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Guidelines for Assessing Women's Empowerment in Agriculture

Operational Manual for Using the Women's Empowerment in Agriculture Index (WEAI) in Field Research

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www.tarina.cals.cornell.edu

TABLE OF CONTENTS

PREFACE

This report is a product of the Center of Excellence (CoE), a multi-disciplinary team of scholars, policy analysts, and development practitioners based in New Delhi that offers cutting-edge research and capacity for implementing nutrition-sensitive agriculture in the Indian context. The CoE was established through the Technical Assistance and Research for Indian Nutrition and Agriculture (TARINA) project, a four-year grant awarded to the Tata-Cornell Institute for Agriculture and Nutrition (TCI) from the Bill & Melinda Gates Foundation to tackle malnutrition in India (see Box 1).

The CoE serves as a central repository of information and knowledge for building stronger linkages between agriculture and nutrition, as well as a hub for a network of national and international experts working in this space. It provides a mix of technical assistance, capacity development, and advocacy for the design and implementation of nutrition-sensitive agricultural projects, programs, and policies that ensure improved nutrition outcomes at scale.

The CoE plays a key role in translating lessons and evidence from TARINA, acquired through research and field-based implementation, into a collection of policy briefs, recommendations, and best practices for a wide range of stakeholders. While the CoE was founded under TARINA, it is envisaged to eventually evolve into an autonomous entity that is able to sustain itself well beyond the life of the grant through the provision of demand-driven technical assistance and expertise.

Box 1: About TARINA

Technical Assistance and Research for Indian Nutrition and Agriculture (TARINA) is a consortium that connects policy-focused academics with impact-focused implementation partners to promote a more nutrition-sensitive food system in India that enhances the availability and affordability of nutrient-rich foods for the rural poor.

Led by the TCI, TARINA links the research capacities of Cornell University, Emory University, the International Food Policy Research Institute (IFPRI), and the Tata Institute of Social Sciences (TISS) with the technical capacities of leading non-governmental organizations (NGOs) and development partners – BAIF Development Research Foundation, CARE India, Grameen Development Services (GDS), and Tata Trusts.

Through its leadership and expertise, the consortium aims to redirect agricultural policy away from staple grain fundamentalism toward a much broader food systems focus, which considers the need to build better connections between factors influencing agricultural production and nutrition. More specifically, it focuses on agricultural pathways for improving the rural poor's year-round access to affordable, diverse, and high-quality foods.

This is achieved through the project's three broad objectives to:

1. Provide technical assistance in redesigning agricultural projects to ensure nutrition outcomes at scale.
2. Provide assistance and evidence for policy reform that enhances diet quality at affordable prices.
3. Build capacity to design and implement nutrition-sensitive agricultural programs and policies.

TARINA was established with a US$13.4 million grant awarded to the TCI from the Bill & Melinda Gates Foundation. As the primary grantee, the TCI is the convening agency responsible for coordinating the TARINA consortium as well as providing oversight and ensuring accountability among partners. The project was launched on December 1st, 2015 and will run through November 2019 .

For more information about TARINA and to access additional information products, please visit the project's website:
www.tarina.cals.cornell.edu

INTRODUCTION

Agricultural projects, programs, and policies are increasingly being designed to be nutrition-sensitive, with the objective of leveraging agriculture for improved nutrition. Of the multiple ways in which agriculture can influence nutrition outcomes, women's empowerment remains the least studied. However, any discussion of how the production and sale of food can influence consumption decisions is incomplete without considering the crucial role that women play in agriculture. As producers and/or sellers of food, women's ability to influence decisions around the mix of crops to be cultivated, sale of crops, use of income, and their access to resources like labor-saving technologies that can reduce drudgery in the field are all key to defining the pathways from agriculture to nutrition.

The recent move towards multi-dimensional and comprehensive indicators for assessing agriculture-nutrition pathways takes into account the many domains of women's decision-making. One such multi-dimensional indicator is the Women's Empowerment in Agriculture Index (WEAI) that was developed by IFPRI, USAID, and OPHI as a first step towards assessing women's empowerment, specifically in the domain of agriculture. It accounts for both women's empowerment as well as women's empowerment relative to men (i.e. gender parity) within a given household. The WEAI has been field-tested in USAID's Feed the Future countries.

This manual discusses how the WEAI can be operationalized in a field setting using TCI's experience of incorporating the index within a larger household survey in the Chandrapur District of Maharashtra. This was the first time that the WEAI was applied in a field setting in India (see Box 2 for more details). Based on this experience, we demonstrate how the WEAI can be adapted according to context-specific characteristics and highlight the inputs required for, and challenges faced during, the design and implementation of the index.

Box 2: Women's empowerment and iron deficiency in Chandrapur (Maharashtra), India

In 2013-14, TCI rolled out a household survey that focused on the links between women's empowerment in agriculture and their iron deficiency status in the Chandrapur District of Maharashtra, India. The survey identified three different types of farming systems between which this relationship was analyzed. A total of 960 households in 24 villages were surveyed. An index man and woman from each household were interviewed on aspects of agricultural activities, food consumption, food security, and empowerment in agriculture. The latter incorporated the Women's Empowerment in Agriculture Index (WEAI) developed by IFPRI and its partners. Additionally, the survey activities included anthropometry (for adults and children 2-5 years old) and a basket of five biochemical markers for women (reproductive age group, non-pregnant, non-lactating).

Lessons from TCI's application of the WEAI may be useful to development practitioners and researchers interested in incorporating indicators of empowerment in surveys that focus on agriculture and nutrition. While this document provides links to relevant references that help explain the theory behind the development of some of the more recently used empowerment indices, its primary focus is to show how an empowerment module can be adapted to, and operationalized in, a field setting.

WHY FOCUS ON WOMEN'S EMPOWERMENT IN AGRICULTURE

Of the multiple ways in which agriculture can influence nutrition outcomes, women's empowerment remains the least studied. By 'empowerment' we mean women's ability to make decisions about their access to, and control of, resources, as well as their time use in various domains of agriculture and in the household. According to FAO (2011), while women account for 43% of the agricultural labor force in developing countries, and slightly more than 30% in South Asia and India, they face a 'gender gap' in their ability to access and control such resources.

Agriculture-nutrition pathways themselves are directly affected by women's empowerment. For instance, women can affect their own and their household's nutritional security by influencing both the mix of crops cultivated and the mix of foods purchased from the market. Women's time use in agriculture (e.g. weeding, harvesting, and post-harvest activities) can also affect nutrition outcomes, especially those related to childcare, child feeding, and food preparation practices. Women's time use and influence over foods cultivated and/or purchased largely depends on their access to agricultural resources (e.g. access to seeds, credit, extension services, etc.), nutrition education, and health services, as well as their control over use of income (Peña et al., 1996; World Bank, 2007).

IMPORTANT FIELD-LEVEL CONSIDERATIONS

1. Determining which indicator(s) to use

Measures of empowerment can be characterized as direct versus indirect, intrinsic versus extrinsic and qualitative versus quantitative, amongst others (Ibrahim and Alkire, 2007). Empowerment indicators can also be singular (i.e. one-dimensional) or comprised of several individual sub-indicators (i.e. multi-dimensional). These characteristics of empowerment indicators and several examples of commonly used, one-dimensional indicators of empowerment are described in section 1 of the Appendix. Table 1 presents recent examples of multi-dimensional indicators of women's empowerment, including the WEAI.

TABLE 1: EXAMPLES OF MULTI-DIMENSIONAL INDICATORS OF WOMEN'S EMPOWERMENT

Index (Reference)	**Sub-indicators**	**Components**
Women's Empowerment in Agriculture Index (WEAI) (Alkire et al., 2013)	5 domains of empowerment (5DE) index	
	Production	- Input in productive decisions - Autonomy in production
	Resources	- Ownership of assets - Purchase/sale/transfer of assets - Access to & decision on credit
	Income	- Control over use of income
	Leadership	- Group membership - Public speaking
	Time use	- Workload Leisure
	Gender Parity Index (GPI)	- 5DE scores of women relative to men in the household
Global Gender Gap Index (World Economic Forum, 2014)	Economic participation	- Participation gap - Remuneration gap - Advancement gap
	Educational attainment	- Female to male literacy & enrollment rates

	Health & survival	- Sex ratio at birth - Female to male life expectancy
	Political empowerment	- Female to male participation in parliament, ministries & as Heads of State
Women's status (Smith et al., 2003)	Women's decision-making power relative to men (i.e. intra-household)	- Whether woman works for cash income - Woman's age at first marriage - Percentage age difference between woman & partner Difference in years of education between woman & partner
	Societal gender equality	- Difference in weight-for-age Z scores for girls & boys under age five - Difference in vaccination score for girls & boys under age five - Difference in years of education between adult women & men
Literature review (Cunningham et al., 2014)	Control of resources & autonomy	- Control over income - Access to resources - Decision-making power
	Workload & time	- Employment, household chores & childcare
	Social support	- Community group membership - Cognitive social capital

The choice of indicator(s) depends on several considerations. Some of these are discussed below, with reference to TCI's decision to use the Women's Empowerment in Agriculture Index (WEAI) in the Chandrapur District of Maharashtra, India.

a. Scope of the study

The choice of indicator(s) would depend on the specific domains that the project is focusing on. For instance, the TCI project adapted the Women's Empowerment in Agriculture Index (WEAI) since we were specifically interested in women's ability to make decisions and access resources in multiple domains of agriculture. The WEAI, which provides a direct measure of empowerment, was complemented with indirect measures of empowerment like age and education level to validate the results with more traditionally used proxy measures.

While empowerment is domain specific, it is also possible that empowerment in one domain can be instrumental to other outcomes. For instance, women's empowerment in agriculture can influence not just their ability to make decisions in agriculture, but also their dietary intake or child health outcomes. In such a situation, it is possible that if the scope of the study is wide-ranging, then

the choice of indicators to be included would need to be balanced against other components of the survey.

b. Level of application

Empowerment can be assessed at various levels. For instance, we may be interested in the ability to make decisions at the individual, the household or even the collective level. On the other hand, we might just as well be interested in assessing the level of empowerment between men and women in the same household. Depending on the level of application, the choice of indicator can differ. In the case of the TCI project, the WEAI and its sub-indicator components (listed in Table 1) provided data at the level of each farming system and at the individual level. Further, the WEAI also compared intra-household parity in empowerment scores.

c. Logistical constraints

The availability of research funds and the project timeline can also influence the choice of indicators included in the field survey. Another key consideration is the availability of adequately trained field staff that can implement the empowerment module appropriately.

2. Seasonality

Seasonality is an important consideration when deciding the timeline for a survey that includes an empowerment module. This becomes especially true when the module includes direct measures of empowerment that focus on individual decision-making and access to resources. For instance, we would expect women's access to credit, time use, and participation in various activities related to crop production, sale, livestock, and agricultural employment to differ between the sowing, harvest, and post-harvest seasons.

3. Adaptation, translation, and training

Given the specific social, political, and cultural norms that characterize the field site or respondent population, it becomes important to adapt the indicator(s) in a way that is consistent with the local context. Indicators like the WEAI include questions that are comparable across sites, but can also be adapted to the context specific to each site. Therefore, while the indicator may include a question about decision-making in agricultural production, the actual activities (e.g. crop cultivation, fisheries, collection of forest produce to name a few) can be modi-

fied. Similar adaptations can be done for the types of community groups present, types of assets owned, different sources of credit, and different time use related activities that an individual participates in. In addition to obtaining the local names or terms for various activities, objects, and resources, it is also crucial to generate a context-specific list of response codes. While activity codes are relatively easy to translate, it is the response options that need to be translated with care. In our experience, this is most true for the autonomy module of the WEAI, wherein three broad types of motivations are considered.

Site-specific information can be obtained through focus group discussions (FGDs), which are a convenient platform for gathering a wide range of response options in a relatively short amount of time. It is recommended that the FGDs cover all possible target groups to avoid omissions at a later stage. Information from FGDs can be supplemented with a few in-depth interviews with key informants, if necessary.

In addition to making appropriate adaptations to the content of the empowerment module, attention also needs to be focused on ensuring a thorough and accurate translation to retain the intent of the original questions. This will need to be followed-up with extensive pre-testing of the module and training of the field staff to verify that questions are being interpreted and understood correctly by both the respondents and the enumerators.

Box 3 below explains how the TCI adapted, translated, and trained field staff to implement the WEAI module developed for its survey in Maharashtra.

4. Paper or computer survey

The advantages of using a computer survey rather than a paper survey include: an easier interface for the enumerators to work with, quicker recording of responses, and an efficient way to generate datasets at the end of the survey by avoiding time consuming data entry processes that are prone to errors of omission. However, modules, like the WEAI that TCI used in Maharashtra, are fairly complex to code into a software-based platform. The development of such a computer platform requires a competent team that will not only setup and test the software, but will also be available on standby should any assistance be required during the implementation of the survey. TCI did use computer-assisted software for its survey in Maharashtra, as explained in Box 3.

Box 3: Adapting the WEAI for Use in Maharashtra: Challenges & Lessons Learned

The sections below draw on the TCI's experience of using the WEAI for a larger household survey on agriculture-nutrition linkages in Maharashtra, India.

Adapting the WEAI
the Chandrapur District in Maharashtra, India. The following categories were adapted to the local context:

1. Agricultural activity list: Fisheries were excluded. Instead, the collection and sale of forest-based produce were included to reflect the presence of forests and the reliance of tribal communities on forest produce.
2. Community groups: Membership to village 'panchayats' was included as one of the community groups.
3. Time use: The specific activities for the time use module were adapted after group discussions with community members. Additionally, rather than using the 15 minute template of the original WEAI, we recorded the time spent on each of the activities in electronic tablets.

Translating the WEAI
Extra emphasis was placed on translating the adapted version of the survey questionnaire from English to Marathi (the local language). This was most challenging for the autonomy component of the WEAI module. As opposed to a literal translation, the response vignettes had to be rephrased in an equivalent manner in Marathi.

Training of the survey team
The WEAI is an extensive module by itself. When included as part of a larger household survey, it can be challenging for both the respondents and the enumerators to avoid fatigue. Moreover, since it is a relatively new module, none of the enumerators in the Chandrapur study had worked with it before. This meant that the training had to include a separate section for discussing the background, motivation, and components of the WEAI module. We worked with the team to identify ways for them to keep track of the response codes and to identify how to pace their interviews so that greater time could be allotted for the more challenging sub-modules.

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Using computer software
Electronic tablets were used for recording responses to the survey questionnaire. This was beneficial since the WEAI module is very lengthy and detailed. Activity response codes were displayed directly in the tablet to assist the enumerators in recording the correct response option, as opposed to checking the response options each time at the bottom of a paper questionnaire.

CONSTRUCTION AND INTERPRETATION OF THE WEAI

The WEAI is a weighted sum of two sub-indices: 1) the five domains of empowerment sub-index (5DE) and 2) the Gender Parity Index (GPI). The weights assigned to these two sub-indices are 0.90 and 0.10, respectively. The WEAI increases from 0 to 1 as empowerment levels improve.

The 5DE sub-index estimates the extent to which both men and women in each household are empowered across five broad domains of agriculture. These five domains are: 1) input in production, 2) resources, 3) income, 4) leadership, and 5) time use. Each of these five domains is further comprised of ten sub-indicators, all of which are given equal weights in the construction of the 5DE sub-index.

The GPI compares 5DE scores of women relative to men in each household. Women are considered to have gender parity if their 5DE scores are at least as high as those of their partners, or if the woman is already empowered in the 5DE sub-index. Both of the two sub-indices range from 0 to 1, increasing as individual empowerment or parity levels improve within the household. 5DE scores of 0.80 or above (i.e. empowerment in at least 80% of the sub-indicators) are considered to indicate 'empowerment' of the individual. Box 4 provides links to resources that are available to construct, compute, and analyze the WEAI.

Box 4: IFPRI Resources for Constructing and Interpreting the WEAI

WEAI resource center:
http://www.ifpri.org/topic/weai-resource-center

Training materials:
http://www.ifpri.org/weai-training-materials

Calculating the WEAI:
https://www.youtube.com/watch?v=g7ZW0sGD74Y

Calculating the WEAI using Stata:
https://www.youtube.com/watch?v=DWgJQKuOUdI

The WEAI, 5DE, and GPI are calculated at an aggregate level (i.e. the level of a country, region, or state). At each level, the 5DE scores are aggregated separately for men and for women. The WEAI and GPI, however, are not aggregated by gender. Group-level differences in aggregate WEAI, 5DE, and GPI scores can be compared using parametric or non-parametric tests of comparison. Aggregate scores can also be categorized as low, medium, or high using data-driven distributions or using IFPRI's rankings as follows: high if WEAI = 0.85 or higher, medium if WEAI = 0.73-0.84, and low if WEAI = 0.72 or lower. Table 2 presents selected results from IFPRI's baseline studies for the WEAI.

TABLE 2: WEAI BASELINE RESULTS FOR SELECTED COUNTRIES

Country	**5DE score**	**GPI score**	**WEAI score**	**Ranking**
Bangladesh	0.65	0.80	0.66	Low
Malawi	0.83	0.91	0.84	Medium
Uganda	0.85	0.92	0.86	High

Source: Malapit et al., 2014. Measuring progress towards empowerment. Women's empowerment in agriculture index: Baseline report. IFPRI, OHPI, and USAID.

Given that the composite indices can be decomposed by sub-indicators (of which there are ten) and by domains (of which there are five), we are able to identify the key areas in which women are disempowered. Since the data is collected for both men and women in the same household, such disaggregation allows us to identify the contribution of each sub-indicator to women's or to men's disempowerment score. This is useful in distinguishing between the key drivers of disempowerment for each gender.

Disaggregated WEAI results can also be used to identify key differences and patterns between specific groups of interest (e.g. gender, caste, farming system, etc.). Furthermore, individual-level data collected for the sub-indicators and domains allow us to identify each man and each woman as being empowered (or not) and each woman as having gender parity (or not). The Suggested Reading List section of this manual provides some key publications that may be useful in deciding how to present and/or interpret disaggregated WEAI results. Box 5 discusses how the WEAI results were used for analysis in the TCI study in Maharashtra.

Box 5: Analyzing the WEAI Results for Maharashtra, India

The WEAI results obtained from TCI's agriculture-nutrition survey in Maharashtra were compared across three different farming systems in the following ways:

1. Aggregate scores: Aggregate WEAI, 5DE, and GPI scores were calculated at the level of three farming systems: the landless, food-cropping, and cash-cropping households. Aggregate scores were also calculated and analyzed at the group-level to check for significant differences between farming systems (if any).
2. Aggregate scores by domain/sub-indicator: The decomposability of the 5DE sub-index allowed us to disaggregate it into its ten constituent sub-indicators and five domains. This allowed us to identify:
    a. The proportion of women (and men) who are empowered (or disempowered) with respect to each sub-indicator and domain for each farming system.

    b. The contribution of each of the ten sub-indicators to the ag gregate disempowerment score for each farming system.
3. Individual-level variables: The construction of the 5DE sub-index specifies that each individual should have adequate input/decision-making in at least 80% of the sub-indicators. This cut-off allowed us to develop individual-level binary variables that were used in multivariate analysis:
    a. Each woman (and man) is identified as being empowered (=1) or not (=0).

    b. Each woman is identified as having gender parity withi the household (=1) or not (=0).
4. Validation against indirect measures of empowerment: We compared WEAI results to women's age and education levels to see if the former are consistent with the idea that as women grow older or achieve a higher level of education, they have greater say and involvement in household decision-making..
5. Validation against non-agricultural decisions: Women's ability to make decisions in various agricultural domains was compared against their input in decisions regarding non-agricultural domains and outcomes related to health, childcare, and food consumption.

The construction of the WEAI requires data for all individuals on each of the sub-indicators. However, it may not be possible to collect all the data, due to project-level constraints. In that case, one or some of the WEAI components can be included in the project. While these components can be used for comparison at the level of a particular sub-indicator or domain, they will not be sufficient to compute the WEAI. It may also be possible that there are missing data for one or more individuals once the data files are generated. For accurate construction, the WEAI requires that households for which data is missing (whether for the man or woman) be excluded from the construction and analysis of the index.

OPERATIONALIZING THE WEAI IN A FIELD SETTING

This section summarizes the techniques and processes discussed in this manual for using the WEAI in a field setting. The following steps are recommended in operationalizing the index:

1. Identify the appropriate indicator based on the objectives of the research. We provide the modified WEAI module that was used for the TCI study in Maharashtra in section 2 of the Appendix. However, if the scope of the project and/or resources available do not warrant the use of the WEAI, an overview of other commonly used empowerment indicators and their properties are provided in section 1 of the Appendix.

2. Adapt the activities and response options in the WEAI module to the context that characterizes the target population/field-site, translate the module to the local language, and undertake an exhaustive in-class and field-based training of the field staff (see Box 3).

3. Ensure that the data is cleaned and checked before data analysis begins. Response options in the data file should correspond to the codes outlined in the module questionnaire (see section 2 of the Appendix for response option codes for each activity).

4. Construct the WEAI using the list of resources provided in Box 4.

5. Present the WEAI results at the aggregate and individual levels, and validate them against other commonly used measures of empowerment, as suggested in Box 5. Results can also be compared, where appropriate, to results from other countries where the WEAI has been successfully used (see references under the Suggested Reading List of this manual).

CONCLUSION

It is true that the exercise of collecting primary data, especially on direct measures of empowerment, is complex both in terms of identifying and designing the appropriate indicators and in terms of implementing them while being cognizant of the social, economic, and political context that characterizes the target population/field-site. The ground-level challenges of ensuring a thorough translation of questions and adequate interpretation by respondents, training of field staff, and balancing the demands that indices like the WEAI place on the time of both enumerators and respondents are immense. The back-end work of such surveys can also take longer if they are based on a computer platform, as it takes both time and effort to not only code such complex questionnaires, but also to test them for accuracy.

Notwithstanding these challenges, the insight that is gained from such a rich and diverse set of indicators gives us a more comprehensive picture of the degree of empowerment. Depending on the needs of the project, one may choose to analyze all or some of the multiple indicators. The interpretation of results from such surveys can be enriched by complementing direct measures of empowerment with indirect measures as well as qualitative information on social norms, practices, and taboos that very often influence decision-making within a household.

The WEAI is the first multi-dimensional index that is now being adapted specifically to the needs of agricultural projects that are focused on nutrition. We are at a point where the increasing use of the WEAI will allow us to validate the results of the original index across time and space, as well as strengthen it as more lessons from the field emerge and greater needs of projects arise.

SUGGESTED READING LIST

1. Key WEAI publications

For an updated list, visit: https://www.ifpri.org/key-weai-publications

The following is a list of reports, discussion papers, and journal articles on the WEAI. These may be used as a reference point for deciding how to present results from the index for a given location or demographic group.

2. WEAI summary brochure

Available at: http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/126937/

3. WEAI baseline report

Malapit et al. 2014. Measuring progress towards empowerment. Women's empowerment in agriculture index: Baseline report. IFPRI, OHPI, USAID. Available at: https://www.feedthefuture.gov/sites/default/files/resource/files/ftf_progress_weai_baselinereport_may2014.pdf

4. Peer-reviewed publications

Alkire et al. 2013. The Women's empowerment in agriculture index. World Development. Available at: http://www.sciencedirect.com/science/article/pii/S0305750X13001629

Johnson and Diego-Rosell. 2015. Assessing the cognitive validity of the Women's Empowerment in Agriculture Index instrument in the Haiti Multi-Sectoral Baseline Survey. Survey Practice. Available at: http://surveypractice.org/index.php/SurveyPractice/article/view/288

Malapit and Quisumbing. 2015. What dimensions of women's empowerment in agriculture matter for nutrition in Ghana? Food Policy. Available at: http://www.sciencedirect.com/science/article/pii/S0306919215000202

Sraboni et al. 2014. Women's Empowerment in Agriculture: What Role for Improving Food Security in Bangladesh? World Development. Available at: http://www.sciencedirect.com/science/article/pii/S0305750X14000989

4. Discussion papers (available online)

Malapit et al. 2013. Women's Empowerment in Agriculture, Production Diversity and Nutrition: Evidence from Nepal. IFPRI Discussion Paper 01313. Available at: http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/127984

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APPENDIX

1. Background information on empowerment indicators

TABLE 3: CHARACTERISTICS OF EMPOWERMENT INDICATORS

Characteristic	Description
Indirect	Determinants of empowerment ('proxy' measures)
Direct	Focus on an individual's ability to make decisions related to specific goals
Extrinsic	Focus on an individual's ability to make decisions based on external factors
Quantitative	Objective indicators; comparable across individuals, time or space
Qualitative	Subjective indicators; not comparable across individuals, time or space
One-dimensional	Singular variables that are used to assess empowerment
Multi-dimensional	Multiple variables that are used to construct an aggregate indicator

TABLE 4: EXAMPLES OF ONE-DIMENSIONAL INDICATORS OF EMPOWERMENT AND THEIR CHARACTERISTICS

Indicator	Characteristic(s)
Education level	Indirect, Quantitative
Age	Indirect, Quantitative
Ownership of assets	Indirect, Quantitative
Decision-making over resources/assets	Direct, Intrinsic
Autonomy	Direct, Intrinsic
Are you a member of a community group?	Objective
Are you an active member of a community group?	Subjective

2. WEAI questionnaire developed by TCI for use in Maharashtra, India

Tata-Cornell Institute for Agriculture and Nutrition (TCI)

Effect of farming systems' on women's empowerment and iron deficiency status: A study of agriculture – nutrition linkages in Vidarbha, India.

Section A: Role in agricultural production & control over income

Instructions: We are interested in the respondent's roles, access to resources and decision-making. Remind the respondents of that from time to time during this module. Complete 68.1 to 68.3 for each activity before moving to the next activity.

Read aloud: Now I would like to ask you some questions about your role in decision-making about income-generating activities in your household. There is no right or wrong answer. Please tell me about your most usual situation.

Input in productive decisions and control over income

68		**68.1**	**68.2**	**68.3**
code	Activities	Did you (singular) participate in ____ in the past 6 months? **Yes- 1 No – 2-Go to next activity**	How much input did you have in making decisions about ____? **(Codes below)**	How much input did you have in decisions on the use of income generated from ____? **(Codes below)**
1	Food crop farming: Crops like rice, tur/other pulses and any vegetables grown in the field.			
2	Cash crop farming like cotton, soybean etc.			
3	Livestock raising (Goat, cow, buffalo)			
4	Poultry (e.g. chicken, duck, pigeon) and/or fish-pond culture			
5	Collecting forest produce like tendupatta, mahua, lac etc.			
6	Non-farm economic activities: Small business, self-employment, buy-and-sell (kirana/sell utensils etc.)			

7	Wage and salary employment: in-kind or monetary work outside of agriculture (mregs work/ migration etc.)			

Code list for 68.2
01 = No input
02 = Input into very few decisions
03 = Input into some decisions
04 = Input into most decisions
05 = Input into all decisions

Code list for 68.3
01 = No input
02 = Input into very few decisions
03 = Input into some decisions
04 = Input into most decisions
05 = Input into all decisions
06 = Decision not made/ Not applicable/Income not generated

Section B: Access to Productive Capital/resources

Instructions: The purpose of this module is to get an idea about your access to and control of capital/ assets. In this section we focus on three things – 1) ownership of land and assets, 2) decisions regarding purchase/sale/transfer of assets and 3) access to and decisions about credit.
First answer 69.1 for all the assets listed from 1-16. Then return to the top of the table and then ask 69.2-69.6 for for only the assets which the household has.

Ownership and purchase/sale/transfer of assets

Read aloud: Now we have some questions about your household's access to capital/assets and who in the household has ownership of these resources? When we ask about ownership we mean the person who has the final say over that asset. I will list some commonly owned assets and will ask you if anyone in your household currently owns them, who owns them and who can decide whether to buy/sell/give them away.

69		**69.1**	**69.2**	**69.3**
code	Productive Capital	Does anyone in your household currently have any ____? **Yes-1 No-2 If 2, skip to next item**	Who would you say owns most of the ____? (**Codes below**)	Who can decide whether to buy/ sell / give away or rent out____ most of the time?
1.	Agricultural land			
2.	Other land not used for agriculture			
3.	Large livestock (e.g. oxen, cattle, buffalo, horse)			
4.	Small livestock (goats, pigs, sheep, chickens, ducks, pigeons)			
5.	Fish pond or fishing equipment			
6.	Farm equipment (non-mechanized like saw/hammer/hoe/spade/axe/ shovel/sickle/spraying machine for fertilizer or pesticide)			

7.	Farm equipment (mechanized e.g. tractor, power tiller, diesel or electric motor pump for irrigation etc.)			
8.	Non-farm business equipment (e.g. roti oven, sewing machine, solar panels, blacksmith equipment)			
9.	House (and other structures)			
10.	Large consumer durables (ex: fridge, TV, sofa, air cooler)			
11.	Small consumer durables (ex: radio, cookware, wall clock, watch, sewing machine, CD player)			
12.	Mobile phone			
13.	Transportation (motorized or not motorized, e.g. bicycle, motorcycle, car, horse cart, bullock cart, cycle rickshaw, auto richshaw)			
14.	Jewelry (silver/gold)			

Code list for 69.2, 69.3

01 = Self
02 = Spouse
03 = Self and spouse jointly
04 = Other male household member
05 = Other female household member
06 = Self and other household member(s)
07 = Spouse and other household member(s)
08 = Self, spouse and other household member(s)
09 = Someone (or group of people) outside the household
10 = Self and other outside people
11 = Spouse and other outside people
12 = Self, spouse and other outside people.

Access to and decisions about credit

70. Has anyone in your household taken a loan/borrowed money (for any purpose like farming, wedding, health expense etc.)?
Yes -1 –Go to 71
No – 2 – Go to 71.5

Instructions: Please read lending sources one by one completing all questions across the row for one source before proceeding to the next row.

Read aloud: Now I will list some places from where people sometimes take loans. I want you to tell me which of those are relevant for you. We will then talk about who decides to borrow/how to use that money.

71		71.1	71.2	71.3	71.4
code	Lending Sources	Has anyone in your household taken any loans or borrowed cash/in-kind from ____ in the past 12 months? **Yes -1** **No – 2 – go to next source** **Don't know – 3 –go to next source**	Who made the decision to borrow from ____? (**Codes below**)	In whose name was the loan taken? (**Codes below**)	Who makes the decision about what to do with the money/item borrowed from ____? (**Codes below**)
1.	Non-governmental organization (NGO)				
2.	Informal lender				
3.	Formal lender (direct credit from bank/ financial institution/ savings and credit cooperatives)				
4.	Friends or relatives				
6.	Women's groups				

Code list for 71.2- 71.4

01 = Self
02 = Spouse
03 = Self and spouse jointly
04 = Other male household member
05 = Other female household member
06 = Self and other household member(s)
07 = Spouse and other household member(s)
08 = Self, spouse and other household member(s)
09 = Someone (or group of people) outside the household
10 = Self and other outside people
11 = Spouse and other outside people
12 = Self, spouse and other outside people.

71.5 Why did you not take a loan from sources like informal lender, relatives/friends or formal lending institutions?
Have enough money-1
Afraid of losing collateral-2
Do not have enough collateral/did not qualify for the loan-3
Afraid cannot pay back the money- 4
Interest rate/other costs too high-5
Not allowed to borrow/family dispute in borrowing decision-6
Place of lender is too far-7
Don't like to be indebted to someone-8
Other-9

Section C: Individual Leadership and Influence

Read aloud: The purpose of this module is to get an idea about men's and women's potential for leadership and influence in the communities where they live.

S.N.	Question	Response	Response options
72	Do you feel comfortable speaking up in public to Help decide on infrastructure (like small wells, roads, water supplies) to be built in your community?		No, not at all comfortable-1 Yes, but with a great deal of difficulty-2 Yes, but with a little difficulty-3 Yes, mostly comfortable-4 Yes, very comfortable-5
73	Do you feel comfortable speaking up in public to Ensure proper payment of wages for public works or other similar programs?		
74	Protest the misbehavior of authorities or elected officials?		

Instructions: Ask for each type of group under 75.1 . If response is no, move to next group. If response is yes, move to 75.2 and proceed.

Read aloud: I will now list different kinds of groups that people are sometimes a part of, in their village. For each type of group I want you to tell me if such a group is present in your village, and whether or not you are a member of it.

75		**75.1**	**75.2**	**75.3**	**75.4**
code	Group Membership	Is there a ___ in your community? **Yes-1-go to 75.2** **No-2** **If 2, go to next group**	Are you a member of any _____? **Yes-1** **No -2** **If 2 go to 75.6**	In the last 2 months have you attended any meeting of ----- as member/ position-holder? **Yes-1** **No -2**	How much input do you have in making decisions in this _____? (**Code list below**)
	Village panchayat/ committee				
	Agricultural/live-stock/fisheries producer group (including marketing groups)				
	Water users'/ forest users' group				
	Credit or micro-finance group (including SHG)				
	Trade and business association				

	Civic group (improving community) or charitable group (helping others) or religious				
	Other (only if it does not fit into one of the other categories)				

If response if 2 for all or some under 75.2 then go to 75.4

Code list for 75.4

01 = No input
02 = Input into very few decisions
03 = Input into some decisions
04 = Input into most decisions
05 = Input into all decisions
06 = Decision not made

75.5 Why are you not a member of some/all of the groups present in your village?
01 = Not interested
02 = No time
03 = Unable to raise entrance fees
04 = Unable to raise reoccurring fees

Section D: Decision-making

Input and relative autonomy in productive decisions

Read aloud: In this section first, for a list of activities, I will ask you who usually takes the decision, and to what extent you feel you could personally take decisions if you want/wanted to.

76		**76.1**	**76.2**	**76.3**	**76.4**	**76.5**
				Read aloud: I am going to give you some reasons why you act as you do in the activities I just mentioned. For instance the extent to which you take/don't take decisions could be because you might think you could get into trouble, or others might not think highly of you or simply because you think it is the right thing to do. You might have several reasons for doing what you do and there is no right or wrong answer – everyone tries to balance situations don't they? Please tell me to what extent you think these these statements are true or not.		

code	Activities	Who normally takes the decision regarding ____? (**If self, write 01 and skip to next activity**) (**Code list below**) (**If 95, go to next activity**)	To what extent do you feel you can make decisions regarding ___ if you want(ed) to? (**Code list below**) (**If 05, skip 76.3-76.5**)	Regarding __ I do what I do partly because I will get in trouble if I act differently (maybe with spouse/parents/ in-laws/ others in family) if I do differently. (**Code list below**)	Regarding ____ I do what I do so others don't think poorly of me (others will not be pleased by my behavior). (**Code list below**)	Regarding ____ I do what I do because I personally think it is the right thing to do. (**Code list below**)
1.	Getting inputs for agricultural production (which inputs to buy, from where, when etc.)					
2.	Which types of crops to grow for agricultural production					
3.	When to take or who will take crops to the market					
4.	Whether to engage in livestock raising/grazing					
5.	Collecting forest produce					
6.	Your own (singular) wage employment in agriculture					

7.	Your own (singular) Wage and salary employment: in-kind or monetary work, (daily wages/mregs work/migration etc.)					
8.	Major household expenditures (like TV, fridge, radio, mobile phone etc.)					
9	Minor household expenditures (like vegetables/ fruits, kirana items, clothes etc.)					
10	Decision to have a child (whether at present/in past) or how many children to have or family planning					
11	Foods prepared in the household					
12	Health care (if a family member is ill, who decides whether to take him/her to doctor, and when/where)					
13	Feeding children					
14	To go to your mother's or friend's house					

Code list for 76.1

01 = Self
02 = Spouse
03 = Self and spouse jointly
04 = Other male household member
05 = Other female household member
06 = Self and other household member(s)
07 = Spouse and other household member(s)
08 = Self, spouse& other household member(s)
09 = Someone (or group) outside the household
10 = Self and other outside people
11 = Spouse & other outside people
12 = Self, spouse & outside people
95 = Decision not made/household doesn't engage in activity

Code list for 76.2

01 = Not at all
02 = To a small extent
03 = To some extent
04 = To a large extent
05-Not applicable

Code list 76.3-76.5

01 = Never true
02 = Not very true
03 = Somewhat true
04 = Always true

Section E: Time Allocation

Read aloud: We are also interested in knowing about how you allocate your time for both work and leisure activities.

Instructions: If yesterday was a typical day ask the respondent about yesterday. If yesterday was atypical, but the day before typical, please ask the respondent to consider the day before's activities. If both days were atypical (answer for both 77 and 78 is "No"), then please ask the respondent to consider yesterday's activities.

S.N.	Question	Response
77	Was yesterday a typical day? By typical I mean did you do the usual activities (like maybe working in the farm) or was it a 'special' day like holiday or festival etc.?	Yes-1-Go to 80 No-2-Go to 78
78	Was the day before a typical day?	Yes-1 go to 80 No-2 go to 79
79	If neither yesterday nor the day before were typical days, then why?	Public holiday-1 Sick/sick child-2 Festival-3 Travel or away from home-4 Visitors-5 Strike/Bandha-6 Other-96

Time use

Read aloud: Please describe all the time you gave to work and leisure activities you engaged in, since the time you woke up yesterday (or day before, where applicable). Please include time for traveling and commuting as part of the time for a given activity.

80	80.1	80.2	80.3	80.4
	Work group <drop down menu>	Activities <drop down according to activity in 80.1>	How much time did you spend doing ____ yesterday?	Total time in this cell, in hours <software, automatic>
	Economically productive work in primary sector	Field crop farming Kitchen garden Animal husbandry Fishing Forestry Horticulture Gardening Processing and storage		
	Economically productive work in secondary sector	Mining Manufacturing Construction Other		
	Economically productive work in tertiary sector	Self employed (Barber, Tailor, Own shop, Contractor, hawking/ vendor, Transport of goods/ people, tuitions) Government job Private job (driver, guard etc.) MREGS Other		
	Unpaid productive work	Household chores (Cooking Cleaning house Washing clothes, cleaning utensils, fetching water/fuel) Household repairs Child-care Care for elderly		

	Non-productive work	Community level work Education Sleep/resting Eat/drink Walking/exercise Receiving medical care Talking/gossiping/ friends/ watching TV/ Religious practice.	

Satisfaction with time allocation

S.N.	Question	Response
81	Regarding the amount of sleep you got last night, was that less than average, average, or more than average?	Less than average-1 Average-2 More than average-3
82	How satisfied are you with your available time for leisure activities like visiting neighbors, watching T.V., listening to the radio etc.?	Very satisfied-1 Somewhat satisfied-2 Neither satisfied nor unsatisfied-3 To some extent unsatisfied-4 Very unsatisfied-5 Other (Specify)_____96

(Note: For the original questionnaire developed by IFPRI see: https://www.ifpri.org/weai-training-materials)

3. Updates to the original WEAI

The discussion in this manual focuses on the original WEAI that was introduced by IFPRI and its partners. More recently, an abbreviated version of the WEAI (or A-WEAI) has been developed that reduces the time spent in the field on implementing the WEAI by 30%. The A-WEAI excludes four sub-indicators from the original WEAI. These are decisions regarding use (i.e. the purchase, sale, or

transfer) of assets, autonomy in production, speaking in public, and leisure. This leaves four domains with one sub-indicator each and a fifth domain (resources) with two sub-indicators. More information on the A-WEAI can be found at: **https://www.ifpri.org/event/webinar-abbreviated-womens-empowerment-agriculture-index-weai**

IFPRI is also currently working on designing a version of the WEAI that can be adapted for use in various kinds of agricultural projects. This is the Project-level WEAI or 'Pro- WEAI'. It will use the A-WEAI as a starting point and complement that with additional modules that will be specific to the focus of a given agricultural project (e.g. livestock, crops, irrigation, etc.). The indicators, weights, and cut-offs for the additional modules in the Pro-WEAI are yet to be tested and validated by IFPRI. A comparison of the original WEAI, A-WEAI, and Pro-WEAI can be found at: **https://www.ifpri.org/sites/default/files/Basic Page/weai_versions_table.pdf**