42 percent) have a mean 5DE score of 0.65—that is, they have achieved adequate empowerment in almost two-thirds of the indicators.
- **GPI score:** The GPI is 0.92, and almost 61 percent of women have achieved gender parity. The average empowerment gap between the roughly 39 percent of women without gender parity and the adult males in their households is 0.20.

Uganda's baseline WEAI score: **0.86**

5DE score: 0.85

GPI score: 0.92

Key constraints for women:

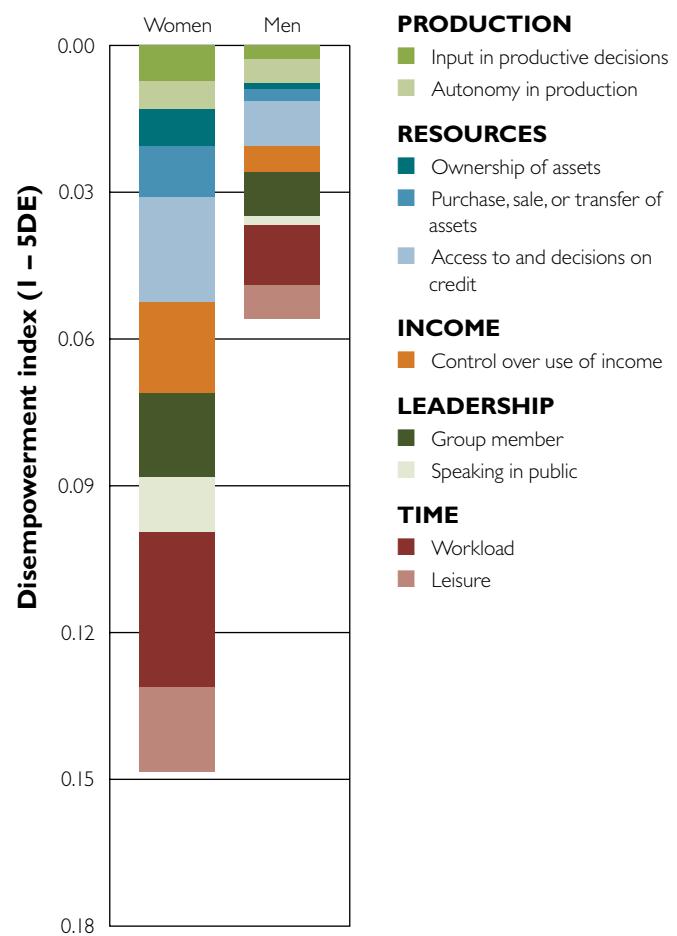
Workload, access to and decisions on credit,
control over use of income

TABLE I. WEAI SCORE

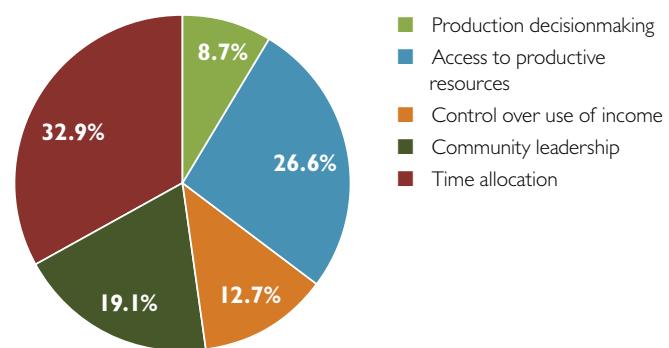
Indicator	Baseline value
5DE score	0.85
Disempowerment score ($I - 5DE$)	0.15
<i>N (number of observations)</i>	1,801
% of women achieving empowerment	57.77
% of women not achieving empowerment	42.23
Mean 5DE score for not yet empowered women	0.65
Mean disempowerment score ($I - 5DE$) for not yet empowered women	0.35
GPI score	0.92
<i>N (number of dual-adult households)</i>	1,012
% of women achieving gender parity	60.98
% of women not achieving gender parity	39.02
Average empowerment gap	0.20
WEAI score	0.86

Source: Westat (2012c).

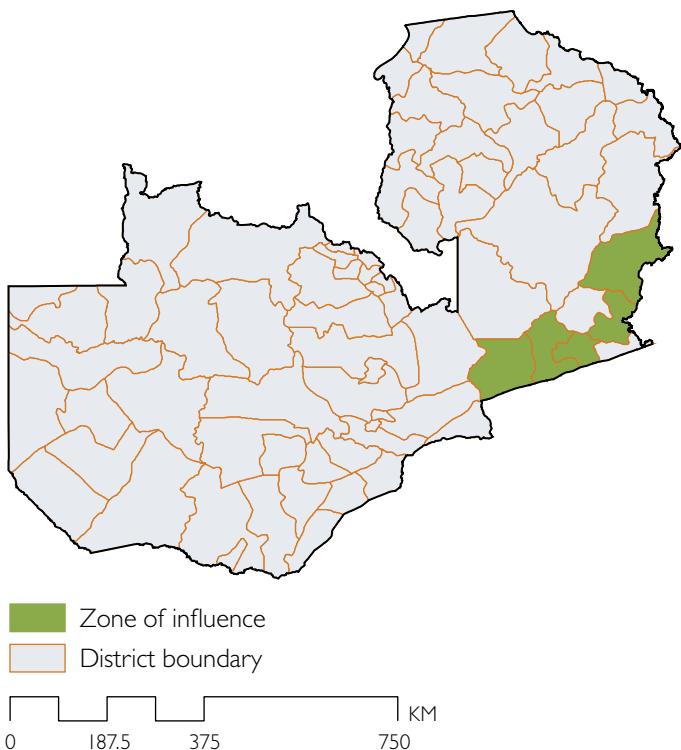
Figure 1 compares male and female disempowerment and illustrates the contribution of each indicator to disempowerment. The figure shows that Ugandan women are more disempowered than Ugandan men. Across all 10 indicators, men fare better than women. The indicators that contribute the most to both men's and women's disempowerment are workload and access to and decisions on credit. For women, control over use of income is also a large contributor, whereas for men, group membership plays an important role. The indicators that contribute the least to women's disempowerment are autonomy in production, input in productive decisions, and ownership of assets. The indicators that contribute the least to men's disempowerment are ownership of assets and speaking in public. The indicators that show the greatest gap between men and women are workload, control over use of income, and access to and decisions on credit. Figure 2 provides a breakdown of women's disempowerment by domain and illustrates that time allocation and access to productive resources contribute almost 60 percent to women's disempowerment.

FIGURE 1. CONTRIBUTION OF EACH INDICATOR TO DISEMPOWERMENT

Source: Westat (2012c).

FIGURE 2. CONTRIBUTION OF EACH OF FIVE DOMAINS TO THE DISEMPOWERMENT OF WOMEN

ZAMBIA



Note: Zone of Influence = the area where the USAID/Feed the Future initiative operates within a country. All maps reflect the zone of influence and areas where WEAI data was collected at the time of publication.

Zambia's baseline WEAI score:

0.80

5DE score index: 0.79

GPI score index: 0.89

Key constraints for women:

Workload, access to and decisions on credit,
speaking in public

Zambia is a landlocked country with a population of approximately 13 million people and one of the lowest population densities in Africa. Agriculture supports the livelihoods of more than 70 percent of the population, and rural poverty remains very high at 80 percent. Agricultural productivity of staple crops has been stagnant because of inadequate infrastructure, small agricultural parcels, low productivity, and seasonal variability. In this context, the geographic focus of Feed the Future activities in Zambia was determined by the following criteria: the number of smallholders, the number of people living in poverty, and the number of underweight children. The potential for commercialization of high-priority staple food crops was also considered. The Zone of Influence in Zambia comprises five districts located in the Eastern Province: Chipata, Katete, Lundazi, Nyimba, and Petauke. The Eastern Province is home to 240,000 poor smallholders, 14 percent of Zambia's underweight children under five years of age, and 23 percent of the country's female-headed households.

Methodology: Zambia's Central Statistics Office, with technical assistance from the National Food and Nutrition Commission, TANGO International, and Ronto Research Company, collected data for the WEAI in November and December 2012. The Office also gathered information on other Feed the Future indicators, including women's dietary diversity and the prevalence of households with moderate or severe hunger. The survey questionnaire was developed based on Feed the Future guidelines and designed to conform to existing questionnaires, including Demographic and Health Surveys. The sample consisted of 1,640 households, 89 percent of which were classified as rural, in 82 different enumeration areas in the five districts that make up the Zone of Influence. The selected sample was a subset of 8,839 households surveyed nationally.

WEAI score: The WEAI score for Zambia is 0.80. The 5DE and GPI scores are presented in Table I and discussed below.

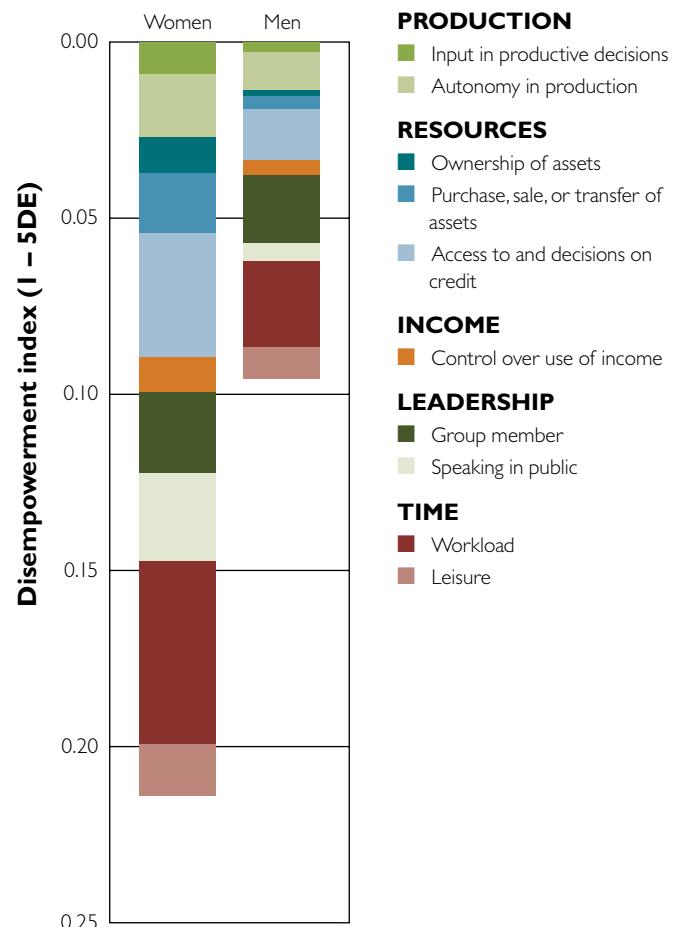
- **5DE score:** The 5DE index value is 0.79. Approximately 40 percent of women have achieved adequate empowerment. Those who are not yet empowered (about 60 percent) have a mean 5DE score of 0.64.
- **GPI Score:** The GPI is 0.89, and 45.94 percent of the women in the survey have achieved gender parity. The average empowerment gap between the 54.06 percent of women without gender parity and the adult males in their household is 0.20.

TABLE I. WEAI SCORE

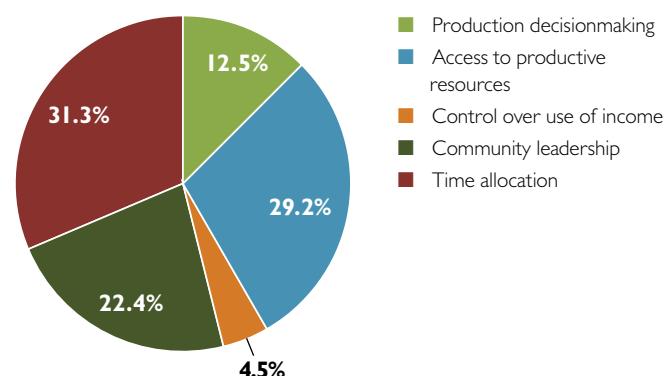
Indicator	Baseline value
5DE score	0.79
Disempowerment score ($I - 5DE$)	0.21
<i>N (number of observations)</i>	1,325
% of women achieving empowerment	40.28
% of women not achieving empowerment	59.72
Mean 5DE score for not yet empowered women	0.64
Mean disempowerment score ($I - 5DE$) for not yet empowered women	0.36
GPI score	0.89
<i>N (number of dual-adult households)</i>	925
% of women achieving gender parity	45.94
% of women not achieving gender parity	54.06
Average empowerment gap	0.20
WEAI score	0.80

Source: Westat (2012d).

Figure 1 compares male and female disempowerment and illustrates the contribution of each indicator to disempowerment. The figure reveals that Zambian women are more disempowered than Zambian men. For all 10 indicators, disempowered men fare better than disempowered women. The indicators that contribute the most to women's disempowerment are workload, access to and decisions on credit, and speaking in public. The indicators that contribute the most to men's disempowerment are workload, group membership, and access to and decisions on credit. The indicators that contribute the least to both men's and women's disempowerment are input in productive decisions and ownership of assets. The indicators that display the largest gap between men and women are workload, speaking in public, and access to and decisions on credit, with men's achievements being greater than women's for all three. Figure 2 provides a breakdown of women's disempowerment by domain and shows that time allocation and access to productive resources account for more than 60 percent of women's disempowerment.

FIGURE I. CONTRIBUTION OF EACH INDICATOR TO DISEMPOWERMENT

Source: Westat (2012d).

FIGURE 2. CONTRIBUTION OF EACH OF FIVE DOMAINS TO THE DISEMPOWERMENT OF WOMEN

Source: Westat (2012d).

Note: Because of rounding, the percentages do not add up to 100.

CROSS-COUNTRY ANALYSIS: TOO LITTLE CREDIT, TOO MUCH WORK, AND NOT ENOUGH GROUPS

The following sections review some of the patterns that emerge from the country summaries.

The data collected on women's empowerment in agriculture in 13 countries allows for generalizations and cross-country comparisons. Which constraints contribute most to disempowerment across countries and regions? Is empowerment associated with other development indicators? The following sections review some of the patterns that emerge from the country summaries, how women's empowerment in agriculture relates to development outcomes that interest the Feed the Future initiative, and the policy implications of the report's findings.

WEAI SCORE FINDINGS

Table I summarizes the WEAI scores by region and divides them into high, medium, and low rankings based on their score. Bangladesh has the lowest WEAI score at 0.66 while Cambodia has the highest at 0.98. No global pattern emerges regarding the scores. This is not surprising, given the diversity of the Feed the Future zones in the countries included, as well as the countries themselves. Regionally within Africa, West Africa has the lowest achievement, followed by southern Africa, with medium-ranking countries.

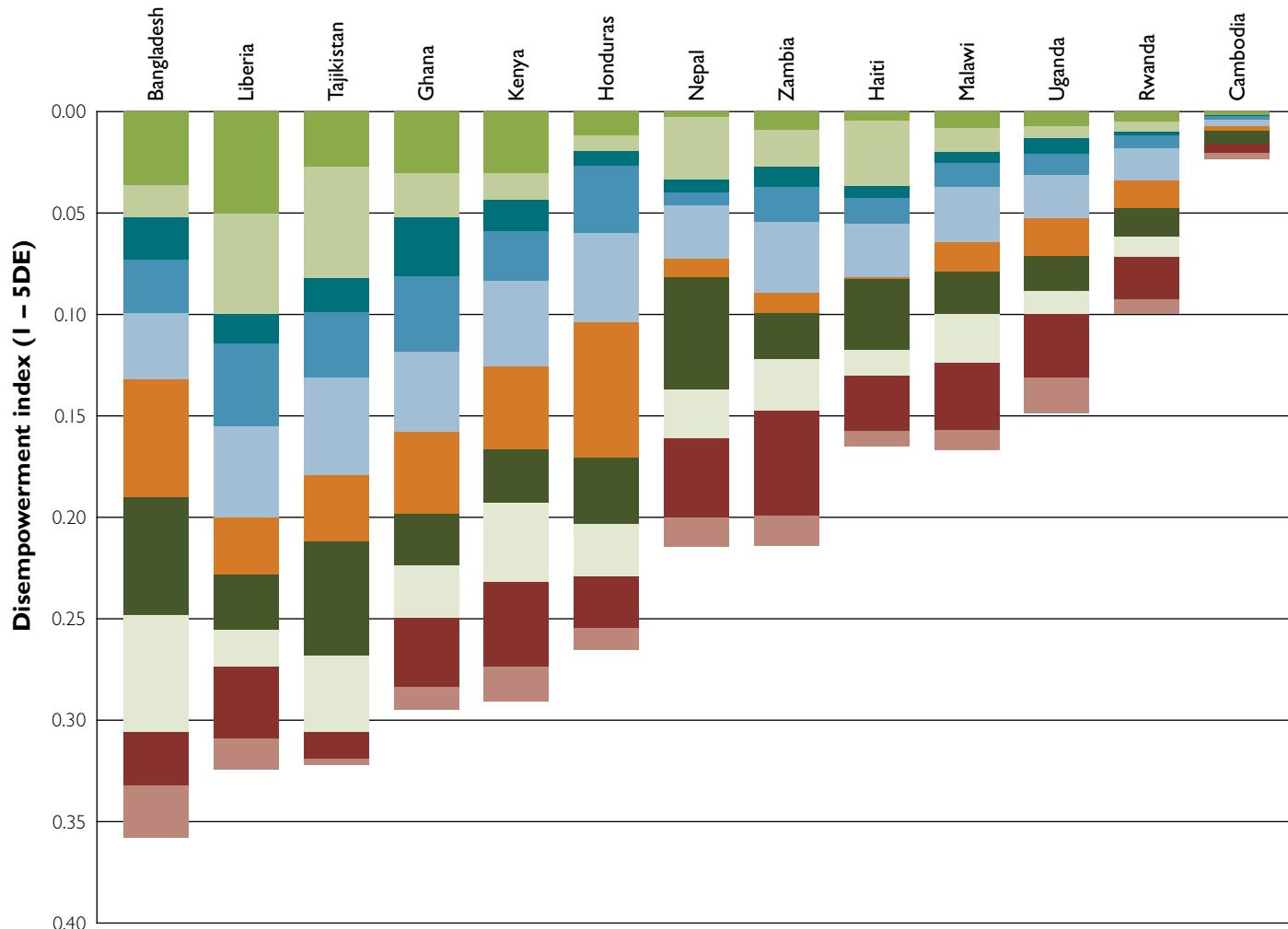
TABLE I. 5DE, GPI AND WEAI SCORES

Country	Region	5DE	GPI	WEAI	Ranking
Bangladesh	Asia	0.65	0.80	0.66	Low
Cambodia	Asia	0.98	0.99	0.98 ^a	High
Nepal	Asia	0.79	0.89	0.80	Medium
Tajikistan	Asia	0.68	0.79	0.69	Low
Haiti	Latin America & Caribbean	0.83	0.94	0.85	High
Honduras	Latin America & Caribbean	0.74	0.87	0.75	Medium
Kenya	East Africa	0.71	0.81	0.72	Low
Rwanda	East Africa	0.90	0.96	0.91	High
Uganda	East Africa	0.85	0.92	0.86	High
Ghana	West Africa	0.70	0.81	0.71	Low
Liberia	West Africa	0.66	0.95	0.69	Low
Malawi	Southern Africa	0.83	0.91	0.84	Medium
Zambia	Southern Africa	0.79	0.89	0.80	Medium

Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: ^aCompared to other countries, Cambodia's high WEAI score makes it an outlier in this analysis. Also, data on the public speaking indicator were not collected, thus Cambodia's results should be interpreted with caution and not directly compared to the other countries.

FIGURE I. CONTRIBUTION OF EACH INDICATOR TO WOMEN'S DISEMPowerMENT



Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Significant additional information is provided by the 5DE and GPI scores. Consider the three countries having the lowest levels of empowerment: Bangladesh, Liberia, and Tajikistan. While all of them have similar 5DE values of 0.65–0.68, the GPI results vary considerably. The lowest gender parity is found in Tajikistan and Bangladesh, whereas Liberia has relatively high gender parity. Breaking down the 5DE score into its component indicators provides additional insight as to which indicators contribute substantially more or less to women's empowerment (Figure I). For example, compare Ghana and Kenya, whose 5DE scores are similar but whose composition of disempowerment differs. The contribution of production and resources to disempowerment is greater in Ghana, whereas lack of time and leadership opportunities are more disempowering in Kenya. In contrast, Zambia and Malawi have quite similar patterns of disempowerment, but Zambian women are slightly less empowered, primarily due to their greater constraint in workload. Examining the highest and lowest 5DE scores, women in Bangladesh, Liberia, and Tajikistan are more than three times

PRODUCTION

- Input in productive decisions
- Autonomy in production

RESOURCES

- Ownership of assets
- Purchase, sale, or transfer of assets
- Access to and decisions on credit

INCOME

- Control over use of income

LEADERSHIP

- Group member
- Speaking in public

TIME

- Workload
- Leisure

as disempowered as women in Rwanda (excluding Cambodia which appears an outlier). Looking at scores by region, Asia has the greatest range in scores, followed by East Africa due to Kenya's notably lower achievement. Both southern and West Africa exhibit the greatest similarity in score, although they have fewer countries of comparison.

In the majority of countries, limited ownership of assets and lack of leisure time contribute least to women's disempowerment. Conversely, access to and decisions on credit emerges as a major constraint in most countries, with low levels of group membership and heavy workloads also significant contributors to women's disempowerment. However, in general, there is no simple pattern to women's disempowerment, in terms of either the depth of disempowerment or the relative contribution of each indicator.

What are the top contributors to women's disempowerment?

As Table 2 demonstrates, the top contributor to women's disempowerment is access to and decisions on credit. Workload and group membership are the second and third largest contributors, respectively. Regionally, credit ranks within the top three indicators contributing to women's disempowerment in ten of thirteen countries; it is the most dominant constraint among countries in East Africa. Workload is a dominant constraint in seven countries and in every region except West Africa; it is the top contributor to women's disempowerment in southern Africa. Group membership is a dominant constraint in six countries, but figures most prominently in Asia and least in the southern and West African regions.

Comparing countries within regions, Asian women are most constrained with respect to the group membership indicator. Regional patterns are less clear in Latin America and the Caribbean (LAC), with only two countries serving as the basis of comparison and no indicator emerging as a dominant constraint in both countries. In Africa, the patterns of disempowerment are more obvious. Across all countries in Africa, credit ranks among the top three contributors to women's disempowerment. In southern Africa, the pattern of disempowerment among women is strikingly similar; for instance, Malawi and Zambia have exactly the same indicators and rankings. West Africa differs from the other African regions in that neither group membership nor workload rank among the top contributors.

- **Access to and decisions on credit:** As the foremost contributor to women's disempowerment, credit is an important constraint in all regions. To have empowerment in this indicator, a woman must belong to a household that has used a credit option, and the woman must have participated in at least one decision about it. While this analysis highlights a lack of empowerment for this indicator, it remains unclear whether the driving factor is a lack of access to credit, or a lack of decisionmaking power regarding the use of credit. As illustrated in Figure 2, Cambodia, Rwanda, and Uganda stand out as having the lowest disempowerment scores for this indicator (with Cambodia as

a possible outlier). Countries with the highest contributions to disempowerment from this indicator include Tajikistan, Liberia, Honduras, and Kenya, respectively.

- **Workload:** Women who work more than 10.5 hours per day are considered disempowered.¹ As Figure 3 indicates, disempowerment regarding workload is lowest among women in Cambodia, Tajikistan, and Rwanda, and highest among women in Nepal, Kenya, and Zambia. Levels of disempowerment for this indicator are markedly similar among LAC and West African countries, with LAC countries slightly less disempowered than West African countries.
- **Group membership:** Group membership is an important source of social capital, and this indicator measures whether a woman is a member of at least one group out of a wide range of social and economic organizations.² High rates of disempowerment in this indicator may be indicative of social and cultural norms that discourage participation in activities outside the home (Alkire et al. 2013). While lack of group membership is a top contributor to women's disempowerment across countries, it is most significant in Asia, as Figure 4 illustrates, with Cambodia being the exception.³ Regionally, LAC women are the second-most constrained by this indicator, and disempowerment regarding group membership is least important in the African regions.

¹ The workload indicator is derived from a detailed 24-hour time allocation module in which respondents are asked to recall the time spent on primary and secondary activities during the previous 24 hours. The respondent may mention up to two activities that he or she may be doing simultaneously (for example, taking care of a child while cooking), and the respondent identifies which is the primary and which is the secondary activity. The individual is considered to have inadequate achievement (an excessive workload) if he or she worked more than 10.5 hours in the previous 24 hours, with hours worked defined as the sum of the time spent on work-related tasks as part of the primary activity plus 50 percent of the time spent on work-related tasks as part of the secondary activity (Alkire et al. 2013).

² Note that if a woman indicates there are no groups in her community, she is presently excluded from the analysis rather than deemed disempowered for this indicator. However, because the absence of groups may indicate disempowerment, we're exploring more carefully the sensitivity of this indicator to the exclusion of these observations.

³ Data on speaking in public could not be collected because of Cambodia's historical and cultural context. As a result, Cambodia's results are not directly comparable with those of other countries.

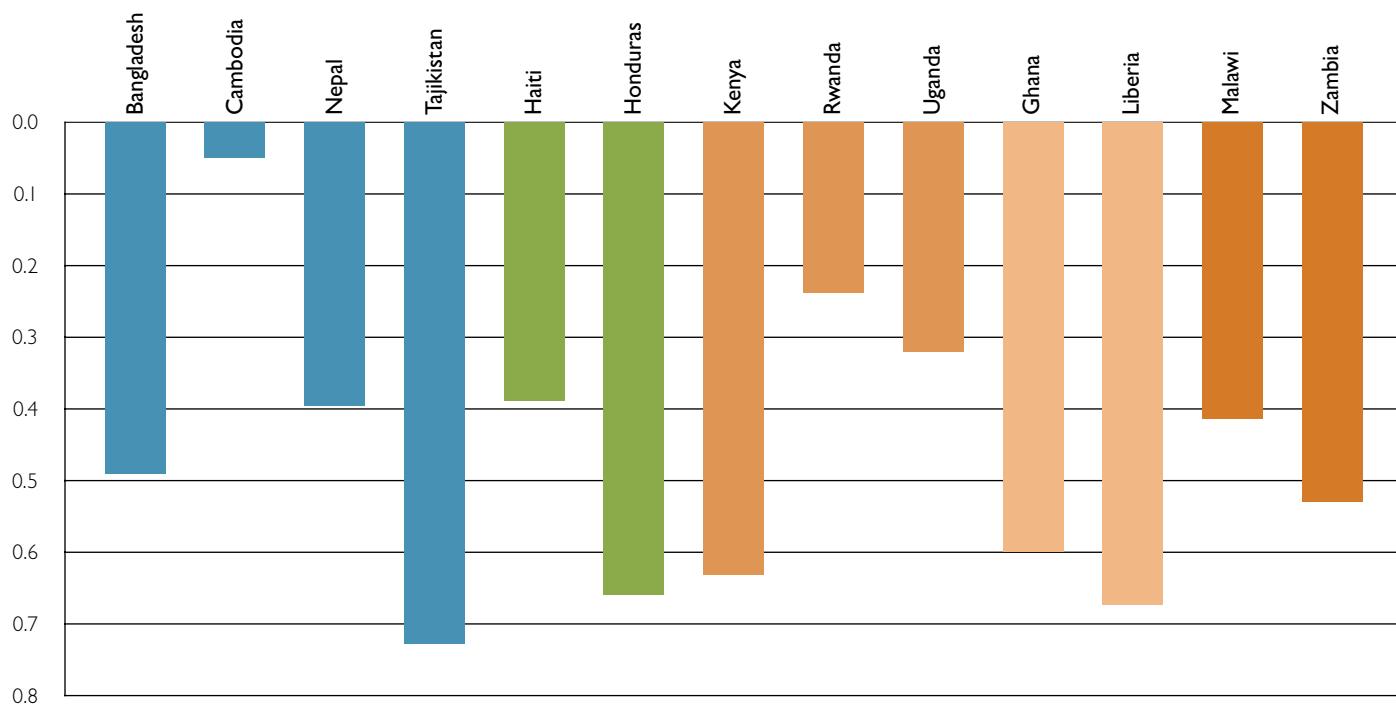
TABLE 2. TOP CONTRIBUTORS TO WOMEN'S DISEMPowerMENT

	Bangladesh*	Cambodia	Nepal	Tajikistan	Asia total	Haiti	Honduras	LAC total	Kenya	Rwanda	Uganda	East Africa total	Malawi	Zambia	Southern Africa total	Ghana**	Liberia	West Africa total	Number of countries with this top constraint	Indicators' total points count
Constraints																				
Input in productive decisions																	1	1	1	3
Autonomy in production	3	2	2		3			1								2	1	4	6	
Ownership of assets																				
Purchase, sale, or transfer of assets								3	1							2	1	2	3	
Access to and decisions on credit	3	3	2				2	1	1	1	1	2	3	2	2	1	3	2	10	20
Control over use of income	1				1		1	1	3	3	3	3			1		1	6	12	
Group member	1	1	1	1	4	1		1		2		1						6	17	
Speaking in public	1				1							3	3	2				3	5	
Workload		2	2		2	2		1	2		1	2	1	1	2			7	17	
Leisure																				

Source: Authors.

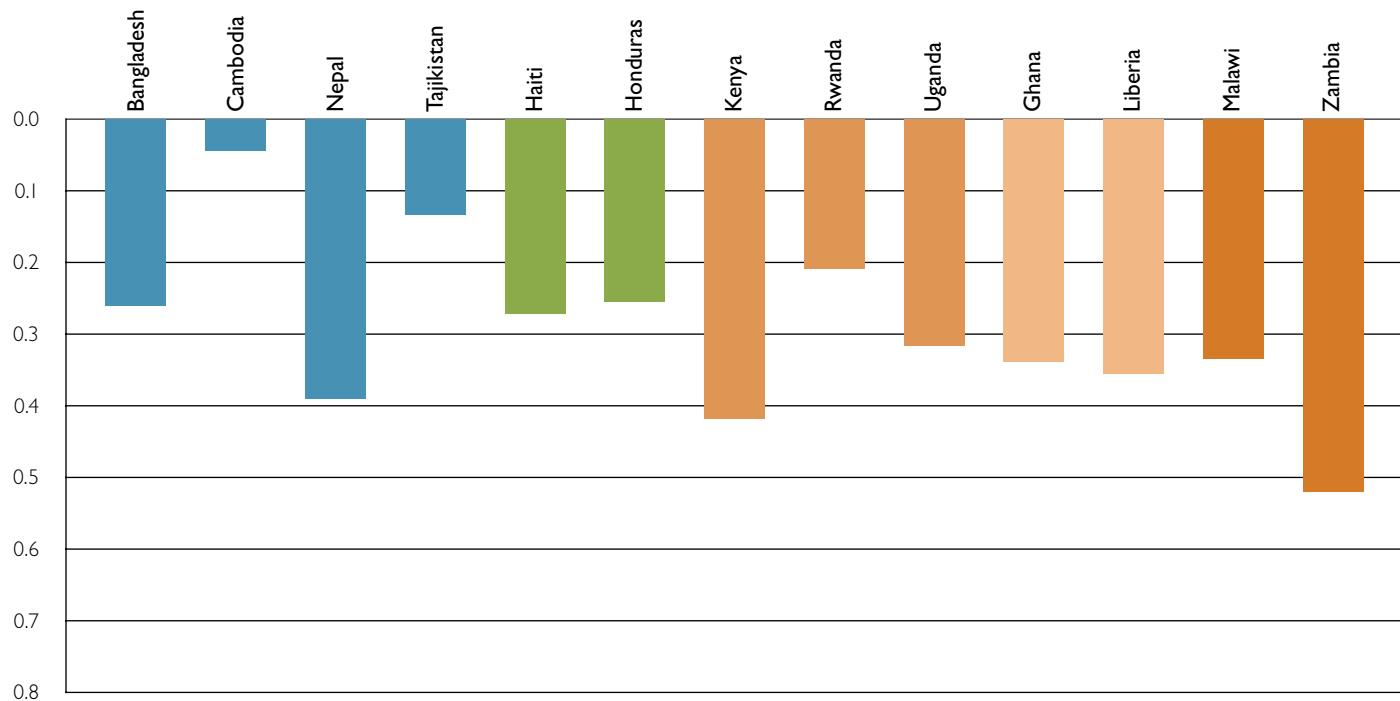
Notes: * = A three-way tie among the top three constraints; ** = A two-way tie among the top two constraints; LAC = Latin America and the Caribbean. The three indicators that represent the greatest constraints to empowerment are identified and ranked for women in each country; they are indicated by a "1", "2" or "3" in each of the country columns. The regional totals represent the number of countries in which a given indicator was a top constraint. The column "Number of countries with this top constraint," counts the number of countries for which an indicator appeared as one of the top three constraints. The column "Indicators' total points count," assigns the highest constraint 3 points, the second-highest constraint 2 points, and the third-highest constraint 1 point, and aggregates these points for all indicators across all countries.

FIGURE 2. PROPORTION OF WOMEN NOT YET EMPOWERED AND WHO HAVE INADEQUATE ACHIEVEMENT: ACCESS TO AND DECISIONS ON CREDIT



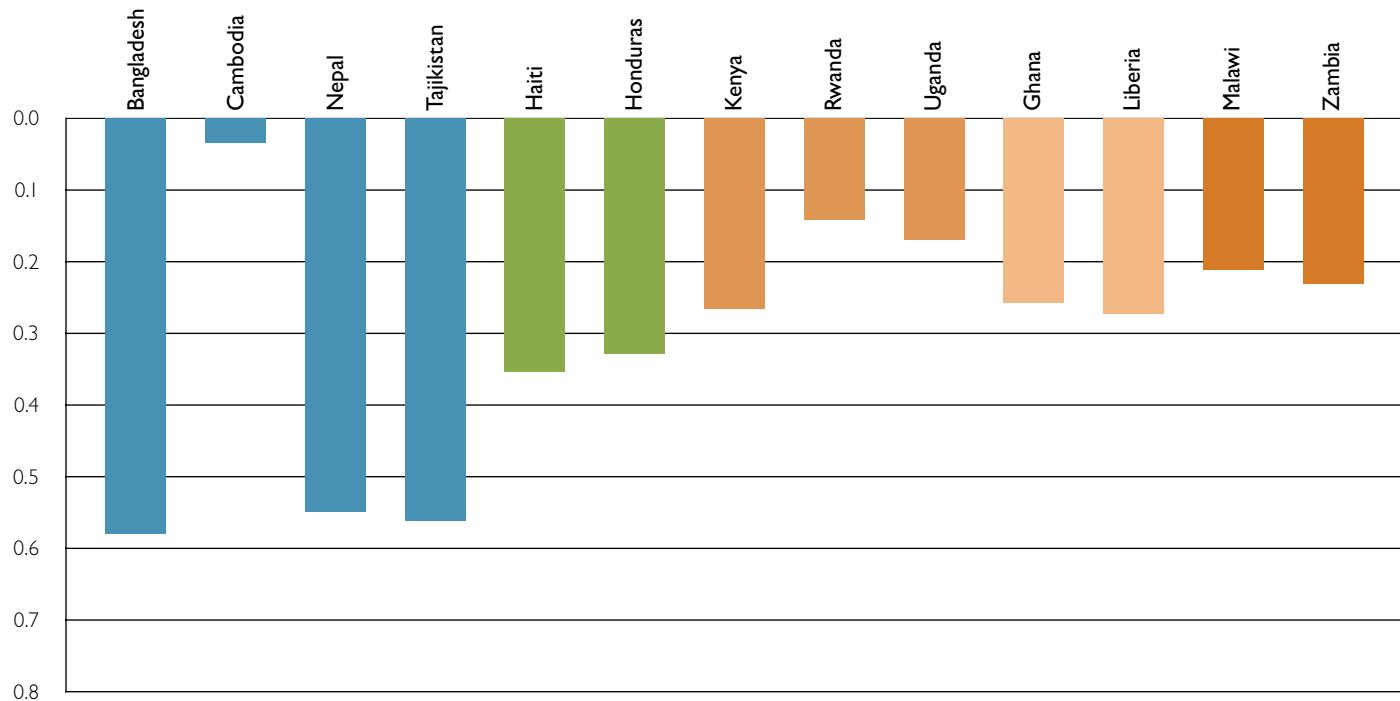
Source: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

FIGURE 3. PROPORTION OF WOMEN NOT YET EMPOWERED AND WHO HAVE INADEQUATE ACHIEVEMENT: WORKLOAD



Source: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

FIGURE 4. PROPORTION OF WOMEN NOT YET EMPOWERED AND WHO HAVE INADEQUATE ACHIEVEMENT: GROUP MEMBERSHIP



Source: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

What are the top contributors to men's disempowerment?

The top contributor to men's disempowerment is group membership; it ranks as a top constraint in all countries except Liberia (Table 3). Group membership is most dominant in the Asian region, where it is the top constraint on empowerment in three out of four countries. Group membership provides an important source of social capital and access to networks, which are both empowering in themselves and may also be an important source

of agricultural information or inputs (Alkire et al. 2013). Workload, and access to and decisions on credit, rank as the second and third most binding constraints on men's empowerment. Workload is among the top three contributors to disempowerment in all countries except Cambodia, Honduras, and Tajikistan. It contributes prominently to men's disempowerment in East and southern Africa. Finally, access to and decisions on credit is a top contributor to men's disempowerment in all countries except Bangladesh, Haiti, and Nepal.

TABLE 3. TOP CONTRIBUTORS TO MEN'S DISEMPOWERMENT

Constraints	Bangladesh	Cambodia	Nepal	Tajikistan	Asia total	Haiti	Honduras	LAC total	Kenya	Rwanda	Uganda	East Africa total	Malawi	Zambia	Southern Africa total	Ghana	Liberia	West Africa total	Number of countries with this top constraint	Indicators' total points count
Input in productive decisions																				
Autonomy in production	3	1	2		2			—									1	1	4	9
Ownership of assets																				
Purchase, sale, or transfer of assets							3	1								2	1	2	3	
Access to and decisions on credit	3	3	2			1	1	2	2	2	2	3	2	3	2	1	2	2	10	21
Control over use of income	2			1														1	2	
Group member	1	1	1	2	4	1	2	2	3	3	3	3	1	2	2	3	1	12	25	
Speaking in public	2			1														1	2	
Workload	2	2		2	3			1	1	1	1	3	1	1	2	2	3	2	10	23
Leisure																				

Source: Authors.

Note: LAC=Latin America & the Caribbean. The three indicators that represent the greatest constraints to empowerment are identified and ranked for women in each country; they are indicated by a 1, 2, or 3 in each of the country columns. The regional totals represents the number of countries in which a given indicator was a top constraint. The column "Number of countries with this top constraint", counts the number of countries for which an indicator appeared as one of the top three constraints. The column "Indicators' total points count", assigns the highest constraint three points, the second-highest constraint two points, and the third-highest constraint one point and aggregates these points for all indicators across all countries.

WEAI SCORES & OUTCOMES OF INTEREST TO FEED THE FUTURE

This section provides an analysis of the WEAI scores and select outcomes that are of interest to Feed the Future. The analysis first discusses the outcomes that might affect empowerment, including poverty, income, and education. It then examines the outcomes that might result from empowerment, which include the following indicators: level of household hunger (Household Hunger Score), women's nutrition (Women's Dietary Diversity Score), maternal behavior (minimum acceptable diet and exclusive breastfeeding), and child nutrition indicators (wasting, underweight, and stunting). In the figures, the size of the bubbles reflects the relative population size of the Zones of Influence. All WEAI score and outcome values are for the Zone of Influence only and are not nationally representative. Also, no regressions were run for this analysis, and thus only associations, not causality, are inferred.

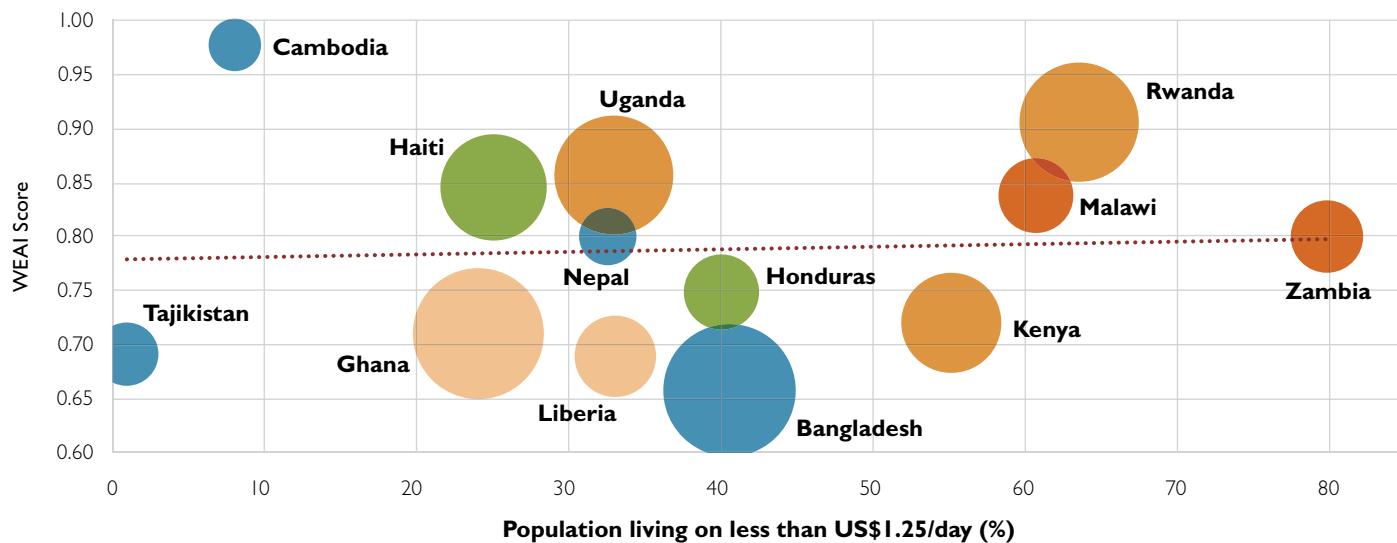
Possible influences on empowerment

- **Poverty:** There is no clear relationship between women's empowerment in agriculture and poverty as measured by the percentage of the population living on less than US\$1.25 per day (Figure 5).
- **Income:** There is a negative association between women's empowerment and per capita expenditure (Figure 6). However, the historical pattern has been that, as income rises, the share of agriculture in GDP falls, leading to lower labor force participation rates in agriculture. This secular trend, which is part of the process of structural transformation, may underlie the negative relationship between the WEAI and per capita expenditure rather than a causal relationship between incomes rising and women's empowerment decreasing. This negative relationship arises in part because the WEAI was designed to reflect empowerment exclusively in agriculture, not in the other sectors that expand in the process of economic development.
- **Education:** The associations between women's empowerment and education are generally quite strong and intuitive, though there are exceptions. Lower scores are associated with higher proportions of households in which members have no education or the highest level achieved is only primary education (Figure 7). Higher women's empowerment scores are associated with higher proportions of households in which members have secondary education, although Cambodia and Kenya appear as outliers to this relationship as both have secondary education rates of approximately 25 percent but vastly different WEAI scores (Figure 8).

Possible results of empowerment

- **Household Hunger Score:** A review of the countries in this study does not reveal any consistent relationship between women's empowerment and moderate or severe household hunger (Figure 9). As with poverty, it is not clear that aggregate hunger and women's empowerment are necessarily related, because aggregate figures mask important differences among households within a particular country. Further analysis at the household level is needed to see whether women's empowerment is associated with hunger reduction within communities and Zones of Influence.
- **Maternal nutrition indicator:** Women's Dietary Diversity Score (WDDS): There is no clear relationship between WDDS and women's empowerment (Figure 10). Considering the score ranges from zero to nine, all countries have low WDDSs, ranging from a low in Kenya (2.57) to a high in Cambodia (4.6)—both of which appear to be outliers from the group.
- **Maternal behavior—Minimum acceptable diet:** There is a strong positive relationship between female empowerment and the prevalence of children receiving a minimum acceptable diet (Figure 11). The highest prevalence of this diet occurs in Cambodia and Honduras while the lowest occurs in Kenya and Tajikistan.
- **Maternal behavior—Exclusive breastfeeding:** There is a strong positive relationship between higher female empowerment and higher rates of exclusive breastfeeding for children under six months (Figure 12). Honduras and Rwanda have the highest prevalence rates of exclusive breastfeeding while Haiti and Zambia have the lowest.
- **Child nutrition indicators:** The relationships between child nutritional outcomes and women's empowerment are unclear (Figures 13–15). Child nutritional status is determined by many factors, of which women's empowerment is only one. It may be that children's nutritional outcomes are affected by other factors, such as access to healthcare and sanitation, which may be more important than women's empowerment.

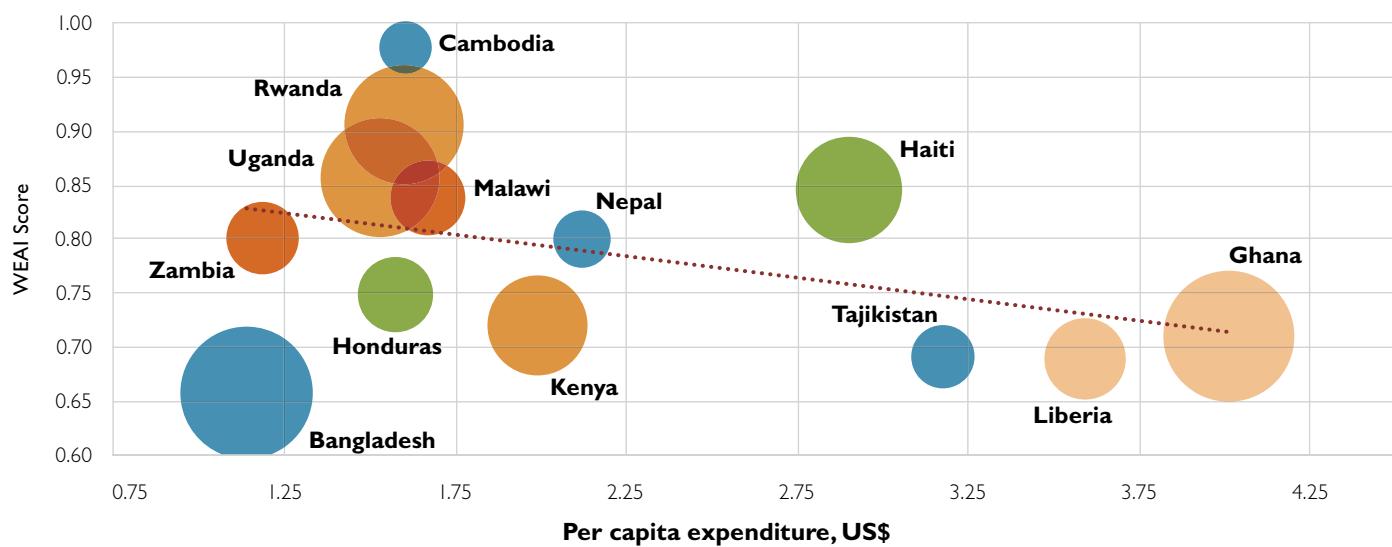
FIGURE 5. POPULATION LIVING ON LESS THAN US\$1.25/DAY (%)



Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: Correlation coefficient is not significant. The bubbles colors represent the various regions covered in this report. Blue=Asia, green=Latin America and the Caribbean, dark orange=Southern Africa, medium orange=East Africa, light orange=West Africa. The dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed.

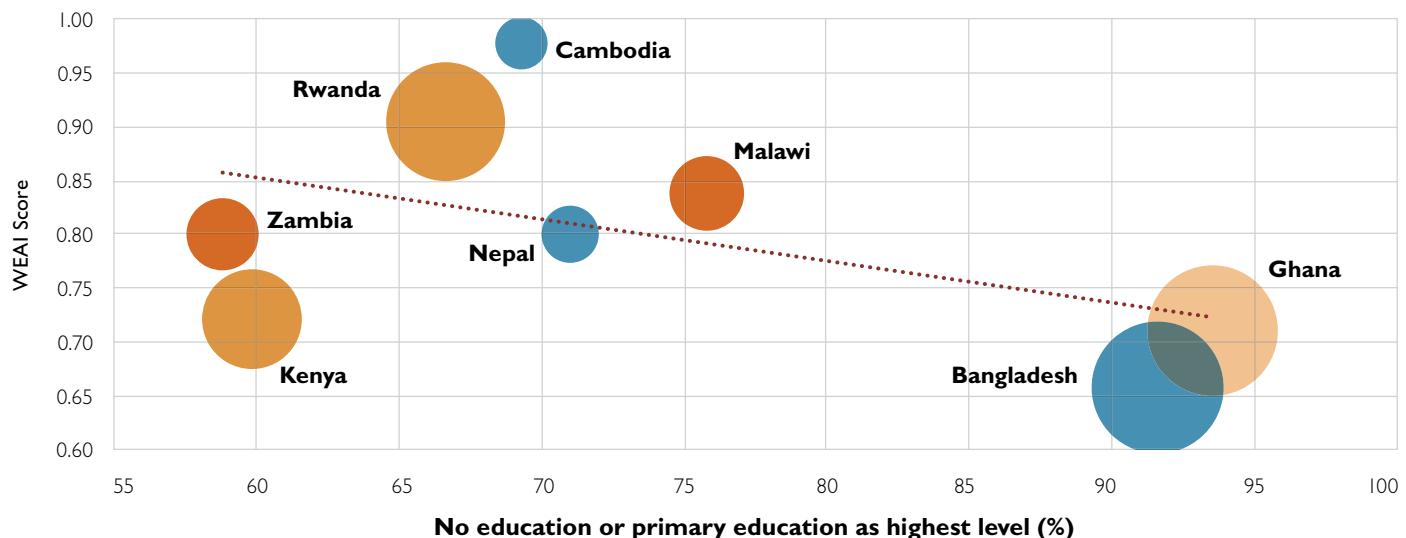
FIGURE 6. PER CAPITA EXPENDITURE (US\$)



Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: Correlation coefficient is not significant. The bubbles colors represent the various regions covered in this report. Blue=Asia, green=Latin America and the Caribbean, dark orange=Southern Africa, medium orange=East Africa, light orange=West Africa. The dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed.

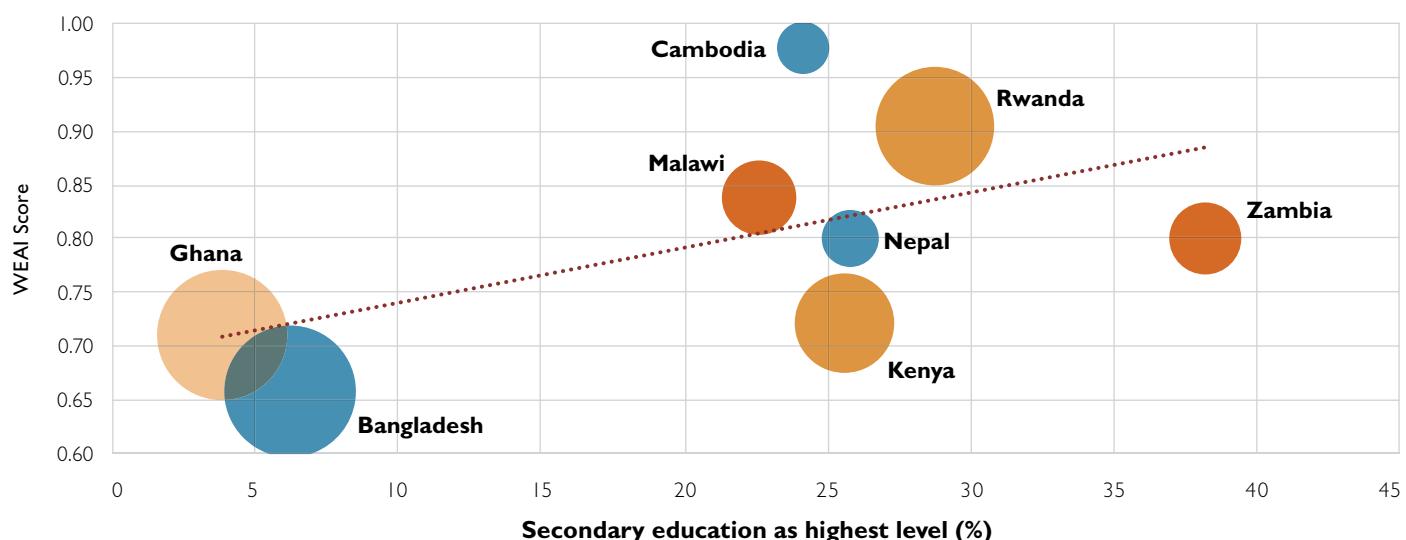
FIGURE 7. HOUSEHOLDS WITH NO EDUCATION OR PRIMARY EDUCATION AS THE HIGHEST LEVEL ACHIEVED (%)



Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: Correlation coefficient is not significant. The bubbles colors represent the various regions covered in this report. Blue = Asia, green = Latin America and the Caribbean, dark orange = Southern Africa, medium orange = East Africa, light orange = West Africa; the dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed; only 8 of 13 countries are represented in this figure. No statistics were available for Haiti, Honduras, Liberia, Tajikistan, and Uganda.

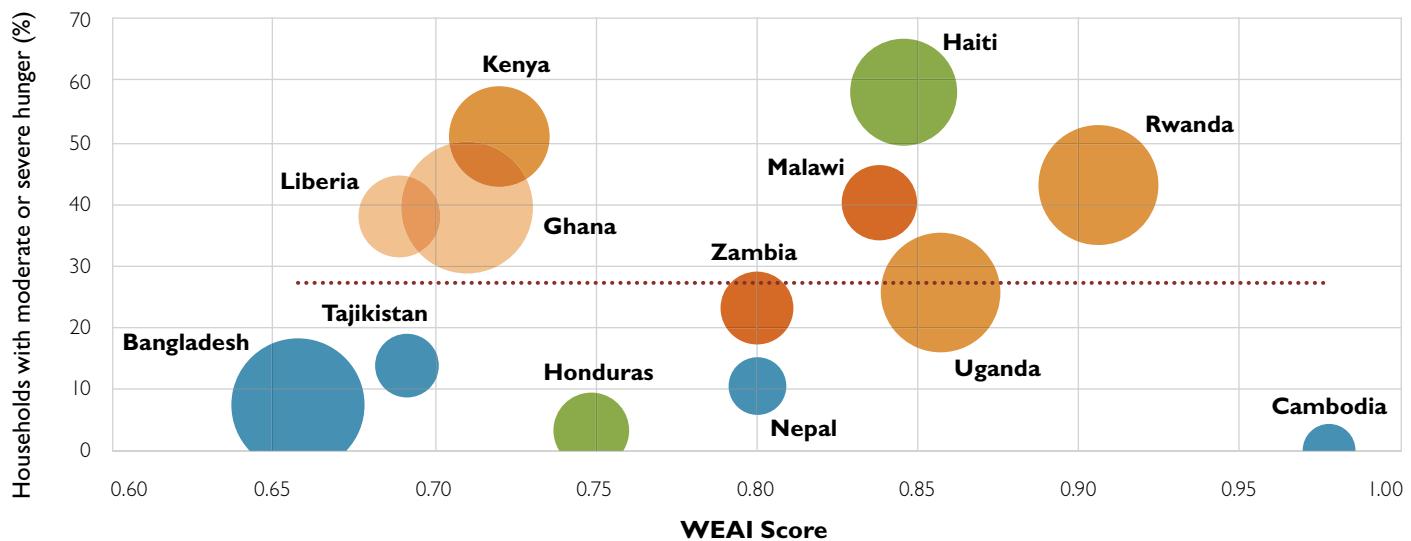
FIGURE 8. HOUSEHOLDS WITH SECONDARY EDUCATION AS THE HIGHEST-LEVEL ACHIEVEMENT (%)



Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: Correlation coefficient is significant (excluding Cambodia from the analysis). The bubbles colors represent the various regions covered in this report. Blue = Asia, green = Latin America and the Caribbean, dark orange = Southern Africa, medium orange = East Africa, light orange = West Africa. The dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed; only 8 of 13 countries are represented in this figure. No statistics were available for Haiti, Honduras, Liberia, Tajikistan, and Uganda.

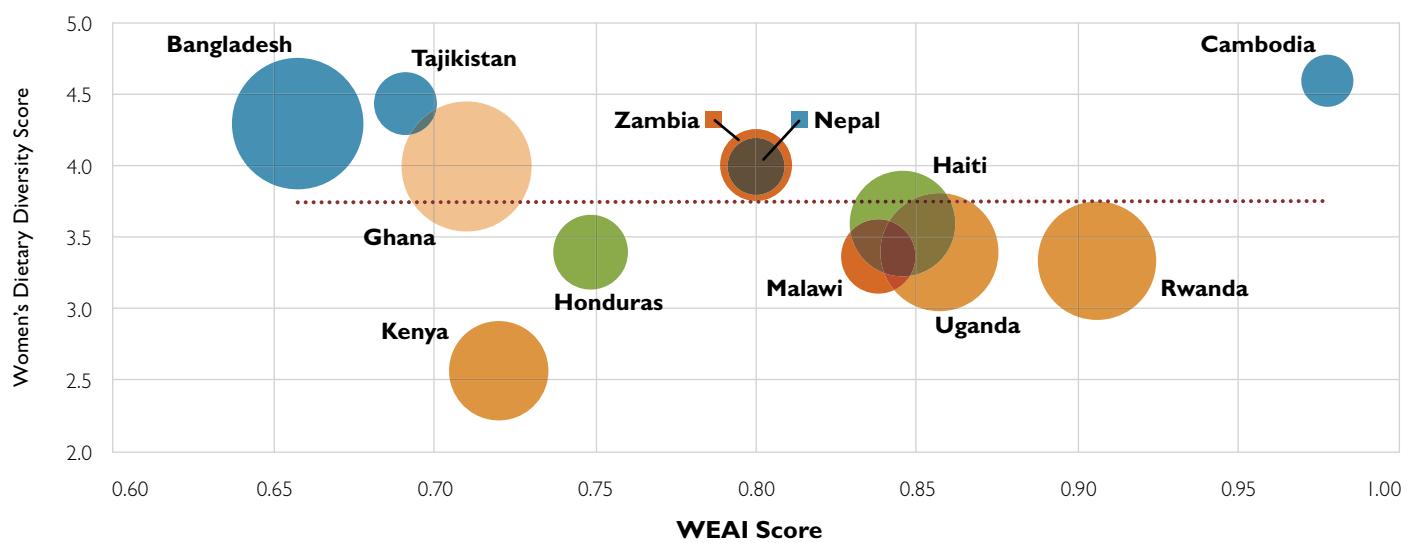
FIGURE 9. HOUSEHOLDS WITH MODERATE OR SEVERE HUNGER (%)



Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: Correlation coefficient is not significant. The bubbles colors represent the various regions covered in this report. Blue=Asia, green=Latin America and the Caribbean, dark orange=Southern Africa, medium orange=East Africa, light orange=West Africa. The dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed.

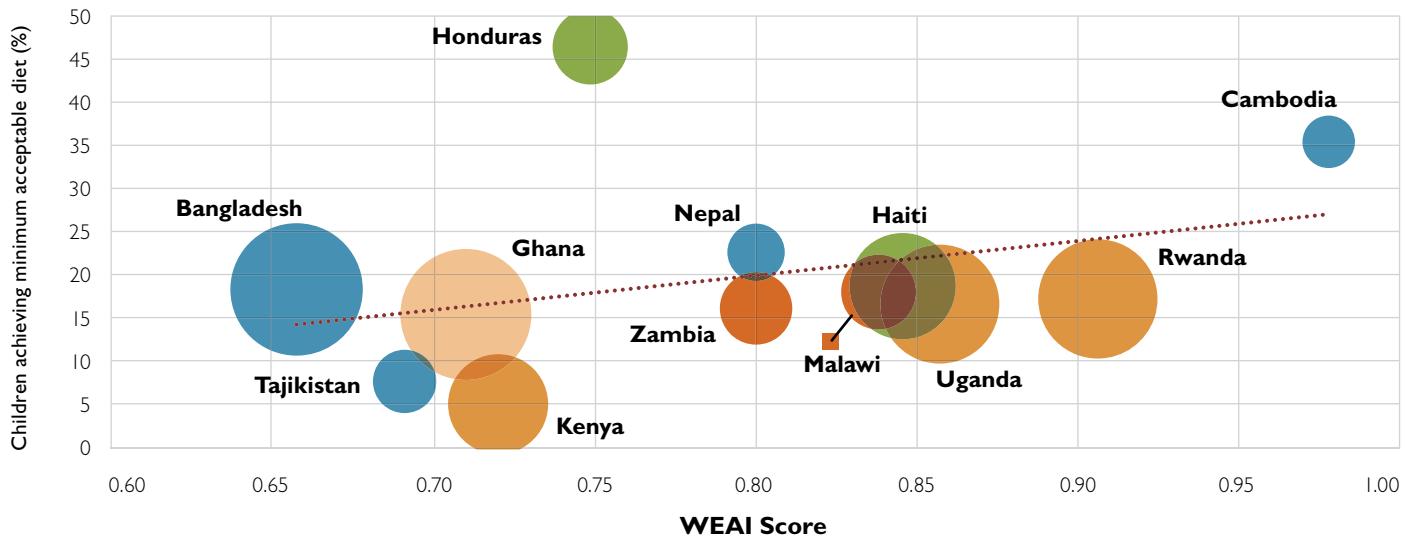
FIGURE 10. WOMEN'S DIETARY DIVERSITY SCORE [WDDS]



Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: Correlation coefficient is not significant. The bubbles colors represent the various regions covered in this report. Blue=Asia, green=Latin America and the Caribbean, dark orange=Southern Africa, medium orange=East Africa, light orange=West Africa; the dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed; Liberia is not represented in this figure as no statistics were available.

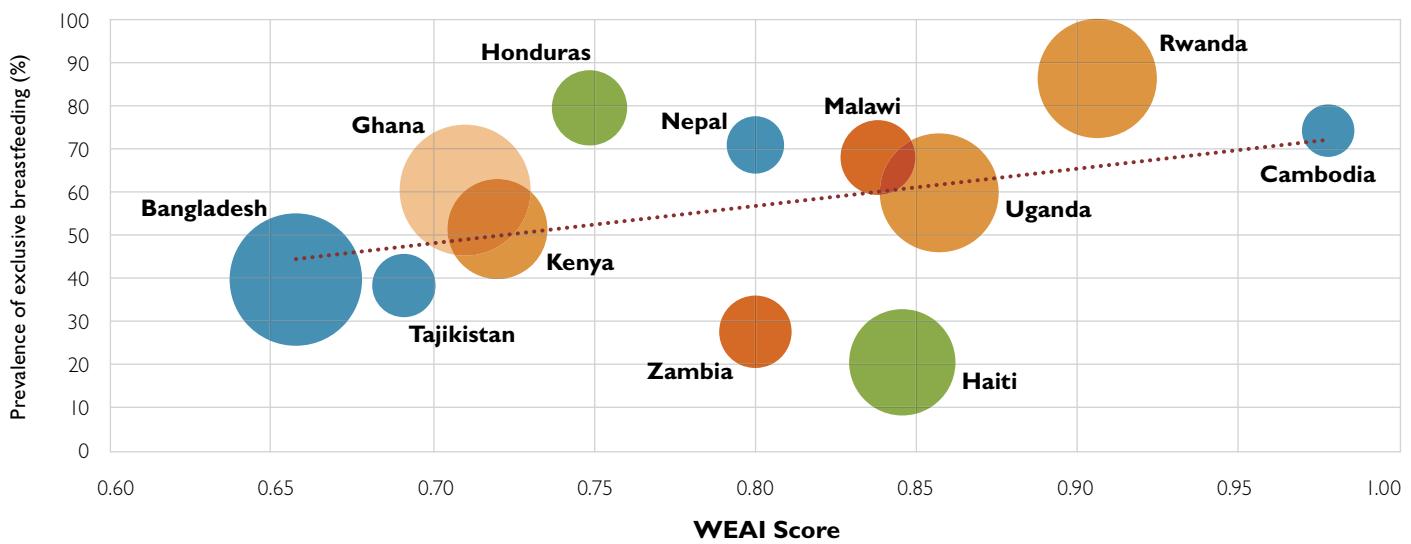
FIGURE II. CHILDREN ACHIEVING A MINIMUM ACCEPTABLE DIET (%)



Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: Correlation coefficient is not significant. The bubbles colors represent the various regions covered in this report. Blue = Asia, green = Latin America and the Caribbean, dark orange = Southern Africa, medium orange = East Africa, light orange = West Africa. The dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed.

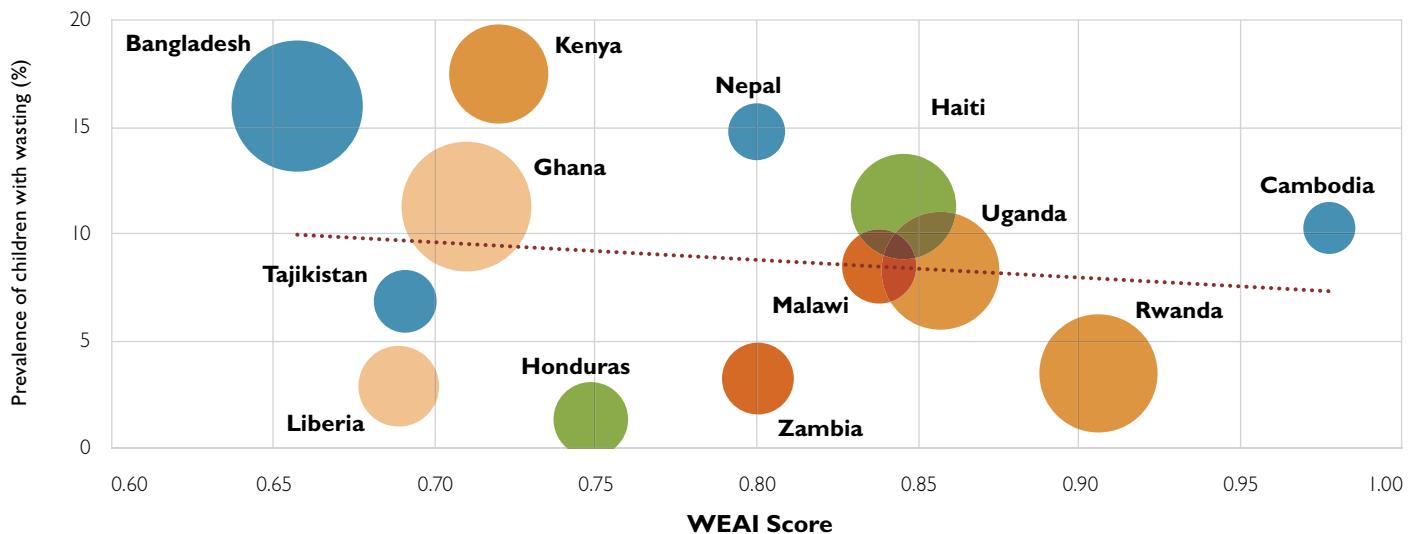
FIGURE I2. EXCLUSIVE BREASTFEEDING (%)



Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: Correlation coefficient is not significant. The bubbles colors represent the various regions covered in this report. Blue = Asia, green = Latin America and the Caribbean, dark orange = Southern Africa, medium orange = East Africa, light orange = West Africa; the dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed; Liberia is not represented in this figure as no statistics were available.

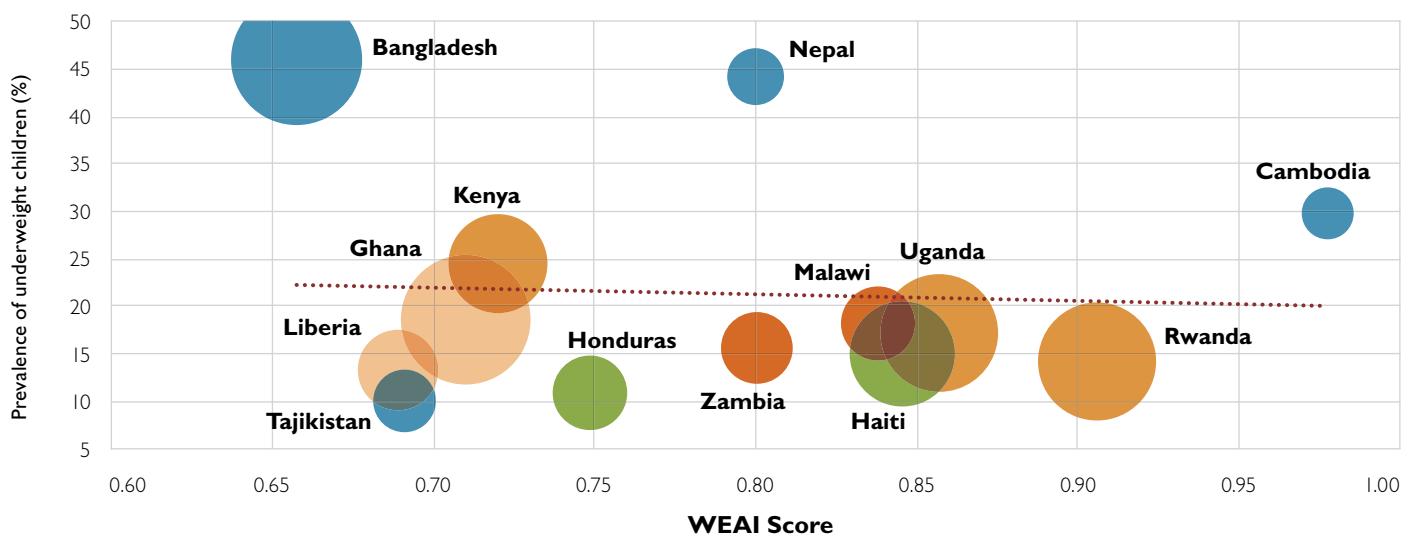
FIGURE 13. PREVALENCE OF CHILD WASTING (%)



Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: Correlation coefficient is not significant. The bubbles colors represent the various regions covered in this report. Blue = Asia, green = Latin America and the Caribbean, dark orange = Southern Africa, medium orange = East Africa, light orange = West Africa. The dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed.

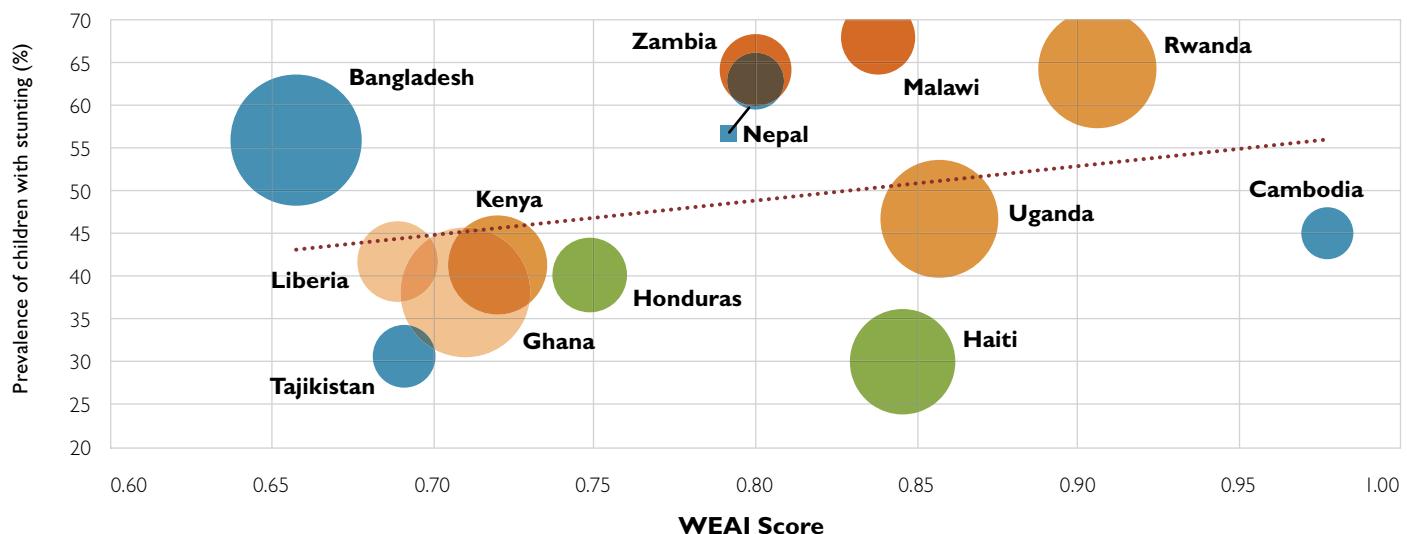
FIGURE 14. PREVALENCE OF UNDERWEIGHT CHILDREN (%)



Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: Correlation coefficient is not significant. The bubbles colors represent the various regions covered in this report. Blue = Asia, green = Latin America and the Caribbean, dark orange = Southern Africa, medium orange = East Africa, light orange = West Africa. The dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed.

FIGURE 15. PREVALENCE OF CHILD STUNTING (%)



Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: Correlation coefficient is not significant. The bubbles colors represent the various regions covered in this report. Blue = Asia, green = Latin America and the Caribbean, dark orange = Southern Africa, medium orange = East Africa, light orange = West Africa. The dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed.

SUMMARY

- Among women in agriculture, the greatest constraints to empowerment are access to and decisions on credit, workload, and group membership. While the magnitude of women's disempowerment is greater, men also face these same constraints on achieving empowerment in agriculture.
- Specific constraints dominate certain regions. For women, group membership is the primary constraint in Asia, while access to and decisions on credit and workload are more severe constraints in East and southern Africa, respectively. For men, group membership also emerges as the dominant constraint in Asia while workload is the major constraint in both East and southern Africa.
- The WEAI score is more strongly associated with household educational achievement, income, exclusive breastfeeding, and children receiving a minimal acceptable diet than it is with other outcomes of interest to Feed the Future. Higher female empowerment scores are associated with greater rates of secondary school completion as the highest household educational achievement. While negative, the relationship between income and women's empowerment may be a result of the index being designed to measure agricultural activities, which tend to decline in importance as per capita incomes rise. Higher rates of both exclusive breastfeeding and children with a minimum acceptable diet are also associated with greater women's empowerment scores. The relationships between women's empowerment and both mother's dietary diversity and children's nutritional outcomes are unclear. Note, however, that these are Zone of Influence-level correlations; examination of household-level data may show clearer patterns.

POLICY RECOMMENDATIONS

- The FTF program's goals are to sustainably reduce global poverty and hunger through the dual objectives of stimulating inclusive agricultural growth and improving the nutritional status of women and children. The WEAI is a crucial tool for monitoring progress toward these objectives, given that there is consistent and credible evidence that when the status of women is improved, agricultural productivity increases, poverty is reduced, and nutrition improves. The results from the WEAI may be used to prioritize and target areas that stand to make the largest improvements.

- Given the baseline results, providing greater access to credit, formulating strategies to decrease workload, and increasing membership in groups should receive concerted attention in subsequent Feed the Future programming. These indicators are the foremost contributors to disempowerment for both women and men in agriculture. Intervention strategies should therefore consider how to address the needs of both women and men in these areas. In some cases, this may involve joint programs (such as a single credit program for both men and women). Careful attention should be given to ensure that the benefits are not captured by men and that gender-specific needs are met (for example, through addressing the differential time constraints of women and men).
- The interrelationships among access to and decisions on credit, workload, and group membership should not be overlooked, as positive spillover effects may occur and cost effectiveness be gained (for example, membership in a group may increase access to credit if the group has a microfinance component).
- While the factors contributing most to disempowerment may be the same regardless of country or gender, effective policies and interventions are likely to be context specific, due to the large variation across and within countries. Baseline results indicate that women's empowerment is associated with practices that contribute to better nutritional outcomes, such as exclusive breastfeeding and achieving a minimum acceptable diet for children. However, the lack of association between women's empowerment and maternal and child health suggests that while women's empowerment is one contributor to these outcomes, there are likely other influencing factors. Moreover, the WEAI measures only one aspect of empowerment which is agriculture. Thus, the WEAI should be used in conjunction with other measures to obtain a more complete picture of these relationships.
- The limitations of this index and analysis are also a consideration in terms of informing policy. The WEAI is designed to be comprehensive within the realm of empowerment in agriculture, but there may be other domains of empowerment not measured by the WEAI that contribute to Feed the Future outcomes of interest. Also, further study of the baseline survey data will serve more fully to uncover the specific needs of different groups and the interconnected and nuanced relationships between women's empowerment and other Feed the Future outcomes of interest.



Eveline Sonia works in Kenya teaching horticulture to farmers through a Feed the Future partnership. Photo: USAID/Riccardo Gangale

GLOSSARY

Adequacy: An individual has achieved adequacy in an indicator (see 5DE score below) if he or she has met or surpassed the threshold for the given indicator.

Disempowerment score: The disempowerment score is found by subtracting the 5DE score (see below) from 1. A lower number reflects greater empowerment.

Empowerment gap: For a woman lacking gender parity with the primary adult male in her household (see GPI below), the empowerment gap refers to the average percentage shortfall she experiences relative to the primary male in her household.

Exclusive breastfeeding: The exclusive breastfeeding indicator measures the percentage of children under six months of age who were exclusively breastfed during the day preceding the survey. Exclusive breastfeeding means the infant receives breast milk (including expressed milk or from a wet nurse) and may receive oral rehydration salts, vitamins, minerals, or medicines (or all of these), but does *not* receive any other food or liquid. Exclusive breastfeeding for the first six months of life provides children with significant health and nutrition benefits, including protection from gastrointestinal infections and reduced risk of mortality due to infectious disease.

Five Domains of Empowerment (5DE): The five domains of empowerment (5DE) constitute the first sub-index of the WEAI and assess women's empowerment in the following five domains: decisions about agricultural production, access to and decisionmaking power over productive resources, control over use of income, leadership in the community, and time allocation. Each domain is composed of between one and three indicators, and together the five domains cover 10 indicators.

5DE score: The 5DE score reflects the extent of women's empowerment in the 5DE (see above). A higher score reflects greater empowerment.

Gender Parity Index (GPI): The gender parity index is the second sub-index of the WEAI and measures women's empowerment relative to that of men by comparing the 5DE profiles of women and men in the same households. A woman is assumed to achieve gender parity if her achievements in the five domains are as high as or higher than the primary adult male in her household. The GPI is calculated only for women living in a household with a primary male decisionmaker.

GPI score: The GPI score reflects the inequality in 5DE scores between the primary adult male and female in each household. A higher number reflects greater gender parity.

Household Hunger Score (HHS): The Household Hunger Score is used to calculate the prevalence of households with moderate or severe hunger. The HHS was developed, in collaboration with the Food and Agriculture Organization of the United Nations, by the Food and Nutrition Technical Assistance II Project, which was funded by the United States Agency for International Development (USAID). The scale has been cross-culturally validated to allow comparison across different food-insecure contexts. The HHS is used to assess, geographically target, monitor, and evaluate settings affected by substantial food insecurity. The HHS estimates the percentage of households affected by three different severities of household hunger: little to no household hunger (HHS score 0–1); moderate household hunger (HHS score 2–3); and severe household hunger (HHS score 4–6). The “prevalence of households with moderate or severe hunger” indicator measures the percentage of households experiencing moderate or severe hunger, as reflected by a score of 2 or more on the HHS. The numerator for this

indicator is the total number of households in the sample with a score of 2 or more on the HHS. The denominator is the total number of households in the sample with HHS data.

Minimum acceptable diet: The prevalence of children receiving a minimum acceptable diet is an indicator that measures the percentage of children 6–23 months of age who receive a minimum acceptable diet apart from breastfeeding. This composite indicator measures both the minimum feeding frequency and minimum diet given to the child in the past 24 hours. Tabulation of the indicator requires data from the following components: consumption of milk or milk products; dietary diversity (consumption of four or more food groups); and number of feedings with semi-solid/solid foods and breast milk.

Per capita expenditure: The per capita expenditure indicator measures the expenditures of rural households as a proxy for income, on the assumption that increased expenditure is strongly correlated to increased income. Data for this indicator is collected using the Consumption Expenditure methodology of the Living Standards Measurement Survey. Expenditures are used instead of income because of the difficulty in accurately measuring income and because expenditure data are less prone to error, easier to recall, and are more stable over time than income data.

Prevalence of poverty: The prevalence of poverty is the percentage of people living on less than the equivalent of US\$1.25 per day. This standard for poverty is applied to different countries by using 2005 Purchasing Power Parity rates, which ensure that the poverty line applied in each country has the same real value. Measurement is based on the value of average daily consumption expenditure per person, where food and other items that a household consumes out of its own production are counted as if the household purchased those items at market prices.

Stunting: The stunting indicator measures the percentage of children 0–59 months with stunting, as defined by a height-for-age Z-score that is less than two standard deviations (below -2SD) from the median of the 2006 World Health Organization (WHO) Child Growth Standard. This indicator measures the prevalence of moderate (below -2SD) and severe (below -3SD) stunting. Stunting is a height-for-age measurement that is an indicator of linear growth retardation, most often due to prolonged exposure to an inadequate diet and poor health. The numerator for this indicator is the total number of children 0–59 months with a height-for-age Z score below -2SD. The denominator is the total number of children 0–59 months in the sample with height-for-age Z score data.

Underweight: The underweight indicator measures the percentage of children 0–59 months who are underweight, as defined by a weight-for-age Z-score below -2SD from the median of the 2006 WHO Child Growth Standard. This indicator measures the prevalence of moderate (below -2SD) and severe (below -3SD) underweight. Underweight is a weight-for-age measurement that is an indicator of undernutrition, whether acute, chronic, or both.

The numerator for this indicator is the total number of children 0–59 months with a weight-for-age Z score below -2SD. The denominator is the total number of children 0–59 months in the sample with weight-for-age Z score data.

Wasting: The wasting indicator measures the percentage of children 0–59 months who are acutely malnourished, as defined by a weight-for-height Z-score below -2SD from the median of the 2006 WHO Child Growth Standard. This indicator measures the prevalence of moderate (below -2SD) and severe (below -3SD) wasting. Wasting is a weight-for-height measurement that is an indicator of acute malnutrition; children who are wasted are too thin for their height. The numerator for this indicator is the total number of children 0–59 months with a weight-for-height Z score below -2SD. The denominator is the total number of children 0–59 months in the sample with weight-for-height Z score data.

Women's Dietary Diversity Score (WDSS): The Women's Dietary Diversity Score aims to measure the micro-nutrient adequacy of women's diets and reports the mean number of food groups consumed during the previous day by women of reproductive age (15–49 years). To calculate this indicator, nine food groups are used: (1) grains, roots, and tubers; (2) legumes and nuts; (3) dairy products (milk, yogurt, cheese); (4) organ meat; (5) eggs; (6) flesh foods and other miscellaneous small animal protein; (7) vitamin A-rich dark green leafy vegetables; (8) other vitamin A-rich vegetables and fruits; and (9) other fruits and vegetables. The WDSS is tabulated by averaging the number of food groups (out of the nine food groups above) consumed across all women of reproductive age in the sample.

Women's Empowerment in Agriculture Index (WEAI): An innovative index developed jointly by USAID, IFPRI, and OPHI that measures the extent of women's empowerment in the agricultural sector. It is composed of two sub-indexes: the 5DE and the GPI.

Zone of Influence: The Zone of Influence is the area where the USAID/Feed the Future initiative operates within a country.

REFERENCES

- Alkire, S., R. Meinzen-Dick, A. Peterman, A. R. Quisumbing, G. Seymour, and A. Vaz. 2013. "The Women's Empowerment in Agriculture Index." *World Development* 52: 71–91.
- Cambodia Development Resource Institute. 2012. "USAID/Helping Address Rural Vulnerabilities and Ecosystem Stability (HARVEST) Baseline Study Report." Unpublished, Phnom Penh, Cambodia.
- Institut Haitien de l'Enfance (ICF International). 2012. "Haiti Baseline Survey: Contract #AID-52I-M-I2-00001." Unpublished, Washington, DC.
- IFPRI (International Food Policy Research Institute). 2012a. "Feed the Future Baseline Indicators for Bangladesh: Estimates from the 2011–2012 Bangladesh Integrated Household Survey." Unpublished, Dhaka, Bangladesh.
- . 2012b. "Evaluation of the Feed the Future Intervention ACCESO-Honduras: Preliminary Baseline Results." Unpublished, Washington, DC, US.
- IFPRI (International Food Policy Research Institute), USAID (United States Agency for International Development), and OPHI (Oxford Poverty and Human Development Initiative). 2012. *Women's Empowerment in Agriculture Index*. Summary Brochure. Washington, DC: IFPRI.
- Kansas State University, Department of Agricultural Economics. 2013. "Baseline Feed the Future Indicators for Ghana 2012." Unpublished, Manhattan, KS, US.
- Optimal Solutions Group, LLC. 2013. "USAID Liberia Feed the Future Population-Based Survey Final Report." College Park, MD, US.
- Westat. 2012a. "FTF FEEDBACK Population Based Survey: Malawi." Unpublished, Rockville, MD, US.
- . 2012b. "FTF FEEDBACK Population Based Survey: Tajikistan." Unpublished, Rockville, MD, US.
- . 2012c. "FTF FEEDBACK Population Based Survey: Uganda." Unpublished, Rockville, MD, US.
- . 2012d. "FTF FEEDBACK Population Based Survey: Zambia." Unpublished, Rockville, MD, US.
- . 2013a. "FTF FEEDBACK Population Based Survey: Nepal." Unpublished, Rockville, MD, US.
- . 2013b. "FTF FEEDBACK Population Based Survey: Northern Kenya." Unpublished, Rockville, MD, US.
- . 2013c. "FTF FEEDBACK Population Based Survey: Rwanda." Unpublished, Rockville, MD, US.

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Munira is a farmer from Bangladesh who received training from Feed the Future.

Photo: USAID/Wasif Hasan

ABOUT THE REPORT PARTNERS

FEED THE FUTURE



Feed the Future, the U.S. Government's global hunger and food security initiative, is establishing a foundation for lasting progress against global hunger. With a focus on smallholder farmers, particularly women, Feed the Future supports partner countries in developing their agriculture sectors to spur economic growth that increases incomes and reduces hunger, poverty, and undernutrition. Feed the Future efforts are driven by country-led priorities and rooted in partnership with governments, donor organizations, the private sector, and civil society to enable long-term success. Led by the U.S. Agency for International Development, Feed the Future leverages the strengths of agencies across the U.S. Government.

Feed the Future aims to assist millions of vulnerable women, children, and family members—mostly smallholder farmers—to escape hunger and poverty, while also reaching significant numbers of children with highly effective nutrition interventions to prevent stunting and child mortality.

USAID

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USAID is the lead U.S. Government agency that works to end extreme global poverty and enable resilient, democratic societies to realize their potential. USAID plays a leadership role in implementing Feed the Future. Across the globe, USAID's efforts support long-term and equitable economic growth and advance U.S. foreign policy objectives. Key focus areas include: economic growth, agriculture and trade; global health; and democracy, conflict prevention, and humanitarian assistance.

IFPRI

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The International Food Policy Research Institute (IFPRI), established in 1975, provides research-based policy solutions to sustainably reduce poverty and end hunger and malnutrition. The Institute conducts research, communicates results, optimizes partnerships, and builds capacity to ensure sustainable food production, promote healthy food systems, improve markets and trade, transform agriculture, build resilience, and strengthen institutions and governance. Gender is considered in all of the Institute's work. IFPRI collaborates with partners around the world, including development implementers, public institutions, the private sector, and farmers' organizations.

IFPRI is a leader in gender and household decisionmaking research in developing countries. Its gender and intrahousehold research program (1994–2001) provided empirical evidence that the bargaining power of men and women within households affects the allocation of household resources and that increasing resources controlled by women improves agricultural productivity, household food security, and investments in the next generation. The Gender and Assets research program (2009–present) is examining ways that agricultural development programs can reduce the gap in assets controlled by men and women and thereby more effectively achieve development outcomes. (Read more about this program at www.ifpri.org/ourwork/program/gender-and-assets.)

OPHI

www.ophi.org.uk



The Oxford Poverty and Human Development Initiative (OPHI) is an economic research centre within the Oxford Department of International Development at the University of Oxford. OPHI aims to build a more systematic framework for reducing multidimensional poverty, grounded in people's experiences and values. Creating real tools that inform policies to reduce poverty, OPHI has two main research themes: multidimensional poverty measurement and missing dimensions of poverty data (improving data on topics like violence and empowerment).

OPHI developed the Alkire Foster method for multidimensional measurement, which underpins the WEAI. It is being implemented at national and international levels and is currently being used and adapted by the UN Development Programme in their flagship Human Development Report (along with the Multidimensional Poverty Index) as well as the Governments of Bhutan, Colombia, and Mexico.