

# Gender and Agriculture Issues in Ghana and Malawi – A Desk Study

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June 2017



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**Published by:** International Institute of Tropical Agriculture

This project, 'Improving the use of tools to make sustainable agricultural intensification more equitable', is part of the Sustainable Intensification of Agricultural Research and Learning in Africa (SAIRLA) Programme. It is led by the International Institute of Tropical Agriculture (IITA), in collaboration with Michigan State University (MSU), University of Ghana and Lilongwe University of Agriculture and Natural Resources (LUANAR). Project activities are being implemented by partners in Ghana and Malawi.

Funded by the UK Department of International Development, SAIRLA is a five-year programme (2015–2020) that seeks to generate evidence and design tools to enable governments, investors and other key actors to deliver more effective policies and investments in sustainable agricultural intensification that strengthen the capacity of poorer farmers', especially women and youth, to access and benefit from SAI in Burkina Faso, Ethiopia, Ghana, Malawi, Tanzania and Zambia. The SAIRLA programme is managed by WYG International Ltd and the Natural Resources Institute, University of Greenwich.

This document was made possible with support from the UK Department for International Development (DFID). The contents are the responsibility of the producing organization and do not reflect the views of UK DFID, the British Government, WYG, nor the University of Greenwich - Natural Resources Institute.




The project thanks all donors and organizations who globally supported its work through their contributions to the [CGIAR system](#)

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# Executive Summary

In this report, we briefly summarize key gender and agriculture issues for Ghana and Malawi. We then review existing tools for gender analysis in agriculture. The tools described here come from two sources as a starting point for the manual that will be developed in the coming years. The first source is the list of methods for estimating gender equity indicators used in the draft sustainable intensification (SI) indicator manual developed by Michigan State University (MSU) and the University of Florida for the USAID-funded Sustainable Intensification Innovation Laboratory in collaboration with Africa RISING scientists. The other source is the list of gender analysis tools provided by decision makers during the baseline data collection. For each tool their suitability for SAI in general and for the national context in particular as well as their features (costs, user-friendliness, etc.) are described.

# 1. Overview of Gender and Agriculture Issues in Ghana and Malawi

We first present some bulleted highlights from various reports about gender and agriculture in each country. This is followed by a table summarizing some key statistics on gender in agriculture in both Ghana and Malawi.

## 1.1 Ghana-specific review of evidence of gender and youth issues related to SAI

The following excerpts, unless otherwise noted, are taken from a consultancy report commissioned by Africa RISING to evaluate agricultural intensification in northern Ghana from a gendered perspective (Britwum and Akorsu 2016).

Overview of gender relations:

- “Norms and deeply entrenched patriarchal cultural practices deny women the opportunity to exercise their full rights as citizens (Koira 2014). Women as a result, do not have equal access to productive resources for agricultural production.” p. 3

Gender and agriculture generally:

- “Existing literature in Ghana captures sex-segregated and sequential divisions in crop and livestock production (Duncan 2004; Duncan and Brants 2004). In Ghana, crops usually attributed to men are the main staples, or those grown for local or international markets such as cocoa, yam, millet, or sorghum and women operate with legumes and vegetables (Duncan 2004; Britwum et al. 2006). They note at the same time that women are not wholly absent from cash crop production; they participate in their own right or as unpaid household laborers on their husbands’ farms or as waged workers on commercial farms.” p.7.
- “Whatever sex-differentiated systems operate in a particular community, it is generally observed that female agricultural tasks are normally linked to tasks with lower value, while male tasks confer ownership claims to land and market-oriented products.” p.7.

Access to land:

- “In the case of northern Ghana, the belief in the sanctity of land, with the associated rites and rituals performed prior to land allocation, is another route that grants male control over communal land. Such rites are male roles and give men power in decisions over land allocation and use (Britwum et al. 2014; Apusigah 2009).” p. 9.
- “In the Upper East and West regions, women are considered as farm hands, with strict marital obligations to work on their husbands’ or household farms” p.10.
- “Women with male children in northern Ghana have better access to land since all lineage systems pass on property to males (Manuh et al. 1997). Widows without children, and more so without male children, are the worse off when it comes to maintaining claims over plots of land accessed through the largesse of a deceased husband (Adolwine and Dudima 2010).” p.11.

Access to credit:

- “Agricultural produce traders are mostly women; yet official credit programs do not usually cover trading activities.”(p.3 quoting Ministry of Food and Agriculture 2007) .

Access to information:

- "... programs and projects are not systematically formulated around different needs, interests, roles, responsibilities, status, and influence in society of women and men." (Ministry of Food and Agriculture 2007, quoted in Britwum and Akorsu 2016, p.4).
- In Ghana, the adoption of inclusive business models, by development projects as out-grower schemes and contract farming has ensured that markets are closer to communities, work load is reduced, and the voices of women groups are being heard (Egyir et al. 2017).

Youth in agriculture:

- A farmer's age, education, household size, farm size, farm income, access to credit, membership of an FBO, location, and distance from house to the site of Youth-in-Agriculture Program, determine participation (Ohene 2013).

## 1.2 Malawi specific review of evidence of gender and youth issues related to SAI

Overview of gender relations:

- "Participants described many changes that have occurred since Malawi's transition to democracy, some of which are seen in a primarily positive light (such as women's increased access to property inheritance) and some of which are viewed more negatively (such as relaxed dress codes that some believe encourage promiscuity). While it has become more acceptable for women to take on leadership roles and income earning activities over time, hegemonic constructions of masculinity and femininity continue to guide the behavior of both men and women, with men viewed as the primary breadwinners responsible for supporting their families and women expected to be respectful, responsible for household chores, and subordinate to their husbands." (CRS 2015, p.5)
- "The interviews indicate that there is a high social value placed on joint decision-making. Couples that share household activities or make decisions together are admired as role models; community members drew a clear correlation between couples' cooperation and their economic and social wellbeing." (CRS 2015, p.11)

Gender and agriculture generally:

- "Studies that have been done in both patrilineal and matrilineal settings of Malawi (including Dedza and Ntcheu) show that men tend to control and dominate in decisions over cash cropping agricultural activities, while women dominate in food crop related decisions (Chirwa et al. 2011; Hockett and Richardson 2016; Simtowe (2009).)" (Chitsike et al. 2016, p.8).
- "The Malawi IHS3 collected information on the numbers of elderly (65 years), adult male and female (15–64 years), and child (6–14 years) household members engaged in three categories of agricultural tasks: land preparation and planting; weeding, fertilizing, and other non-harvest activities; and harvesting. Female headed households (FHH) and women in MHHs engage in more tasks than men (National Statistical Office 2004)" (Chitsike et al. 2016, p.8).

Access to land:

- "The Deceased Estates (Wills, Inheritance, and Protection) Act was passed in 2011, repealing the discriminatory Wills and Inheritance Act of 1967 and prioritizing the nuclear family in inheritance." (CRS 2015, p.7).
- Generally, plots controlled by men for cash crop production tend to be larger and more fertile than those controlled by women's food production (Chirwa et al. 2011)." (Chitsike et al. 2016, p.8).

## 1.3 Comparison of gender and agriculture in Ghana and Malawi

Agriculture in both Malawi and Ghana depends heavily on household labor and in both contexts gender norms play an important role in shaping who carries out which activities and who controls which resources. In both countries, the percent of female employees in the government is below 20% and female farmers are visited significantly less than male farmers (Table 1). In Malawi, women represent a larger portion of the agricultural labor force. Malawi also ranks worse in overall gender inequality according to the United Nations (UN) (Table 1).

**Table 1.** Key indicators and metrics for gender and agriculture in Ghana and Malawi.

Indicator	Metric	Ghana	Malawi
UN gender inequality index <sup>1</sup>	Rank out of 188 countries (2015)	139	170
Representation in agricultural policy decision-making	% of female employees in civil service, especially Ministry of Agriculture	16% (MoFA 2007) <sup>2</sup>	19% (FAO 2011)
	% of female employees in Ministry of Agriculture with decision-making rank	9.5% (MoFA 2007) <sup>2</sup>	-
Labor contributions to agriculture	% of overall agriculture labor force represented by women	49% (GSS 2013) <sup>2</sup>	80% (Hyder and Behrman 2014)
	% of subsistence agriculture labor force represented by women	70% (GSS 2013) <sup>2</sup>	70% (ADF 2005)
Access to land	Women can hold land titles	Yes	Yes
	% formal landholders who are women	36% <sup>3</sup>	32% (FAO 2011)
	% agricultural land without formal title (customary tenure system)	80% (FAO 2013) <sup>2</sup>	65–75% (USAID 2010)
	Gender balance in customary land transfer decision-making	Male dominated	Male dominated
	Customary inheritance system	Patrilineal (north) Matrilineal	Patrilineal (north) Matrilineal (central and

1 Source: <http://hdr.undp.org/en/data>.

2 Cited in Britwum and Akorsu. 2016. Africa RISING gender consultancy report for Ghana.

3 Deere, C.D., L. Boakye-Yiadom, C. Doss, A.D. Oduro, H. Swaminathan, J. Twyman, and J.Y. Suchitra. 2013. Women's land ownership and participation in agricultural decision-making: evidence from Ecuador, Ghana, and Karnataka, India. Centre for Public Policy, Indian Institute of Management Bangalore. The Gender Asset Gap Project. Research Brief Series No. 2 8 pp.

		(south)	south)
Access to credit	Formal credit system	Male dominated	-
	Micro-credit projects	Target women	-
Access information to	Male farmers visited by extension	10–13% (FAO 2013) <sup>2</sup>	13% (Mathiassen et al. 2007) <sup>4</sup>
	Female farmers visited by extension	2% (FAO 2013) <sup>2</sup>	7% (Mathiassen et al. 2007) <sup>4</sup>

## 2 Data availability

This section describes the available gender/youth and SAI data in Malawi and Ghana.

In Ghana the following publicly available household survey data contains a wealth of information that can be used to explore gender and youth issues related to agricultural intensification:

1. Ghana Living Standards Survey, 1987–1988, Round 1 GSS<sup>5</sup> (1989).
2. Ghana Living Standards Survey, 1988–1989, Round 2 GSS (1991).
3. Ghana Living Standards Survey, 1991–1992, Round 3 GSS (1993).
4. Ghana Living Standards Survey, 1998–1999, Round 4 GSS (2000).
5. Ghana Living Standards Survey, 2005–2006, Round 5 GSS (2008).
6. Ghana Living Standards Survey, 2013–2013, Round 6 GSS (2013).
7. Core Welfare Indicators Questionnaire (CWIQ), 2003 (GSS 2005).
8. Ghana Agricultural Production Survey (MoFA<sup>6</sup> 2012).
9. Baseline Feed the Future for Northern Ghana (2012 & 2015) METSS<sup>7</sup> (2014, 2016).
10. Baseline Survey: Cocoa Rehabilitation and Intensification Programme (SWA<sup>8</sup> 2015).
11. Data base: Ageing farmers and Youth in Agriculture in Ghana (MoF<sup>9</sup> 2016).
12. Data base: Organic Farming Systems in Africa (OFSA) project, Ghana (2017).
13. Data base: ProEco Africa Project, Ghana (2017).

4 Cited in Chitsike et al. 2016. Africa RISING gender consultancy report for Malawi.

5 GSS is Ghana Statistical Service.

6 MoFA is Ministry of Food and Agriculture.

7 METTS is Monitoring, Evaluation and Technical Support Services, Ghana.

8 SWA is Solidaridad West Africa.

9 MoF is Ministry of Finance.



Malawi has many similar publicly available household surveys including the following:

1. Malawi Integrated Household Survey, 1997, Round 1.
2. Malawi Integrated Household Survey, 2003, Round 2.
3. Malawi Integrated Household Survey, 2010, Round 3.
4. Malawi Integrated Household Panel Survey 2013.
5. Malawi Agricultural Input Subsidy Study, 2007.
6. Malawi Agricultural Input Subsidy Study, 2009.

Data from Malawi's Fourth Integrated Household Survey will be soon available. It is implementing recommendations for learning about intra-household asset ownership and control by interviewing multiple respondents from each household.

## **3 Review of gender and youth analysis tools applicable to SAI projects in sub-Saharan Africa**

There are many tools available for carrying out gender analysis related to sustainable intensification, many of which can be adapted for analysis of youth equity issues as well. Before reviewing those tools it is important to have a clear understanding of gender analysis. The following text from Senders et al. (2012, p.5) provides a clear summary:

Gender is the socially constructed difference between women and men. The meaning society gives to the roles of men and women results in certain power relations and dynamics. As a consequence, inequality in people's ability to make choices exists. Because women are often lagging behind in this respect, many tools are focused on empowering women. However, in order to change gender relations in society, the input of both men and women is required. (Senders et al. 2012, p. 5)

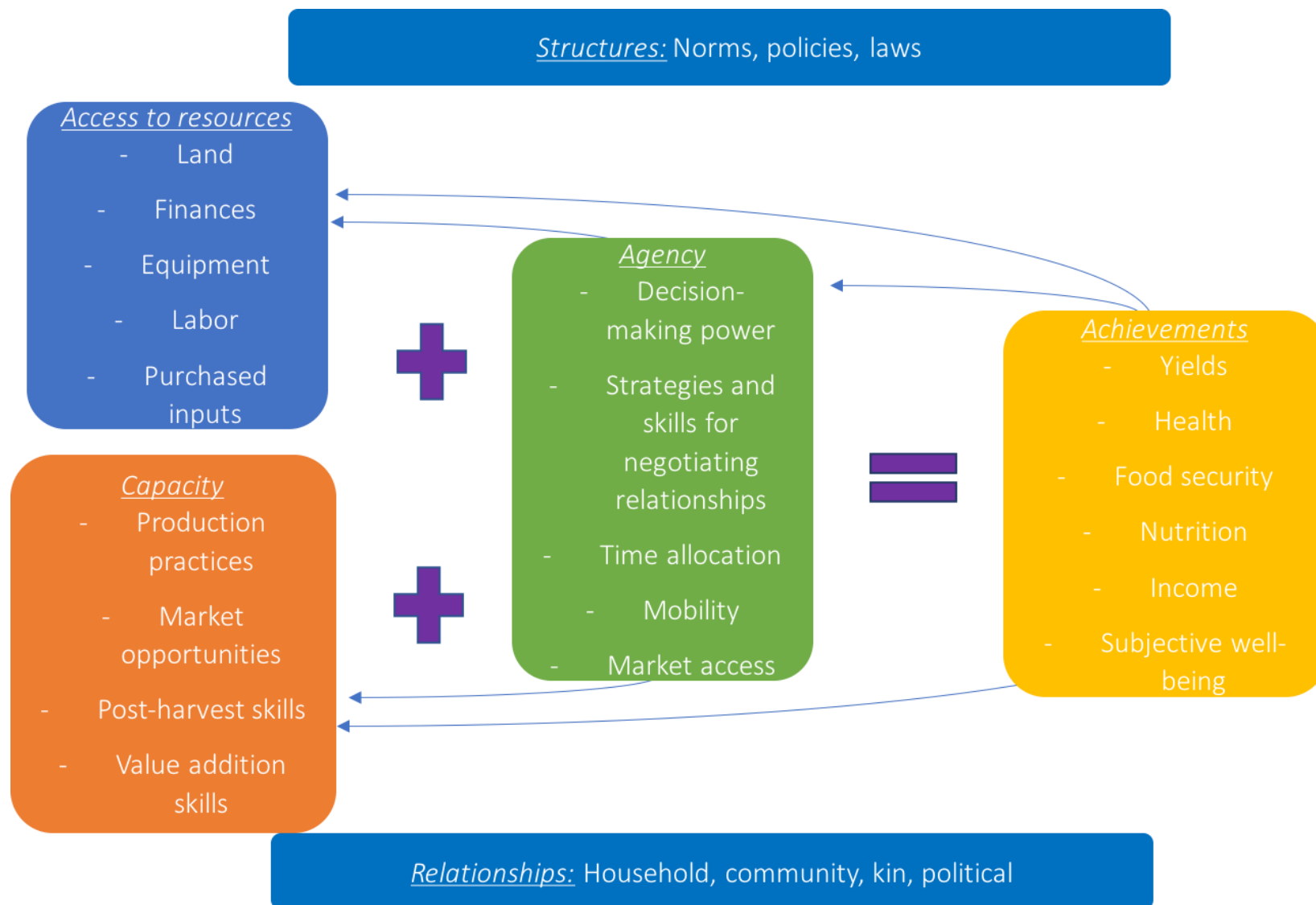
It is also important to define a few key terms that will be used to discuss three distinct rights related to a resource (such as land): ownership, access, and control. Ownership of a resource refers to either having a legal title or having the right to transfer that resource to others. Access refers to the ability to use a resource, or "The freedom or permission to use a resource, perhaps with some decision making once access is obtained" (Pulhalla et al. (no date) adapted from Feldstein et al. 1989). Control over a resource refers to the right to use and determine how the resource is used, or "The power to decide whether and how a resource is used, how it is to be allocated" (ibid).

### **3.1 Equity indicators (youth or gender)**

Equity is concerned with fairness or justice, which is a more complex concept than equality due to various ways that justice is understood. Cook and Hegtvedt (1983) outline four conceptions of justice: fair exchange, fair allocation, fair procedures, and just compensation. When equity is assessed across households it can be easily calculated by comparing responses to household surveys. However, equity analysis for gender or youth requires considering intrahousehold decision-making as well.

Drawing from the gender empowerment literature, we developed a conceptual framework for equity in agriculture that is detailed in Figure 1. Following Hemminger et al. (2014) we use the empowerment framework from Kabeer (1999) to categorize equity metrics as follows:

- Resources—These metrics are concerned with fair allocation of physical resources. They measure differential access to resources for agriculture.
- Capacity—These metrics are concerned with fair allocation of information and training resources. They measure differential access to information about markets or agricultural practices.
- Agency—These metrics are concerned with fair procedures. They measure differential levels of control over resources.
- Achievements—These metrics are concerned with fair exchange. They measure differences in realizing various benefits from agriculture.



**Figure 1.** Conceptual framework for empowerment and equality in agriculture. Adapted from (Hemminger et al. 2014) (based on Kabeer 1999) including elements from CARE gender toolkit and WEAI.

## 3.2 Measuring equity indicators

Quantitative assessment of equity can be calculated in various ways that combine the average values for each of the groups of interest (Group A and Group B). The following formulas are adapted from work by Rao (2016) on gender equity:

$$\text{Parity} = A/B$$

A ratio of the Group A to Group B measure, where 1 signals no difference, < 1 indicates B is favored and > 1 indicates A is favored.

$$\text{Gap} = A-B$$

The difference between the Group A measure and the Group B measure, where 0 signals no difference, < 0 indicates B is favored, and > 0 indicates A is favored.

$$\text{Normalized Gap} = 100 * (A-B)/B$$

The percentage difference between the Group A and Group B measures, with the B measure as the base: where 0 signals no difference, < 0 signals Group B is favored, and > 0 signals Group A is favored. The size of the differential is normalized against the Group B value.

When there are more than two groups of interest then one group needs to be selected as the base for comparison (Group B in the equations). The base for comparison may be the largest group, the average group, or the most favored group, depending on the situation.

Gender equity is a special type of equity that requires further attention due to the complexities of analyzing intra-household allocation, exchange, and procedures.

Most of the gender equity metrics require obtaining quantitative information from men and women and then calculating the gender gap. For easy interpretation, we follow the suggestion by Rao (2016) to compute the gender gap as the ratio of the female value to the male value expressed as a percentage, which we will refer to as gender parity.

$$\text{Gender parity (\%)} = \text{female value}/\text{male value} * 100$$

Ideally this calculation would be carried out using data collected separately from male and female adults in a given household. Interviewing multiple respondents per household is time consuming for data collection, entry, and analysis but is likely to improve accuracy, especially where power struggles limit the free exchange of information within the household. In some situations, it may be possible for one respondent to provide information about who in the household owns and controls various resources. While this information is collected at the individual or household level it will often be useful to analyze it at the community level. In many cases, it may be useful to disaggregate the average gender indicators for various categories of women (household heads or part of a dual-headed household, junior or senior women in the household, etc.).

All these equations provide a starting point for assessing quantitative data about equity that can be collected through interviews, focus group discussions (FGDs), or participatory exercises. However, equity assessment will be much richer and informative if the quantitative values are accompanied by qualitative information about how and why the observed differences across groups came to be and how fair or just the situation is perceived by various types of stakeholders.

For example, imagine two contexts where youth age 17 to 30 have a significant gap in land ownership compared to middle-aged adults. In one context, youth may not feel it unfair to have less access to land because they are fairly compensated for their contributions while they wait to inherit. But in another context youth with the same gap in land access may have little hope of inheritance and feel that the status quo is unjust. Thus, qualitative methods, such as FGDs and in-depth interviews, are critical for correctly interpreting these equity metrics.

Following are lists of all the specific data collection methods for gender analysis and youth analysis mentioned by decision makers in the baseline interviews:

### **Data collection methods for gender analysis**

- Gender sensitive participatory tools
  - Gender balance tree (also known as a decision tree)
  - Gender-sensitive vision journey
  - Ideal man, ideal woman—FGD
  - Gender sensitive seasonal calendar or farming calendar
  - Activity profile
  - Gender-sensitive Venn diagram
  - Gender-responsive problem tree; HIV, vulnerability, and sustainability
  - Gender-sensitive river code
  - HIV/AIDS tools
  - Transect walks
  - Mapping tools
- Women’s Empowerment in Agriculture Index
- Value Chain Map for Gender Analysis
- Gender barometer with a community score card
- Leadership Ranking Decision Tree—not found
- Futures tool—not found

### **Youth analysis data collection methods mentioned by decision makers**

- M & E data (3 respondents)
- FGDs (2 respondents)
- PRA (1)
- Demographic dividend tool (1)
- Occupational safety and health assessments (1) regarding child labor
- Nutrition for young women (1) method not specified

### **General data collection methods that can be adapted for gender analysis or youth analysis**

- SWOT analysis
- Most Significant Change
- Political Economy Analysis
- Knowledge, Attitude, and Practices (KAPS) surveys
- Adaptation and coping strategy tools, risk assessment
- Household economic assessment

## **3.3 Descriptions of data collection tools**

In this section, we summarize the available information about data collection methods for gender and youth analyses. The methods are organized by the dimensions of equity in our conceptual framework (access to resources, agency, and achievements) with an additional section on crosscutting methods that can be used to measure multiple aspects of equity. The last tools are those that are useful for identifying attitudes and perceptions related to gender relations.

Table 2 provides a summary of these tools and the dimensions of equity that they can be used to measure. In addition to these specific tools, we also outline more general data collection methods, such as surveys, semi-structured interviews, and FGDs. Together, this description of tools and methods provide the initial material for the handbook and manual that decision makers can use to be better informed about gender and youth analyses of SAI projects, policies, and investments.

**Table 2.** Tools for gender and youth analyses and the dimensions of equity they can be used to measure.

	Particip. mapping OR Transect walk	Venn diagram	Gender balance tree	CARE daily time use	Activity analysis	Seasonal calendar	CARE intra hh decisions	Gender value chain map	WEAI	Vision Journey	Ideal Man/Woman or River code
Ownership of resources	X								X		
Access to resources	X								X		
Access to information		X									
Leadership		X							X		
Control of resources	X		X				X		X		
Control of income			X				X		X		
Daily time allocation			X	X	X				X		
Seasonal time allocation					X	X					

Market participation								X			
Beliefs and perceptions			X					X		X	X
Planning	X									X	

### 3.3.1 Access to Resources

Land and livestock are critical resources for production and differences in ownership across groups and can reveal systemic inequities in how these resources have been allocated. Other key resources could be of interest in specific locations, such as irrigation water, credit, or machinery.

#### Measurement method 1: Surveys

Household surveys are regularly used to collect information about land owned, land cultivated, livestock owned, and other agricultural resources (credit, machinery). Many baseline surveys collect this contextual data. Equity measures simply require the ability to disaggregate households and compare mean values (or distributions) across groups.

Open-ended questions can be part of a household survey where respondents are selected randomly and this enables the use of qualitative analysis to make inferences on the average perspective (e.g., most people from Group A feel that Group B is favored by the chiefs in land allocation) or categorizing perspectives by quantitative values, such as livelihood strategy, age, or wealth (e.g., most people who said that bribery was the main cause of unequal access to land were from poorer households and under the age of 30).

#### Example 1: Surveying access to land by gender

It is common to compare the average area of land used solely or jointly by women to the average area of land used solely or jointly by men. Due to the complexity of intra-household labor allocation, it is not possible to assume that those who work the land have decision-making power about the benefits from their labor. Therefore, we suggest the use of the ability to decide how to use the harvest (sale or consumption) as a feasible metric for access to that land.

Where possible, land quality should be taken into consideration. For example, farmers' subjective assessment of soil fertility could be used to analyze the differences in quality of land that men and women have access to. The monetary value of the land would also show land quality but accurately quantifying the market value for land is only possible where land markets are well developed.

Following Rao (2016) we focus on control over the use of the harvest (home consumption, sale, trade). It is relatively simple in a household survey to add the question "Who decides what to do with the harvest?" for each field, where multiple household members can be selected. Joint responsibility of a field should not be interpreted automatically as equality and will need to be interpreted in the local context.

Qualitative questions that could be useful for a deeper understanding of gendered responsibility include:

- In this community, on which fields do men do most of the work? On which fields do women do most of the work? On which fields do men decide what to plant and what inputs to use? On which fields do women decide what to plant and what inputs to use? Why?
- When someone says that they decide how to manage the harvest jointly as a household, what does that look like? How equal is the decision-making?

#### Example 2: Livestock ownership

Livestock ownership can either be separated by type of livestock (cattle, small ruminants, poultry, etc.) or combined using Tropical Livestock Units (Jahnke 1982). In many agricultural surveys the respondents are asked the number of all types of livestock. This could easily be followed up by a question "Who is the owner of these livestock?" for each type. Asking about the monetary value for each type of livestock if it were sold could also allow for combining livestock across categories.

Relevant questions adapted from Tanzania National Panel Survey (using the numbering system in that survey):

28. Who in your household decided what to do with these earnings?

29. In principle, who makes decisions about keeping or selling [ANIMAL]? (Indicate up to two people)



30. Who in your household provided labor for feeding/watering of [ANIMAL]?
31. Who in your household provided labor for selling the animals and animal products?
32. Who in your household mainly provided labor for grazing of [ANIMAL]?

### **General issues about surveys**

It should be noted that in some contexts, respondents may not truthfully reveal the quantity of land or livestock they own. For example, farmers with larger than average landholdings who are concerned about land redistribution may not mention all land that they own. On the other hand, respondents may exaggerate their livestock ownership due to its high social value.

### **Measurement method 2: Key informant interviews or focus group discussion**

In-depth interviews with key stakeholders from the various groups of interest or FGDs with members from these groups can provide approximations of resource allocation as well as detailed information about how and why these resources are allocated that way. Open-ended questions are best for encouraging rich responses that draw on the respondents' lived experiences.

Qualitative interviews to understand equity in access to resources would aim to understand perceptions of the relative allocation across groups, how fair that allocation seems, and how and why there are differences. Purposively selecting respondents from various groups (or randomly selecting them from stratified lists) is important for qualitative methods regarding equity so that perspectives from all group of interest are obtained. In addition to selecting respondents from each group, in many contexts men and women will speak more freely in same sex groups that are led by a facilitator who is of the same gender. Focus groups may then be formed for Group A men, Group A women, Group B men, and Group B women. If age, wealth, or livelihood strategy is thought to be important then separate focus groups could be formed or the characteristics of the respondents in each focus group could be noted with the transcript to allow for analyzing differences in perspectives across these characteristics. Random sampling is not typically necessary with qualitative methods because statistical inference is rarely the goal.

Purposive sampling is important for targeting key informants with deep knowledge of a subject. Only well-informed individuals will be able to accurately estimate quantitatively the values of land and livestock resource owned by individuals in each group. For example, chiefs may have knowledge about how land has been allocated by ethnic group in their villages and the processes used for allocating that land.

During the interviews a secretary should take detailed notes and if possible the interview should be recorded so that respondents' exact words are the data that is analyzed. The typed-up notes from each interview or focus group should then be analyzed qualitatively. It is beyond the scope of this manual to detail the various forms of qualitative data analysis methods, but we will outline a basic strategy for categorizing information for a simple type of analysis:

1. Read through all of the transcripts and choose a few of the themes that you want to analyze in greater depth. These themes could come from your questions (e.g., response to how chiefs allocate land) or they could emerge from the responses to one or more of your questions (e.g., how migration to urban centers is affecting nomadic herders and settled farmers differently).
2. Copy all of the text relevant to one of your chosen themes into a single document. Include a respondent ID at the start of each portion of text so that you can easily identify who made each statement. If there is too much text to do this easily with copy and paste in a text editor then you can use qualitative software to code the data and then retrieve it by code. QDA miner lite is a free version of such software.
3. Highlight the key words that relate to your theme in each response. You may consider using colored highlighting based on a group of responses (for example, green for statements indicating the land allocation is fair and yellow for statements indicating it is unfair).
4. Summarize the diversity of responses in your own writing (though perhaps using quotes) aiming to

fairly represent the breadth and depth of information as succinctly as possible. You may want to use numbers to represent the level of agreement on the statements (such as 9 out of 12 respondents said... while the other 3 said...). The written length of these summary statements depends on both the diversity of the responses being summarized and the detail necessary to achieve the purpose for which the summary is applied.

### **Issues with qualitative interviews and FGDs**

Qualitative interviewing and FGDs are time-consuming methods for collecting quantitative information about access to resources and typically are not used with hundreds of respondents. The purposive sampling strategy limits the usefulness of any quantitative data collected because inferences are limited to those similar to the respondents and leave the results open to critiques of selection bias. Analysis of the qualitative data can be overwhelming for scientists not trained in those methods, especially for assessing the complex causes and effects of unfair allocation of resources.

### **Measurement method 3: Participatory mapping and transects walks**

Participatory mapping and transect walks are activities that can be used with each group of interest (men, women, male youth, female youth, etc.) to better understand the resources that they use and have access to. If the project focus is on crop production then a map of the village farmland might be most appropriate. If the project focus is an irrigation scheme then a transect walk through the irrigated land or along the canal might be useful.

Participatory mapping is typically done as a group (separated by men and women) on the ground with local materials representing the features of the landscape. Once the main features are in place probing questions can be used to add visual elements, for example, placing different colored stones for land managed by men, women, and youth. The final map can be transferred to a large sheet of paper, which can then be easily copied for the community to keep and to be included in a report. Mapping can be used generally to understand how resources are used by each group. It can also be used for specific planning or evaluation, for example, deciding on a location for an investment in marketing, storage, or irrigation.

A variation on participatory mapping is the printing of aerial or satellite images of the community, laminating them and having community members draw on them with different colored markers. This approach was used to apply a gender lens to nutrition sources in the landscape by Estrada-Carmona (2014).

Another variation had men and women map where negotiations happened in decision-making (Christie and Luebering 2011— presentation).

Transect walks are group walks across a landscape to observe the full range of conditions in an area (for example, from low to high elevation). The walk does not need to be in a straight line but can meander to observe interesting elements. Someone should take notes about observations during the walk. At the end the notes can be listed under a diagram of the transect with images to represent the features along the route. For assessing access to resources, the walks should be done separated by group and at various points the community members should point out what resources in the landscape they have access to and which ones they do not have access to.

### **Further resources**

Corbett, J. 2009. Good practices in participatory mapping: a report prepared for IFAD.

Willmer, A. and J. Ketzis. 2001. Participatory gender resource mapping: a case study in a rural community in Honduras. PLA notes resource CD.

### 3.3.2 Capacity

#### **Tool: Gender-sensitive Venn diagram**

Source: Climate Change, Agriculture and Food Security (CAAFS) gender toolkit (Jost et al. 2014)

Ask the participants to identify impactful organizations/groups/individuals, local and external, that provide services related to your area of focus (for example, projects and activities that improve agriculture). Follow up by asking for a list of organizations/groups/individuals that are non-agricultural (finance, healthcare, women's empowerment, etc.).

For each organization/group/individual ask:

- What are the objectives of the organization?
- How long has the organization existed in the village?
- What has been its most successful project in the village? Why? Who benefited?
- Does it have links with outside organizations? For what purpose?
- Who are the main beneficiaries? Men, women, young, old?
- Does one group (social and/or gender) rely more on the organization than others?

Transfer all of the organizations, groups, and individuals on to circles. The participants should decide which list item deserves a small, medium, or large circle to represent its relative importance to your area of focus (e.g., improved agriculture). Different colored circles can be used to indicate perceptions regarding groups of organizations. For example, green can be used to indicate organizations that the participants perceive to be friendly and easy to work with, while red is used for those that use too much scientific language or that do not seem to respect farmers.

Ask the participants if the organizations work together or have overlapping memberships. Leave the circles disconnected if they do not cooperate, use arrows if they only communicate, have them touch if they cooperate some, have them overlap if they cooperate extensively.

Discuss the diagram with the following questions:

- Who holds decision-making roles in the organization?
- Does the organization have both men and women participating? If so, in what ways are they participating?
- Do women provide input in this organization? If so, how do the men react to it?
- Does the organization work specifically with women in agriculture or natural resource management?
- Does the organization provide information on farming practices? If yes, what is the nature of this information?
- Who accesses the information provided by the organization? Men? Women? How do they access it?
- Are the specific needs of young and elderly people taken into account by the institution? If so, how?
- Are the specific needs of marginalized groups, for example, ethnically, financially, socially marginalized, considered by the institution? If so, how?

Variation: The UBALE gender analysis report (CRS 2015) shows using a similar tool to explore women's access to services. Each service provider is listed and the size of the circle reflects the importance. The circles are then placed on a paper based on how accessible the services are to women—most accessible at the top and least accessible at the bottom.

### 3.3.3 Agency

Agency is what allows people to use the resources that are available to them to generate their desired achievements through processes of decision-making, negotiation, deception, and manipulation (Kabeer 1999). This is the element of empowerment that is most difficult to empirically observe. Leadership role and formal decision-making authority can provide some indication of differential agency across groups.

## Measurement method 1: Surveys

Surveys can be used to identify the composition of leaders in groups, either by targeting key informants or by asking randomly selected individuals about the leadership of groups they participate in or are familiar with. Equal representation of groups in leadership positions does not necessarily mean there is equal agency.

## Measurement method 2: Key informant interviews or focus group discussions

As described in the Access to Resources section, qualitative interviews are suitable for understanding how and why questions through the use of open-ended questions. In this case, qualitative methods can be used with respondents from various groups to obtain detailed information on the respondents' personal experiences making decisions (or being affected by the decisions of others) as well as their general perceptions about the decision-making power of various groups of interest. Crafting an interview guide that effectively draws out respondents' experiences on a complex and relatively intangible concept can be difficult.

### *Time allocation by gender*

This metric can be used to assess gender equity through the quantitative measurement of differences in time spent on various tasks. While the division of labor by gender is not inherently negative, it is possible to assess gender equity by comparing amounts of leisure time for each gender or comparing time spent on the least desirable or most taxing tasks. Also, this information can be combined with other metrics in the agency and resource categories to assess who benefits from how the time is spent. Rao (2016) recommend the following metrics for gender labor inequities: "Average hours of leisure for women and for men or proportions of women and men who report inadequate leisure time".

Depending on the technology being assessed, it may be useful to develop detailed time allocation for activities directly or indirectly affected by that technology. In general, one can partition labor analyses into three broad categories—agricultural tasks (including livestock care), non-agricultural income generating tasks, household chores and leisure time. When inquiring about the time required for non-seasonal tasks, like household chores, it is common to ask about an "average" day. However, when inquiring about the time required for season tasks, such as crop production, there is no "average" day. Instead one can ask about all the agricultural activities (land preparation, planting, weeding, fertilizing, harvesting, etc.) field by field.

## Measurement method 1: Daily time use exercise

CARE's Daily Time Use exercise

- **Objective:** To explore and increase awareness of gender differences between women's and men's daily activities.
- **Materials/Preparation:** large sheets of paper, pens.
- **Participants:** This exercise has been used for both analysis and training.
  - Mixed groups of men and women in different ethnic/caste or socioeconomic groupings.
  - Single-sex groups.
  - Staff or research teams to critically reflect on gender roles.
  - Boys and girls, divided into single-sex groups.

### Steps

Following introductions and description of objectives, participants split into two groups by gender. Separately, the men's group and the women's group list all the activities in their daily schedule, from waking to going to sleep.

For this tool, it is important to specify what type of day is at the focus of the exercise, perhaps the busiest time during the season, and also after harvest. The Exploring Dimensions of Masculinities exercise focused on a typical weekday and a typical weekend day for its workshop with urban adolescent boys.

Each activity is drawn on an idea card and laid out in order across the day.

The group then reviews the day, and the facilitator discusses:

- Where does each activity take place? And with whom?
- The facilitator then asks the group to identify which activity takes the most time. Next to that activity, the group places 10 stones. The group then identifies the 2nd- most time-consuming activity, and decides how many stones to place there. This continues until each activity has stones next to it to show the amount of time required.
- After this is completed, ask the participants to list the activities across the daily schedule of someone of the opposite gender.
- Once completed the women's group joins the men's group and the men present their schedule. The participants—men and women—then go to the women's exercise and the women present their schedule.
- When both lists have been completed, the facilitator discusses:
  - What surprised you about this exercise?
  - Did the men accurately list women's activities? Did the women accurately list men's activities?
  - Is there a difference in the kind of activities that men and women do? What is the difference?
    - *Probe* → What is the reason for the difference? Does society expect very different things from men and women? Why does society expect men and women to spend time in different ways?
    - *Probe* → Do you think this difference is justified? Why or why not?
  - Which kind of work is a person paid for? Which kind of work is a person not paid for? Why?
  - Which group has more leisure time to spend as they like? Which group has a larger workload?
    - *Probe* → Is this justified? Why or why not?
  - Was sex listed on the daily schedule? Why or why not? If it was added, would it be listed the same way in all the groups' daily activity schedules? Do men and women have the same expectations for sex? Why or why not?
  - How much variation from this general daily activity schedule happens in your community? Do you see some particular men or women acting differently? Why is that?
  - How does their reputation in the community change if they are not conforming to the norm?
  - Are there certain ways that you would like to change community expectations of the daily activity schedules and workloads of men and women? What are they? Describe them. What can you do to make these changes happen? What can others do? How can this project contribute to those changes?

In addition, the facilitator may ask groups to place values alongside each activity:

- "H" (or another symbol) for tasks that are highly valued.
- "P" (or another symbol) for tasks that are paid with money.
- "R" (or another symbol) for those paid with respect/prestige.
- "U" (or another symbol) if it is unpaid.

Once completed, groups discuss their observations regarding the chart. The team then reflects on how the chart may change based on age or class.

Further, teams also discuss the roles of boys or girls in each of these tasks.

## Variations

### Variation: Making activities with tools

Rather than ask participants to draw, the facilitator can ask participants to gather the tools/utensils that they associate with each time period and lay them across a paper with the hours of the day to illustrate the activities. This is done with men and women side-by-side. The research team can then facilitate a discussion around the matrix and tools on the different daily activities done by men and women.

### Variation: Activity pie chart

While the Daily Time Use exercise has been used with children, another variation asks boys and girls in separate groups to list the activities they undertake during the day. In the Power to Lead Alliance, this exercise was facilitated with girls 10–11 years old in one group, and 12–14 in another.

## Steps

Following introductions and description of objectives, participants split into two groups by gender. Separately, the men's group and the women's group list all the activities in their daily schedule, from waking to going to sleep.

For this tool, it is important to specify what type of day is at the focus of the exercise, perhaps the busiest time during the season, and also after harvest. The Exploring Dimensions of Masculinities exercise focused on a typical weekday and a typical weekend day for its workshop with urban adolescent boys. Each activity is drawn on an idea card and laid out in order across the day.

The group then reviews the day, and the facilitator discusses:

- Where does each activity take place? And with whom?
- The facilitator then asks the group to identify which activity takes the most time. Next to that activity, the group places 10 stones. The group then identifies the 2nd- most time-consuming activity, and decides how many stones to place there. This continues until each activity has stones next to it to show the amount of time required.
- After this is completed, ask the participants to list the activities across the daily schedule of someone of the opposite gender.
- Once completed the women's group joins the men's group and the men present their schedule. The participants—men and women—then go to the women's exercise and the women present their schedule.
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    - *Probe* → What is the reason for the difference? Does society expect very different things from men and women? Why does society expect men and women to spend time in different ways?
    - *Probe* → Do you think this difference is justified? Why or why not?
  - Which kind of work is a person paid for? Which kind of work is a person not paid for? Why?
  - Which group has more leisure time to spend as they like? Which group has a larger workload?
    - *Probe* → Is this justified? Why or why not?
  - Was sex listed on the daily schedule? Why or why not? If it was added, would it be listed the same way in all the groups' daily activity schedules? Do men and women have the same expectations for sex? Why or why not?
  - How much variation from this general daily activity schedule happens in your community?

- Do you see some particular men or women acting differently? Why is that?
- How does their reputation in the community change if they are not conforming to the norm?
- Are there certain ways that you would like to change community expectations of the daily activity schedules and workloads of men and women? What are they? Describe them. What can you do to make these changes happen? What can others do? How can this project contribute to those changes?

In addition, the facilitator may ask groups to place values alongside each activity:

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While the Daily Time Use exercise has been used with children, another variation asks boys and girls in separate groups to list the activities they undertake during the day. In the Power to Lead Alliance, this exercise was facilitated with girls 10–11 years old in one group, and 12–14 in another.

1. This exercise begins with discussing the various activities or tasks that girls (or boys, in a separate discussion) do during the day. Make a list of key activities together.
2. Invite one participant to draw a large circle on the ground or on a chalkboard. This circle represents one day, 24 hours.
3. Explain that the group will now divide the circle into pieces, each representing one activity or task they have listed. The size of that piece should represent the time spent on that task. One way to represent the chart is to show or discuss what an orange looks like when it is cut into parts, with the wedges visible.
4. It may be helpful to start with the process of discussing how many hours of sleep girls get each night, and allocating that piece first.
5. Let the participants discuss and mark sizes themselves, as early as possible. The facilitator should focus on posing clarifying questions or probing for further discussion (*e.g., I see that this piece looks bigger than that one, so you spend more time fetching water than preparing dinner? Is this the same for everyone?*)
6. If the typical day is a school day, discuss how they spend their time in school (in lessons, chores, meals, recess, etc.)
7. When the group finishes the chart, participants should review their list to be sure that each task has been included. They should note the amount of time allocated for each activity. Reviewing

the list and adding the amount of time helps to confirm and clarify the drawing for analysis.

Following the activity, further discussion questions may include:

1. If you were free to change your schedule, how would you spend your time differently?
2. How might you work with others to change how you spend your time?

If done with boys and girls separately, this activity can bring both groups together in a subsequent activity to discuss and compare the two time-use charts.

Similarly, the CCAFS gender toolkit has a daily activity clock exercise. That manual suggests drawing two circles—one from 6 a.m. to 6 p.m. and the other from 6 p.m. to 6 a.m.

“Be creative in how you use the different spaces (pieces of pie) to visually represent information. For example, once the clock is complete give the participants a pile of 100 beans to show the activities they feel are relatively more demanding or labor intensive compared to others. Or they can show the activities they find relatively enjoyable and rewarding compared to others. Or you can ask them to place a stone or other marker to show activities during which they obtain other benefits, like sharing information with others.” (Jost et al. 2014, p.135)

### Measurement method 2: Time allocation 24-hour recall using individual survey

The WEAI (women’s empowerment in agriculture index) survey provides guidelines for estimating the number of hours worked per day in order to calculate its time allocation component of the empowerment index. It recommends asking people about how they spent their time from 4.00 a.m. the previous day to 3.59 a.m. the next morning. The various activities are predefined and can be recorded in 15-minute intervals. Respondents can provide up to two activities at any one time but will be asked which activity is primary. Following is the first page of the table for data collection. The second page has the same activities for the remaining hours of the 24-hour period.

**Table 3:** WEAI guidelines for estimating the number of hours worked per day

#### MODULE G6: TIME ALLOCATION

*Enumerator G6.01: Please record a log of the activities for the individual in the last complete 24 hours (starting yesterday morning at 4 am, finishing 3:59 am of the current day). The time intervals are marked in 15 min intervals and one to two activities can be marked for each time period by drawing a line through that activity. If two activities are marked, they should be distinguished with a P for the primary activity and S for the secondary activity written next to the lines. Please administer using the protocol in the enumeration manual.*

	Night			Morning			Day											
Activity	4	5	6	7	8	9	10	11	12	13	14	15						
A Sleeping and resting																		
B Eating and drinking																		
C Personal care																		
D School (also homework)																		
E Work as employed																		
F Own business work																		
G Farming/livestock/fishing																		
J Shopping/getting service (incl health services)																		
K Weaving, sewing, textile care																		
L Cooking																		
M Domestic work (incl fetching wood and water)																		
N Care for children/adults/elderly																		
P Travelling and commuting																		
Q Watching TV/listening to radio/reading																		
T Exercising																		
U Social activities and hobbies																		
W Religious activities																		
X Other, specify...																		

Alkire et al. (2013) note that a major shortfall of this method is that it does not cover seasonality and may not be representative of the given season if the previous day was a holiday. Harvey and Taylor (2000) recommend asking respondents about activities that took place no more than one or two days previous to the interview, as memory fades on the detailed use of time beyond that.



Harvey and Taylor (2000) point out the importance of adapting all these tools to the local context using local terms for how time is reckoned.

In addition, they note that data generated from questions asking only about specific activities (e.g., carrying water, weeding, collecting firewood.) are susceptible to significant reporting errors compared to more rigorous methods like the stylized activity log used in the WEAI time module.

**Measure method 3: Activity analysis**

The goal of this exercise is to understand who does each activity. This can be a binary question for each gender (yes or no) or it could be a proportional assessment of time spent on each task (such as a percent, or allocating 10 stones by gender). This activity could be implemented through individual interviews, couple interviews, or larger groups (such as several couples, or a group of women and a group of men separately).

**Table 4:** understanding who does each activity.

	Men	Women	Boys	Girls	Comments
Crop/Field 1					
Activity 1					
Activity 2					
Activity 3					
Crop/Field 2					
Activity 1					
Activity 2					
Activity 3					
Livestock—Animal 1					
Task 1					
Task 2					
Task 3					
Household production					
Off-farm production					

**Measurement method 4: Gender-sensitive seasonal calendar**

Symbols can be used for each gender, or the tasks from the activity analysis can be referenced, or a separate calendar can be done for men and women.

**Table 5:** Gender-sensitive seasonal calendar

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Season												
Crops												
Livestock												
Household												
Off-farm												

### Management control by gender

This metric aims to capture differences in decision-making power between men and women. To be operationalized, it will be necessary to choose the most important decision in the given context.

For cropping systems, one could measure the land area where women report that they are the primary decision-maker about crop management (solely as well as jointly) compared to the land area where men report being the primary decision-maker (solely as well as jointly). Some simple survey questions are “Who decides what crop to plant?”, “Who decides what inputs to apply?” and “Who decides when to plant, fertilize, or weed?”. Agency over the use of production factors (such as plowing) can be measured indirectly (such as by when women’s and men’s fields get prepared).

A longer-term focus for cropping systems may be helpful where SI technologies aim to improve land quality. Ownership of land shows that the individual has the incentive to invest in the long-term. However, quantifying ownership of land by gender is not a simple matter for two reasons. First, ownership of land may mean different things in different contexts. Complete ownership would include having the right to manage it, the right to control the benefits from it, and the right to transfer rights to others (Rao 2016). In many developing country contexts, traditional tenure systems do not give individuals the rights to transfer land and ownership refers simply to the rights to manage and to control benefits from it. Second, quantifying ownership is difficult because de facto ownership may be different from de jure ownership (the name on the title). Rao (2016) justifies a focus on de facto rights by giving the example of someone officially owning distant land that they are not able to access while another has access to land without a title. These de facto rights to land need to be assessed at the individual level and not simply at household level.

Management control gender gaps need to be explored for other areas of agriculture as well, such as livestock raising, irrigation schemes, and collective marketing efforts.

### Measurement method 1: Intra-household decision-making tool

#### CARE’s Intra-household decision-making tool

- **Objective:** To understand how decisions are made around resources and strategies women use to influence men’s decision-making.
- **Materials/Preparation:** Interview checklist based on relevant literature and discussions with field staff and partners familiar with the local context. Teams should also discuss the translations for “power” and “empowerment” to be used with respondents. If time permits, interviews should be piloted and adjusted before the study itself, and adapted for interviews with men. To prepare staff for research, teams in CARE Bangladesh also conducted mock interviews.
- **Participants:** Men and women across age, household composition, ethnicity, and well-being groups in individual interviews.

## Steps

Research pairs conducted semi-structured interviews and used key personal events in women's lives (i.e., education, dowry, marriage, work/income for both women and their daughters) as the basis for discussing decision-making, women's interpretation, and use of power.

## Sample questions from Tanzania:

### Education

- How much education of self/spouse? Literacy?
  - *Probe* → Why did(n't) you go to school?
- Education of children? Education plans for boy children? And for girl children?
  - *Probe* → Barriers? Factors preventing education?
- In your opinion, why is education important?
- Without education, where do you see the future of your children? Why?
- With education, where do you see the future of your children? Why?
- In your family, how is the decision made whether children go to school or not?

### Marriage

- When were you married and tell me about the circumstances (Your age and that of your spouse; who made the decision; bride-price).
- What are you planning/what happened for your children? (same kind of ideas as above).
  - *Probe* → (if different) Why was this different?
- Do you practice any form of birth control? What kind? Is this a collective decision with your husband/partner? Is it a personal decision?
- [*if 1st wife in polygamous marriage*]: Were you consulted in the second marriage? How has your life changed since the arrival of a new wife?
- [*if polygamous man*]: Did you consult your 1st wife in your second marriage?
- [*if inherited/widow*]: Please share with us the circumstances after your husband's death.
- [*if divorced/living with partner/abandoned/FHH*]: Please share with us the circumstances of your \_\_\_\_\_. *Probe* about: social support, stigmatization, etc.

### Gender roles in the household

- What is your responsibility inside the household (i.e., cooking, childcare, domestic duties, crop processing)? Was it the same for your mother or different?
- What are the responsibilities of your spouse or partner? Was it the same for your father or different?

### Decision-making

- Mobility
  - How far away is your original family?
  - How often do you visit your birth village? And how often are you free to go?
  - [*for women*] What is the farthest you have been away from your home? And with whom?
  - Are you free to go anywhere or do you have to consult first? What are the circumstances (doctor, visiting family, visiting friends, markets)?
- Assets and income
  - Are you a member of a Village Savings and Loan group? If yes, how much do you contribute on a weekly basis? Have you taken any loans and how did you spend the money?
  - [*for women*] Do you earn any cash income?
  - [*for women*] Do you own any assets? (livestock, goats, ducks, chickens)
  - [*for women*] Do you own land? Do you rent in land? Do you cultivate any land where the crop is yours? Is there any petty trading? (i.e., burning charcoal)
  - [*for women*] Do you ever have money of your own where you can decide how to spend it?

## **Conclusion**

- When have you felt most in control of your life? When have you felt least in control of your life?
- Who is your role model? And why?

As preparation, a mock interview between a researcher and a field facilitator was observed by the other facilitators who then carried out the interviews. For interviews, women interviewed women and men interviewed men.

## **Market participation by gender**

Within a household this could be a comparison of who markets which products. At the landscape scale the incidence of men and women participating in the market could be compared.

## **Measurement method 1: Gender-focused value chain analysis using focus group discussions**

The “gender in value chains toolkit” developed by Agri-ProFocus includes instructions and examples of questions for focus groups and mapping exercises to analyze the role of women in particular value chains and how to “make visible” their contributions, even in value chains thought to be dominated by men. Tool 3.2a, Making a Gender-Sensitive Value Chain Map, has the following steps:

1. Formulate hypotheses about women’s roles and possible entry points for greater participation in the value-chain.
2. Actor mapping—make a visual presentation of the actors along the value chain by gender.
3. Make invisible women stakeholders visible—think through the roles women play in each step, even if indirectly.
4. Activity mapping—distinguishing gendered roles for each activity along the value chain.

Specific gender mapping—documenting how many actors and jobs (disaggregated by gender) are involved in each stream of the value chain (e.g., informal sector vs industrial sector for milk production).

## **3.3.4 Achievements**

The result of inequitable allocation of resources and/or disempowerment to use those resources is observed as differential outcomes or achievements, such as income, nutrition, food security, and health or well-being. The methods for measuring these achievements are outlined in the indicators for other domains. The assessment of equity is primarily carried out by disaggregating the data into the groups of interest and then applying one of the three equations defined in the introduction to the equity indicator above.

Achievements often take time to materialize even after underlying issues have been addressed. For this reason, care is necessary in interpreting the results. Equitable achievements may not be sensitive to recent disempowerment. Likewise inequitable achievements do not mean that a short-term project has failed if those achievements only materialize gradually.

## **Income by gender**

Income is both a resource for and an achievement from women’s empowerment. When considering it as a resource, the focus is on access to finances and can be measured by asking who participates in the decisions to buy items such as agricultural inputs and daily goods. When considering income as an achievement it can be measured based on net income from crops or animals controlled by each gender. If detailed time allocation has been collected, then returns to labor can be calculated and compared across genders.

## **Nutrition, food security, and health by gender**

These metrics simply use disaggregated data from the human condition domain to compare achievements across gender.

### 3.3.5 Cross cutting tools

#### *Ratings of technologies by gender*

Technologies that are used at the farm and field scale may be evaluated differently by men and women. The data collection happens at the household scale so the gendered rating is listed at the household level.

#### **Measurement method 1: Participatory rating**

Preparatory information: Ask participants to identify the criteria affecting their decision to use an agricultural innovation/practice or not. For example, if it is a new bean variety, what characteristics do they look for in beans? Have them vote to prioritize that list of criteria by providing 3 to 5 votes each.

Rating an innovation: Ask the participants to rate the practice/innovation according to the most commonly listed criteria. This can be done in one of several ways. Some participants may be comfortable with numbers and giving an innovation a score, such as from 1 to 5 or from 1 to 10. Two methods to make it easier for participants are as follows:

- Option 1: Putting a marker on a line. To use this method you should prepare a sheet with a line marked for each rating and a symbol on either end (for example a horizontal line with five vertical crosses representing 1 to 5, and if assessing harvest using the symbol of a small sack at 1 and a pile of full sacks at 5). A separate sheet could be used for each criterion or a blank sheet can be reused for each. A laminated sheet can be drawn on and wiped off. To compare multiple innovations or practices, create a marker for each (such as a drawing on a small piece of paper) and have them place each one on the line.
- Option 2: Draw a matrix on the ground with the criteria across the top and the innovations/practices to be compared as the rows. Give the participants a pile of markers (stones, beads, seeds) and ask them to put up to five in each square to evaluate each innovation.

#### **Measurement method 2: Co-benefit analysis**

This method is described in the CCAFS gender toolkit. It uses FGDs with separate groups for men and women to understand the perceived benefits and burdens from various agricultural practices.

1. Begin the discussion by asking about one agricultural or nonagricultural change that is of interest to you. Probe the focus group to understand the different benefits and burdens from each practice.
2. Once lists of benefits and constraints have been noted, ask a volunteer to list or draw them out on many sheets of paper or on a large poster.
3. Take 100 counters or beans and explain that they represent all of the men or women (depending on the disaggregated group). Ask a volunteer to distribute the counters between the benefits from the practice first. Encourage the group to work together to create a distribution upon which they agree.
4. Repeat this step but for the burdens of adopting the practice.
5. Discuss the results as a group to gain more insight about the perceptions of the benefits and burdens.
6. Follow the same process for each practice of interest. Record the benefits, burdens, and discussion notes for each practice.
7. Compare results from men and women.

#### **Probing questions**

- How does this activity affect soil quality?
- How does this activity affect water sources?
- How does this activity affect forest resources?
- How does this activity affect crop diversity?
- How does this activity relate to land tenure? Is land required? Rented? Shared in common? Privately owned?
- Who has control over land? Who has access to land? How does those who do not own land gain access to it?

- How is the burden of labor for this activity shared? Who does most of the work? Is it done in a group?
- Does this activity require buying or renting of equipment? Can all groups or individuals in the village afford the equipment? If not, how is it shared? Who cannot afford it?
- Are there seasonal or time constraints associated with the equipment? Who operates the equipment? Who rents it?
- How time consuming is this activity? How does it affect amount of labour for men? For women? For children?
- Is there special knowledge required to do this activity? Who holds this knowledge? Who does not?
- How does this activity effect household food security or consumption?
- Does this activity have any nutritional benefits? Who makes the decision to invest in nutrition? Who in the family does it benefit the most in terms of nutrition?
- How does this activity affect overall family income? Who keeps the income? Is it shared?
- Is the income from this activity channeled into long-term investments like education, businesses, loan repayment? Who makes the decision to invest? Who benefits most?
- How is information shared within a group or household engaged in this activity or among individuals?
- Are there small businesses that have grown from this activity? Do men, women or children run these businesses? Are there associations that run the business? Is the membership of associations mostly men or women? How are decisions made in associations? How are benefits shared?

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

This index is calculated by following a specific data collection methodology where male and female responses are compared. This survey process may be too demanding for many programs but it does provide a great deal of information about the various facets of empowerment at the community or regional scale.

The WEAI has five domains for the empowerment sub index—Production, Resources, Income, Leadership, and Time.

**Table 6:** WEAI domains for the empowerment sub-index

Domain	Indicators	Weight	Abbreviated weight
Production	Input in productive decisions	1/10	1/5
	<i>Autonomy in production</i>	<i>1/10</i>	
Resources	Ownership of assets	1/15	2/15
	<i>Purchase, sale, or transfer of assets</i>	<i>1/15</i>	
	Access to and decisions on credit	1/15	1/15
Income	Control over use of income	1/5	1/5
Leadership	Group membership	1/10	1/5
	<i>Speaking in public</i>	<i>1/10</i>	
Time	Workload	1/10	1/5
	<i>Leisure</i>	<i>1/10</i>	

The gender parity subindex is calculated from two components:

1. Gender parity—the percentage of women who have gender parity defined as either being empowered (scoring 0.80 or higher from empowerment subindex) or having an empowerment index score greater than that of the primary male in their household.
2. The empowerment gap—the average percentage shortfall that a woman without parity experiences relative to the male in her household.

**Table 7:** Core survey questions from WEAI by dimension

Production	1. How much input did you have in making decisions about: food crop farming, cash crop farming, livestock raising, fish culture?
	2. To what extent do you feel you can make your own personal decisions regarding these aspects of household life if you want(ed) to: agriculture production, what inputs to buy, what types of crops to grow for agricultural production, when or who would take crops to market, livestock raising?
	3. My actions in [DOMAIN: agricultural production, inputs to buy, crops to grow, take to market, livestock] are partly because I will get in trouble with someone if I act differently.
	4. Regarding [DOMAIN] I do what I do so others don't think poorly of me.
	5. Regarding [DOMAIN] I do what I do because I personally think it is the right thing to do.
Resources	6. Who would you say owns most of the [ITEM]? Agricultural land, large livestock, small livestock, chicks, etc.; fish pond/equip; farm equip (non-mech); arm equip (mechanized); nonfarm business equipment; house; large durables; small durables; cell phone; non-ag land (any); transport.
	7. Who would you say can decide whether to sell, give away, rent/mortgage [ITEM] most of the time?
	8. Who contributes most to decisions regarding a new purchase of [ITEM]?
	9. Who made the decision to borrow/what to do with money/item borrowed from [SOURCE]? nongovernmental organization (NGO); informal lender; formal lender (bank); friends or relatives; ROSCA (savings/credit group)
Income	10. How much input did you have in decisions on the use of income generated from: food crop, cash crop, livestock, non-farm activities, wage & salary, fish culture
	11. To what extent do you feel you can make your own personal decisions regarding these aspects of household life if you want(ed) to: Your own wage or salary employment? Minor household expenditures?
Leadership	12. Are you a member of any: agricultural/livestock/fisheries producer/mkt group; water; forest users'; credit or microfinance group; mutual help or insurance group (including burial societies); trade and business association; civic/charitable group; local government; religious group; other women's group; other group
	13. Do you feel comfortable speaking up in public: To help decide on infrastructure (like sm wells, roads) to be built? To ensure proper payment of wages for public work or other similar programs? To protest the misbehavior of authorities or elected officials? To intervene in case of a family dispute?
Time	14. Workload based on activities—see 24-hour recall question in the time allocation metric
	15. How would you rate your satisfaction with your available time for leisure activities like visiting neighbors, watching TV, listening to radio, seeing movies, or doing sports?

The questions in the Table 6 are only the core questions from the survey. They provide a concise summary of the information that can be gained from implementing the WEAI. However, when actually carrying out the survey it is important to change the order and use additional questions to improve the flow, a formatted questionnaire to help the enumerators ask the questions and mark the responses, and response codes to facilitate data entry and analysis. Following is an example of how questions 1 and 10 from the above table are implemented in the WEAI with all of these features is presented below.

**MODULE G2: ROLE IN HOUSEHOLD DECISION-MAKING AROUND PRODUCTION AND INCOME GENERATION**

Household identification (in data file, each sub-module (G2-G6) must be linked with HH and respondent ID)

Respondent ID Code

ActivityCode	Activity Description	G2.01	G2.02	G2.03
A	Food crop farming: crops that are grown primarily for household food consumption			
B	Cash crop farming: crops that are grown primary for sale in the market			
C	Livestock raising			
D	Non-farm economic activities: Small business, self-employment, buy-and-sell			
E	Wage and salary employment: in-kind or monetary work both agriculture and other wage work			
F	Fishing or fishpond culture			
		<b>G2.02/G2.03: Input into decision making</b> No input..... 1 Input into very few decisions..... 2 Input into some decisions..... 3 Input into most decisions..... 4 Input into all decisions..... 5 No decision made..... 6		

**Gender tools for understanding attitudes and perceptions**

**Tool: Ideal Man and Ideal Woman**

Source: CARE

Objectives: To distinguish gender from sex, and explore how gender roles are socially defined as well as recognize gender stereotypes. This ISOFI module uses brainstorming and illustration (or in some cases sculpture modeling) to depict definitions of what participants associate with the terms man or woman (or boy or girl), and what it means to be an ideal man, woman, boy, or girl.

Materials/Preparation: flipchart paper, colored pens or markers. In some cases, facilitators used modeling clay, balloons, and newspaper for groups to sculpt or construct representations of the ideal man/woman, rather than drawing.

Participants: This exercise has been done with CARE staff and partners. According to the ISOFI Toolkit, there should ideally be 10–25 participants and equal numbers of men and women.

Part 1: The module begins with a brainstorm of characteristics of a man and a woman, both in terms of physical attributes as well as expected roles and responsibilities. Looking at attributes, teams examine if any of the attributes listed could be reversed and engaged in discussions on the difference between sex and gender.

1. Ask participants to call out the first words that come to mind when you say “man”. List them out on flip chart paper. Repeat the process for “woman” on a different flip chart paper. Make sure that there are at least two to three words that describe biological traits (e.g., penis, breasts, menstruation).
2. Going through each of the words under “man”, ask if any of these words can be used to describe women. Repeat for the woman’s list. For example, “can a man cook? Be gentle? Menstruate? If men are capable of cooking, why don’t more men do the cooking for their households?
3. Circle the biological traits as you go through the lists.



4. Explain that these lists illustrate the difference between sex and gender. Sex refers to biological traits. Gender refers to the economic, social, and cultural attributes and opportunities associated with being male or female at a particular point in time.

Part 2: Teams then divide into single-sex groups. Groups work together to illustrate—or in some cases sculpt or construct—what they perceive to be the ideal man and ideal woman in their culture. This is done either through illustration or sometimes through sculpturing. Facilitating discussion on the values and assumptions underlying these perceptions, a number of questions are presented for the groups to discuss:

- What did you learn about being a boy or girl when you were growing up? How did you learn? From whom?
- How are images of the ideal man and woman created? Where do they come from? Who affirms them? Would you like to change the images you describe?
- What are the things that women or men can do exclusively?
- What groups fall outside these images?
- What is a gender stereotype? Are gender stereotypes positive, negative, or neutral?
- Why do gender stereotypes persist? What is the purpose of challenging gender stereotypes? Why do some people resist challenging the status quo?
- How easy or difficult is it to consider gender roles that are different from the ones we are accustomed to?
- What does this mean in the context of our development work?
- What happens if we challenge these norms?
- What happens if we do not challenge these roles?

Questions exploring masculinity are as follows:

- Do men have certain physical characteristics?
- What other characteristics do men have that are not expressed in the models? Why were these not expressed?
- What is expected of typical men? What attitudes and values do typical men have? Towards family? Children? Fellow men? Women?
- How are men expected to show they are powerful?
- If you were going to do a model of a woman, would it look very different? How? Why?

### **Malawi example from the UBALE gender analysis report**

- “Men emphasized that an “ideal” man should be God-fearing and serve as the provider and protector of his family. He should have a good house and a farm, be able to impregnate his wife in order to have children, and be able to take care of his family. An ideal man should also be loving and caring, respect others’ ideas, participate in development activities, make decisions with their wives, and serve as role models for others. They send their children to school and manage their own time well. Ideal men do not wash clothes, fetch water, steal, or use violence... women expressed a desire for men to be more inclusive of their wives when making household financial decisions and decisions about taking a second wife, although these practices are not currently the norm. According to women, “ideal” men are prayerful and gentle, are good problem solvers, and respect women’s sexual boundaries, for instance, Ethel, a 25-year old woman, said, “A husband should tell his wife in advance when he wants to have sexual intercourse with her that day”. Women say the characteristics of unrespectable men are being adulterous, alcoholic, a thief, or reliant on women for financial support.” (CRS, 2015 p.9).
- “Women believed that an “ideal” woman would dress respectably, such as in a long dress with a wrap (chitenje) over her lower body. She should be gentle and prayerful, help provide for her family, and do household chores. She should give guidance to her husband and children, teach her children how to farm, and encourage them to attend school. An ideal woman would be a member of different savings and loans groups and would be friendly, generous, and loving towards her family. She should not be selfish or adulterous, a gossip, a drunkard, or a smoker... Men emphasize that women “should be respectful to their husbands and dress well,” be polite and humble, love their families,

and respect their in-laws. Women should not come home late, steal, gossip, sleep with other men, or undermine their husbands.” (CRS 2015, p.10).

### **Tool: Gender Vision Journey**

Source: GALS

The goal of this exercise is to help participants develop a vision for the future and plan ways to work towards that vision. Another goal is to help them learn to plan and adjust their plan as they go based on what is working and what is not working. This reflexive learning is very important for working towards change.

1. Have participants envision a better future of improved gender relations.
2. Have participants draw that vision in the top right corner of a large paper.
3. In the bottom left have them draw the current situation and connect the two with straight diagonal lines.
4. In between they should draw several milestones, or intermediate steps
5. They should identify opportunities that they can use to support their actions in working toward the vision—list these above the diagonal lines.
6. They should identify challenges they are likely to face in working toward this journey and list them below the diagonal lines.
7. Finally, they should list specific actions they can take over the next weeks, months, and year to make progress toward their vision. This action plan can have specific indicators so that they know if they are making progress.

The first time this tool is used it is recommended that the goal or vision is attainable in about one year so that participants don't get discouraged working on something that is too difficult to change.

### **Tool: River code**

Source: CARE

This tool aims to help participants understand that a good facilitator helps build their skills to solve problems on their own, not doing things for them.

The tool is primarily a role play to communicate this point. Three participants should be asked to act out the play. One of them will be the facilitator and the other two are people who are helped. The scene is a river with some stepping stones all the way across. Rope or branches can be used to show the edges of the river. Paper or stones can be used for the stepping stones.

In the first act the participant asks for help to cross the river from the facilitator and insists on being carried. They struggle and the facilitator gets tired and has to leave the participant in the middle of the river and then return.

In the second act another participant asks the facilitator for help to cross the river. The facilitator points out the stepping stones and helping each other they get across the river and celebrate.

In the third act the participant who made it across and a third participant want to get across the river. The one who has crossed before teaches the other one how to cross and they help each other cross the river.

## 3.4 Additional resources mentioned by decision makers in baseline interviews

### List of resources for gender analysis tools

- Gender Action Learning System (GALS)—(various sites, e.g. <http://www.galsatscale.net/>)
- FAO gender tool kit (<http://www.fao.org/gender/gender-home/gender-resources/gender-toolkits/en/>)
- CARE gender tool kit (<http://gender.care2share.wikispaces.net/>)

### List of gender analysis frameworks

- Harvard analytical framework
- Moser's framework—roles, needs, and resource availability
- Longwe
- Social relations

### Other frameworks that could be of relevance to gender analysis

- Logical frameworks for monitoring and evaluation—disaggregated data
- Theory of change—making assumptions explicit and assessing risks
- Sustainable livelihoods framework—assessing vulnerabilities
- Land governance assessment framework—gendered access to land
- Social impact assessment framework (lifestyle, cultural, community, quality of life, health)

## 4 References

Adolwine, W.M., and A. Dudima. 2010. Women's access to emerging urban land in the Sissala East District in Northern Ghana. *Journal of Science and Technology* 30(2): 94–104.

African Development Fund (ADF). 2005. Republic of Malawi multi-sector country gender profile.

Alkire, S., R. Meinzen-Dick, A. Peterman, A. Quisumbing, G. Seymour, and A. Vaz. 2013. The women's empowerment in agriculture index. *World Development* 52: 71–91.

Apusigah, A.A. 2009. The gendered politics of farm household production and the shaping of women's livelihoods in Northern Ghana. *Feminist Africa* (12): 51–68.

Britwum, A.O., N.K. Ghartey, and P. Agbesinyale. 2006. Organising labour in the informal sector: the case of rural agriculture in Ghana. Ghana Universities Press, Accra, Ghana.

Britwum, A.O., D. Tsikata, A.D. Akorsu, and M.A. Aberese. 2014. Gender and land tenure in Ghana: a synthesis of existing literature. ISSER Technical Publications No 92, Legon, Ghana.

Britwum, A.O. and A.D. Akorsu. 2016. Qualitative gender evaluation of agricultural intensification practices in northern Ghana. Ibadan, Nigeria, International Institute of Tropical Agriculture. Africa RISING consultancy report. <http://hdl.handle.net/10568/78479>

Chirwa, W.C. Mvula.; P.M.; Dorward, A. and M. Matita. (2011). "Gender and Intra-Household Use of Fertilisers in the Malawi Farm Input Subsidy Programme". Future Agricultures Working Paper No: 028.

Chitsike, C., J. Kampanje-Phiri, and N. Sangole. 2016 (December draft). A qualitative evaluation of gender aspects of agricultural intensification practices in Central Malawi. Africa RISING consultancy report. International Institute of Tropical Agriculture, Ibadan, Nigeria.

Catholic Relief Services (CRS). 2015. UBALE (United in Building and Advancing Life Expectations). Gender Analysis Report. CRS, Lilongwe, Malawi

- Christie, M.E. and C. Luebering. 2011. Women as mapmakers: gender and empowerment in participatory mapping. Paper presented at the Annual Conference of the Association of American Geographers on 14 April 2011 in Seattle, WA, USA. Retrieved from: <https://vtechworks.lib.vt.edu/handle/10919/70232>
- Cook, K.S. and K.A. Hegtvedt. 1983. Distributive justice, equity, and equality. *Annual Review of Sociology* 9(1): 217–241.
- Corbett, J. 2009. Good practices in participatory mapping: A report prepared for IFAD. Retrieved from: [http://www.ifad.org/pub/map/PM\\_web.pdf](http://www.ifad.org/pub/map/PM_web.pdf)
- Duncan, B.A. 2004. Women in agriculture in Ghana. Friedrich Ebert Foundation, Accra.
- Duncan, B.A. and C. Brants. 2004. Access to and control over land from a gender perspective: a study conducted in the Volta Region of Ghana. FAO, Accra.
- Egyir, I.S., C. O'Brien, and J. Bandanaa. 2017. Gender equality policy approach to food security in Ghana: findings from a USAID Feed the Future Project. *World Medical & Health Policy*. In Print, manuscript ID WMHP-12-16-007.
- Estrada-Carmona, N. 2014. Using participatory mapping with a gender lens to understand how landscapes are used for nutrition. Accessed 11 May 2017 from: <http://a4nh.cgiar.org/2014/11/06/participatory-mapping-with-a-gender-lens/>
- Feldstein, H., S. Poats, and K. Cloud. 1989. Conceptual framework for gender analysis in farming systems research and extension. Pages 7–26 in *Working Together Gender Analysis in Agriculture*. Kumarian Press, West Hartford, Connecticut, USA
- Food and Agriculture Organization of the United Nations (FAO). 2011. Gender inequalities in rural employment in Malawi: an overview. Prepared by the Gender, Equity and Rural Employment Division of FAO. United Nations, Rome.
- Harvey, A.S. and M.E. Taylor. 2000. Time Use. Chapter 22 in *Designing household survey questionnaires: lessons from fifteen years of the living standards measurement study, volume 2*, edited by M. Grosh and P. Glewwe. The World Bank, Washington, D.C., USA.
- Hemminger, K., B. Bock, J. Groot, M. Michalscheck, and C. Timler. 2014. Towards integrated assessment of gender relations in farming systems analysis. MSc thesis, Wageningen University (also presented as a poster with the co-authors at Tropentag 2014).
- Hockett, M. and R. B. Richardson. (2016). "Examining the Drivers of Agricultural Experimentation Among Smallholder Farmers in Malawi". *Expl Agric*: pp1-21, Cambridge University Press.
- Hyder, A. and J.R. Behrman. 2014. Female economic activity in rural Malawi. *Journal for Development and Leadership* 3(1), p.1-10.
- Jahnke, H.E. 1982. *Livestock production systems and livestock development in tropical Africa* Vol. 35. Kiel: Kieler Wissenschaftsverlag Vauk.
- Jost, C., N. Ferdous, and T.D. Spicer. 2014. Gender and inclusion toolbox: participatory research in climate change and agriculture. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), CARE International and the World Agroforestry Centre (ICRAF). Copenhagen, Denmark. Available online at: [www.ccafs.cgiar.org](http://www.ccafs.cgiar.org)
- Kabeer, N. 1999. The conditions and consequences of choice: reflections on the measurement of women's empowerment (108: 1–58). United Nations Research Institute for Social Development (UNRISD), Geneva.
- Koira, A.K. 2014. Agribusiness in sub-Saharan Africa: pathways for developing innovative programs for youth and the rural poor. Mastercard Foundation Working Paper.

- Manuh, T., J. Songsore, and F. Mackenzie. 1997. Gender and land: the interface between legislative initiatives, customary tenure and land use management, mimeo.
- Mathiassen, A., R. Eliasi, M. Mahowe, D. Chunga, G. Iversen, S. Pedersen and D. Roll-Hansen (2007), Gender assessment for Malawi. Statistics Norway Report No.25. Oslo: Statistics Norway.
- Ministry of Food and Agriculture. 2007. Food and Agriculture Sector Development Policy (FASDEP II). MoFA, Accra, Ghana.
- Ohene, V. 2013. Determinant of farmers' participation in the Youth-in-Agriculture Programme in the Eastern Region of Ghana. MPhil. thesis submitted to the University of Ghana, Legon, Accra.
- Pulhalla, J., V. Michener, and E. Bastidas. No date. Conceptual framework for gender analysis in farming systems research and extension. University of Florida Digital Collections: <http://ufdc.ufl.edu//AA00008143/00001>
- Rao, S. 2016. Indicators of gendered control over agricultural resources: A guide for agricultural policy and research. Working Paper No. 1. CGIAR Gender and Agriculture Research Network, CGIAR Consortium Office and International Center for Tropical Agriculture (CIAT). Cali, Colombia.
- Senders, A., A. Lentink, and M. Vanderschaeghe. 2012. Gender in value chains—practical toolkit to integrate a gender perspective in agricultural value chain development. Published by Agri-ProFocus, available from: <http://www.fao.org/sustainable-food-value-chains/library/details/en/c/265588/>
- Simtowe, F.P. (2010). "Livelihoods diversification and Gender in Malawi". African Journal of Agricultural Research 5(3): 204 – 216.
- United States Agency for International Development (USAID). 2010. Malawi Country Profile: Property Rights and Resource Governance. USAID, Lilongwe, Malawi 25pp.
- Willmer, A. and J. Ketzis. 2001. Participatory gender resource mapping: a case study in a rural community in Honduras. PLA notes 33. IIED, p. 17-22.