

## Annex 8

### Women's Empowerment in Agriculture Index (WEAI)

#### Baseline Study of Title II Development Food Assistance Programs in Uganda, 2013

#### Overview

Women play a critical and potentially transformative role in agricultural growth in developing countries, but they face persistent obstacles and economic constraints limiting further inclusion in agriculture. The WEAI measures the empowerment, agency, and inclusion of women in the agriculture sector in an effort to identify ways to overcome those obstacles and constraints. The WEAI aims to increase understanding of the connections between women's empowerment, food security, and agricultural growth. This index measures the roles and extent of women's engagement in the agriculture sector in five domains: (1) decisions about agricultural production, (2) access to and decision-making power over productive resources, (3) control over use of income, (4) leadership in the community, and (5) time use. It also measures women's empowerment relative to men within their households.<sup>1</sup>

The WEAI was developed to track changes in women's empowerment levels that occur as a direct or indirect result of interventions under Feed The Future (FTF), the U.S. Government's global hunger and food security initiative. It was collaboratively developed by USAID, the International Food Policy Research Institute (IFPRI), and Oxford Poverty and Human Development Initiative (OPHI).

The WEAI is composed of two sub-indexes. The five domains of empowerment sub-index (5DE) assesses whether women are empowered across five domains. It consists of 10 indicators that range between the values of zero and one, with higher values representing greater empowerment. The gender parity sub-index (GPI) measures gender parity in empowerment within the household and also ranges between zero and one, with higher values representing greater gender parity. By definition, households without a primary adult male are excluded from this measure. The total WEAI score is computed as a weighted sum of the 5DE and the GPI. Based on both sub-indexes, the WEAI is thus an aggregate index that shows the degree to which women are empowered in their households and communities and the degree of inequality between women and men within the household.

#### WEAI results for the Title II program area in the Karamoja region of Uganda

In Uganda, the WEAI was administered to all eligible households in the villages sampled from the list of Title II beneficiary villages in the seven districts of Karamoja. The WEAI survey instrument consists of a series of six modules that are administered to both male and female primary decision makers in the household and is conducted only in households with either dual female and male adults or in households with a single female adult. After data cleaning, WEAI data were available for a total of 3,849 dual female and male adult households, and 742 single female adult households.

The WEAI results for the entire Title II program area in the Karamoja region are presented in Table 7A.1. The WEAI is computed as a weighted average of the 5DE index and the GPI index where the 5DE index has 90 percent of the weight and the GPI index has 10 percent of the weight.<sup>2</sup> The WEAI for the Title II districts in the Karamoja region of Uganda is 0.788. It is the weighted average of the 5DE sub-index value of 0.775 and the GPI sub-index value of 0.901.

The 5DE index is computed as:  $1 - \frac{Hn}{Aa}$  where **Hn** is the disempowered headcount and **Aa** is the average inadequacy score. A woman is considered empowered in 5DE if she has adequate achievements in four of the five domains or has 80 percent total adequacy in some combination of the weighted indicators. For the women who are not yet empowered, the average adequacy score indicates the percentage of domains in which they meet the required threshold and thus experience adequacy.

The components of the 5DE as shown in Table 7A.1 indicate that 42.4 percent of women in the Karamoja region of Uganda are empowered (**He**), or conversely, 57.6 percent are disempowered (**Hn**). Disempowered women have, on average, adequate achievements in 60.9 percent of the domains ( $1 - Aa$ ) and inadequacy achievements in

<sup>1</sup> International Food Policy Research Institute (IFPRI). (2012). *Woman's Empowerment in Agriculture Index Summary Brochure*.

<sup>2</sup> Alkire, S., Malapit, H., Meinzen-Dick, R., Peterman, A., Quisumbing, A., Seymour, G. and A. Vaz. 2013. "Instructional Guide on the Women's Empowerment in Agriculture Index," retrieved from: <http://www.ifpri.org/book-9075/node/9077>

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39.1 percent of domains. Thus, the 5DE index for women is 1 minus 0.576 times 0.391, or 0.775. For men, 37.7 percent are disempowered, and the average inadequacy score among disempowered men is 36.7 percent, resulting in a 5DE index of 0.862.

The GPI is a relative equality measure that demonstrates the equality in 5DE profiles between the primary adult male and female in each household. For households that have not achieved gender parity, the GPI shows the gap that needs to be closed for women to reach the same level of empowerment as men. Households without a primary adult male are excluded from this measure, and thus the aggregate WEAI uses the mean GPI value of dual-adult households. The GPI is computed as:  $1 - (H_{GPI} \times I_{GPI})$ , where  $H_{GPI}$  is the percent of women with no gender parity and  $I_{GPI}$  is the average empowerment gap.

In the Karamoja region of Uganda, the GPI shows that 56 percent of women in dual-adult households have gender parity while 44 percent ( $H_{GPI}$ ) of women have an empowerment score lower than that of the primary male in their household. Of the 44 percent of women with no gender parity, the empowerment gap between the woman and the male in their household is 22.6 percent ( $I_{GPI}$ ). Thus, the overall GPI is:  $\{1 - (.44 \times .226)\}$  or 0.901.

**Table A7.1 Women's Empowerment in Agriculture Index (WEAI) – Karamoja region of Uganda (2013)**

Indexes	Karamoja Region	
	Women	Men
Empowered Headcount (He)	42.4%	62.3%
Disempowered Headcount (Hn)	57.6%	37.7%
Average Adequacy Score (1-Aa)	60.9%	63.3%
Average Inadequacy Score (Aa)	39.1%	36.7%
<b>5DE Index <math>1 - (Hn \times Aa)</math></b>	<b>0.775</b>	<b>0.862</b>
Number of observations	4,591	3,849
% of Data Used	62.7%	52.3%
% of women with no gender parity ( $H_{GPI}$ )	44.0%	
Average Empowerment Gap ( $I_{GPI}$ )	22.6%	
<b>GPI <math>1 - (H_{GPI} \times I_{GPI})</math></b>	<b>0.901</b>	
<b>WEAI <math>(0.9 \times 5DE) + (0.1 \times GPI)</math></b>	<b>0.788</b>	

Table A7.2 shows the contribution of each of the five dimensions and 10 indicators to women's and men's disempowerment while Figure A7.1 provides a graphic presentation of these results. The length of the bars represents the disempowerment index for women and men, respectively, while the composition of the bars represents the absolute contributions of each of the indicators to the disempowerment index. For women and men, control over the use of income, lack of access to or decision-making ability over credit and lack of group membership are the largest contributors to disempowerment; however, men report relatively less disempowerment in these areas compared to women. For women, work burden and lack of autonomy in production are also important contributors to disempowerment.

The WEAI results for the baseline study of the Title II development programs in the Karamoja region are very similar to the results of the pilot WEAI study conducted in Uganda in 2011. The pilot WEAI study surveyed 350 households in five spatially dispersed rural districts in the northern region (Amuru and Kole), central region (Luwero and Masaka), and eastern region (Iganga) in Uganda. For the pilot survey, the 5DE was 0.777 and the GPI was 0.898, resulting in a WEAI of 0.789.<sup>3</sup>

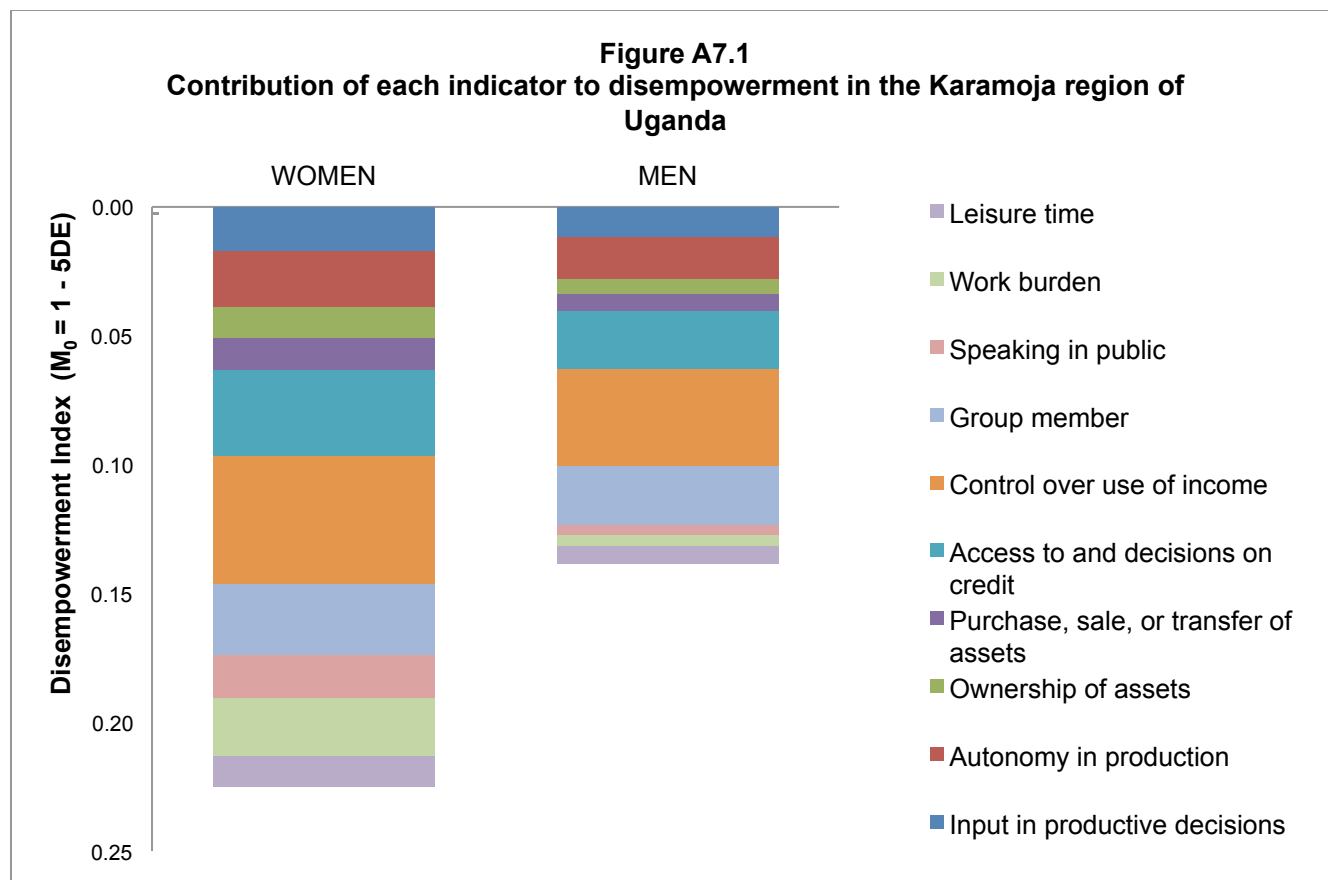
<sup>3</sup> Alkire, S., Meinzen-Dick, R., Peterman, A., Quisumbing, A. R., Seymour, G., & Vaz, A. (2012). *The Women's Empowerment in Agriculture Index*. IFPRI Discussion Paper No. 01240. Poverty, Health & Nutrition Division, International Food Policy Research Institute.

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**Table A7.2 Uganda Karamoja region - 5DE decomposed by dimension and indicator**

Statistics	Production		Resources			Income	Leadership		Time	
	Input in productive decisions	Autonomy in production	Ownership of assets	Purchase, sale, or transfer of assets	Access to and decisions on credit	Control over use of income	Group member	Speaking in public	Work burden	Leisure time
Indicator weight	0.1	0.1	0.0667	0.0667	0.0667	0.2	0.1	0.1	0.1	0.1
<b>WOMEN</b>										
Censored headcount	0.171	0.217	0.179	0.187	0.501	0.249	0.275	0.164	0.227	0.119
% Contribution	7.6%	9.7%	5.3%	5.5%	14.8%	22.2%	12.2%	7.3%	10.1%	5.3%
Contribution	0.017	0.022	0.012	0.012	0.033	0.050	0.027	0.016	0.023	0.012
% Contr. by dimension	17.3%		25.7%			22.2%	19.5%		15.4%	
<b>MEN</b>										
Censored headcount	0.118	0.163	0.089	0.099	0.337	0.188	0.228	0.037	0.043	0.070
% Contribution	8.5%	11.8%	4.3%	4.8%	16.2%	27.2%	16.5%	2.7%	3.1%	5.0%
Contribution	0.012	0.016	0.006	0.007	0.022	0.038	0.023	0.004	0.004	0.007
% Contr. by dimension	20.3%		25.3%			27.2%	19.1%		8.1%	

Note: the highlighted rows represent the absolute contribution of each indicator to disempowerment and are used to create the graphic below.



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**WEAI results for the northern and southern Karamoja Title II program areas separately**

The WEAI results for each of the Title II program areas in northern and southern Karamoja are provided in Table A7.3. The WEAI for the northern Karamoja program area is 0.774 and for the southern Karamoja program area is 0.806. These results indicate that women's empowerment are relatively similar in both program areas. Further examination of the composition of the 5DE index confirms that the contributions of each of the 10 indicators to disempowerment for men and women are similar in both program areas and follow the same distributions as those for the overall WEAI.

**Table A7.3 Women's Empowerment in Agriculture Index (WEAI) by Program Area –  
Karamoja region of Uganda (2013)**

Indexes	Northern Karamoja		Southern Karamoja	
	Women	Men	Women	Men
Empowered Headcount (He)	42.4%	60.0%	45.2%	65.3%
Disempowered Headcount (Hn)	59.7%	40.0%	54.8%	34.7%
Average Adequacy Score (1-Aa)	60.9%	63.2%	62.2%	63.3%
Average Inadequacy Score (Aa)	40.0%	36.8%	37.8%	36.7%
<b>5DE Index 1 – (Hn x Aa)</b>	<b>0.761</b>	<b>0.853</b>	<b>0.793</b>	<b>0.873</b>
Number of observations	2,332	1,971	2,259	1,878
% of Data Used	62.0%	51.6%	63.4%	53.0%
% of women with no gender parity (H <sub>GPI</sub> )	47.0%		40.2%	
Average Empowerment Gap (I <sub>GPI</sub> )	24.0%		20.5%	
<b>GPI 1 - (H<sub>GPI</sub> x I<sub>GPI</sub>)</b>	<b>0.887</b>		<b>0.918</b>	
<b>WEAI (0.9 x 5DE) + (0.1 x GPI)</b>	<b>0.774</b>		<b>0.806</b>	

**Limitations of Data Collection**

The data collection for the WEAI was conducted in conjunction with the household survey. The interview was typically conducted with the self-identified male and female head of each household; however, there were households where more than one woman was eligible to be interviewed due to polygamous marriages, which were fairly common. In these cases, the woman randomly selected for the household survey was also interviewed for the WEAI. This presents some difficulties with the interpretation of the data since the shared relationships between the women in these households may impact each woman's level of empowerment.

A second limitation of the WEAI data was the number of interviews with missing responses. As noted in Tables A7.1 and A7.3, about 50 to 60 percent of the responding households were used to calculate the WEAI. If there was any systematic reason for the nonresponse, this may have created a bias in the reported results.