



“The fact that we still have not fully mainstreamed gender issues amounts to exclusion of women. For data that is fundamental to promote growth and poverty reduction, we need to make women more visible in statistics”

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Participants in the Umwizero programme in Burundi. ©Andrea Ciannavei

4 Capturing and Using Data on Gender

Effective interventions in smallholder farming systems depend on good data. Yet many agricultural ministries are notoriously weak at collating, analyzing and using even the most basic sex-disaggregated data. Most countries have no comprehensive data on the different crops that women and men grow, the types of households growing each crop, and the relative productivity of male-managed and female-managed fields. Our understanding of gender differences has been garnered chiefly through the accumulation of smaller studies over the past 40 years. These point to significant gender issues in the agricultural sector with great bearing upon performance, but much needs to be done to encourage agricultural ministries and research institutions to compile nationally and regionally relevant data.¹

The first part of this chapter explains why we need basic production and productivity data, and also indicators for women's empowerment. It discusses why such data can be so difficult to obtain and presents promising initiatives working to address these deficits. The second part of this chapter details some simple logistical arrangements that can help empower women to speak and to participate in data collation initiatives.

Data collation, analysis and use

There is increased recognition that improved gender-sensitive indicators, and data disaggregated by sex and other variables, are needed to improve decision-making at all levels. Data must be capable of enabling policy-makers, government and development agency planners, and civil society organisations, as well as farmers themselves, to take the best decisions possible. Good data collation and analysis enables farmers to gain a better understanding of the challenges and opportunities they face in planning farm-based livelihood strategies, and will assist women and men along the value chain to better understand their markets.



Terrace farming in Uganda. © DLO, Flickr.

Several initiatives in recent years have made substantial progress in the design of conceptual frameworks and analytical methods, as well as measurement indices and indicators against which to collect data.² However, the scope of these has sometimes been disappointing. For example, widely applied indicators such as those associated with the Millennium Development Goals (MDGs) provide a rather narrow base against which to measure progress for – and identify disparities between – rural and urban

1 Chapter 4 title page quotation: The World Bank (n.d.). Vital Gender Statistics Not Captured in 90 percent of Developing World. <http://go.worldbank.org/EE3E44TL40>. [Accessed 15 August, 2013].

2 Examples include the UN Food and Agriculture Organization (FAO) Agri-Gender Statistics Toolkit (and database), <http://www.fao.org/gender/agrigender/agri-gender-toolkit/en/> and the International Food Policy Research Institute (IFPRI) Women's Empowerment in Agriculture Index, <http://www.ifpri.org/publication/womens-empowerment-agriculture-index>.

women and men. Even though global metrics like the MDGs always include a goal with correlated indicators on gender equality, they often neglect critical social concerns affecting gender equality, such as gender-based violence and harmful traditional practices such as early marriage and wife inheritance. Such practices persist due to inequitable gender power relations and established norms and beliefs, and not only do they affect gender equality outcomes –they are directly associated with weak human development outcomes and with poorer outcomes in the agricultural sector.³

A number of factors are responsible for the lack of progress on gender-sensitive indicators and disaggregated data. For instance, whilst governments and donors increasingly want to collect better data and using it to inform their initiatives, not enough resources are provided to the agencies and programmes responsible for the design, collection, and analysis of data, as well as the dissemination of the findings to highly varied audiences – communities, policy-makers, and others. They often lack sufficient staff or financial and technical inputs such as computers and software, and may lack the institutional capacity – knowledge/skills – required to support this work.

Furthermore, as much as organizations want to demonstrate “impact” and results in terms of benefits for women and girls,⁴ the agriculture and rural development sector still struggles with a lack of data on the impact of donor and government aid and programming on rural women’s and girls’ empowerment and gender equality. The gender equality markers used by the OECD Development Assistance Committee review,⁵ for instance, provide a best estimate of aid flows in support of gender equality and women’s empowerment, as well as the extent to which each donor supports gender equality and in which sector. However, as the OECD-DAC acknowledges, the markers cannot be used to analyse the actual impact of that aid.

At a programmatic and project level, progress has been largely been measured by applying metrics that capture increases in the number of women and girls participating in programmes, training, or specific interventions. Increases in women’s incomes are often used to indicate “success” or positive impact. However, as noted throughout this book, even if women earn more, they may have little power over how their income is spent. Also, very little attention has been paid to capturing the quality of women’s participation in different interventions, or how that participation affects their lives. The indicators also seldom shed light on the multi-dimensional and seasonal aspects of women and men’s work, which is important to understand the potentially different interests and challenges experienced by women and men

3 See, for example, OECD Development Centre (2012). *Do Discriminatory Social Institutions Matter for Food Security?* Issue brief. Organisation for Economic Co-operation and Development, Paris. <http://www.oecd.org/development/poverty/49756756.pdf>.

4 See, for example, the UN Commission on the Status of Women’s 56th session, which focused on rural women’s empowerment, <http://www.un.org/womenwatch/daw/csw/56sess.htm>; the Gender, Agriculture and Assets Project led by the International Food Policy Research Institute (IFPRI) and the International Livestock Research Institute (ILRI), <http://gaap.ifpri.info/>; and FAO (2011). *Women in Agriculture: Closing the Gender Gap for Development*. The State of Food and Agriculture 2010–2011. Food and Agriculture Organization of the United Nations, Rome, Italy. <http://www.fao.org/publications/sofa2010-11/en/>.

5 See OECD-DAC (2013). *Aid in Support of Gender Equality and Women’s Empowerment*. Statistics based on DAC Members’ reporting on the Gender Equality Policy Marker, 2010–2011. Organisation for Economic Co-operation and Development, Development Assistance Committee, Paris. <http://www.oecd.org/investment/stats/46864237.pdf>.



An agricultural development programme enumerator interviews farmers in Ghana. © IFRA, Flickr.

on a daily and seasonal basis, and ensure that extension workers’ interventions are more relevant.

A particularly critical flaw in most available data is that it is aggregated by household, reflecting standard economic models that view households as key units.⁶ As is discussed extensively in this book, aggregating by household obscures often very large gender differences in access to and control over assets and resources. Several agencies and organizations are now conducting research on intra-household dynamics,

including FAO, the UN Inter-Agency Task Force on Rural Women, CARE, Oxfam, the International Food Policy Research Institute (IFPRI), and the International Fund for Agricultural Development (IFAD).⁷ Still, filling those gaps will take time, and the challenge remains of how to monitor more “intangible” changes in women’s and men’s attitudes and behaviours. For the agriculture and rural development sector, this is still a nascent area of research. Lessons are being learnt from the work of other sectors, such as health, on how to conceptualize and measure changes in social norms, but there is still a long way to go.

Recent conceptual developments could greatly improve our approach to data collation and analysis. By thinking more broadly about what women’s empowerment actually looks like, we can better understand how to measure it. For example, CARE International’s Women’s Empowerment in Agriculture (WEA) framework – which we have adapted to help structure the analysis in this book – focuses on five levers for women’s empowerment: (i) gender-equitable land, property and contractual rights, (ii) gender-equitable division of labour and time, (iii) gender-equitable control over labour and the product of labour, (iv) gender-equitable access to and control over water, and (v) attention to gender equity in institutional systems.⁸ In addition, every CARE project identifies levers for change relevant to its particular context.

6 See, for example, Meinzen-Dick, R. et al. (2012). Gender: A key dimension linking agricultural programs to improved nutrition and health. In *Reshaping Agriculture for Nutrition and Health*. S. Fan and R. Pandya-Lorch (eds.). International Food Policy Research Institute, Washington, DC. 135–44. <http://www.ifpri.org/publication/reshaping-agriculture-nutrition-and-health>.

7 See, for example, Doss, C.R. (2013). *Data Needs for Gender Analysis in Agriculture*. IFPRI Discussion Paper No. 1261. International Food Policy Research Institute, Washington, DC. <http://www.ifpri.org/publication/data-needs-gender-analysis-agriculture>.

8 For more about CARE’s framework, see CARE (2010). *Strong Women, Strong Communities: CARE’s Holistic Approach to Empowering Women and Girls in the Fight Against Poverty*. Atlanta, GA. <http://www.care.org/downloads/womens-empowerment-report-201005.pdf>.

CASE STUDY

CARE'S Women's Empowerment in Agriculture (WEA) framework in Mozambique

The WEA Framework has been used to design and implement many projects. One is CARE's Sustainable and Effective Economic Development (SEED) project in Inhambane province, Mozambique,⁹ which was not specifically gender-focused, but rather aimed to increase poor households' access to, and control over, an array of sustainable farm and non-farm income-generating activities. The project recognized gender equality and HIV/AIDS as key issues, and explicitly



Women's Association for Rice Farming, near Beira, Mozambique. Meg Ross, ©IDRC Photography

addressed the issues in the project's design, goals and metrics. "Gender challenges" for the project were assessed through interviews with SEED extension staff, beneficiaries, partners, and people in the community, focusing on everything from staff and partner capacity, to household decision-making, to land tenure issues. To gather baseline data, SEED used a participatory tool, the Income Expenditure Tree: a cardboard tree used to work with men and women to map sources of income (the roots), expenditures (leaves and branches), and household decision-making (the trunk).

SEED prioritized two women's empowerment strategies: (a) creating more economic opportunities for women by increasing the participation of women beneficiaries, and (b) ensuring that the project benefits all family members through fair decision-making. Specific steps included:

- Ensuring services are known to women and accessible to them in terms of time and location, and identifying barriers to women's participation.
- Developing tools to demonstrate the advantages of joint decision-making, such as community theatre and the Income Expenditure Tree, which was used as a baseline and monitoring instrument to map changes in household decision-making over time.
- Integrating women's leadership training into activities.
- Ensuring human rights are reflected in group constitutions.
- Training "positive deviants" – supportive husbands, vaccinators, community members – in public speaking and disseminating messages of change regarding gender equality and women's empowerment.

⁹ This case study is based on Hill, C. (2008). *A Seed Is Planted: Innovating for Gender Equality and Women's Empowerment in Agriculture – the Case of the Sustainable and Effective Economic Development (SEED) Project, Mozambique*. Case study, A Place to Grow. CARE USA, Atlanta, GA. Available at <http://edu.care.org/Documents/Forms/AllItems.aspx>.

The SEED project also developed several “gender-sensitive” indicators to help measure the different experiences of men and women throughout the project. Most were measures of men’s and women’s participation in different activities, contracts entered into, etc., but through the Income Expenditure Tree, they also monitored changes in intra-household decision-making and spending patterns.

Building on the five WEA levers of empowerment, SEED identified additional levers for change needed for agricultural initiatives. They included:

- Management and staff internalization/prioritization/translation into action of gender equality and women’s empowerment;
- Retooling of agriculture programming to prioritize gender goals and objectives;
- Donor/organizational commitment to a longer period of engagement with communities;
- Indicators of women’s empowerment developed by women themselves – done to some extent with the Income Expenditure Tree;
- Men’s involvement in the process of women’s empowerment;
- Ongoing and long-term dialogue and analysis on power dynamics and gender inequality with women and men in communities and with partners.

The SEED project, and CARE’s work more broadly, shows the importance of starting off with a commitment to women’s empowerment across the three domains of agency, structure and relations. It is necessary to tailor these abstract concepts to the reality of the project on the ground. A gender-responsive baseline, which also examines other key factors contributing to inequality, is vital. Analysis of the baseline will help to ensure existing organizational strategies are finely tuned to the local situation. New strategies and indicators will need to be developed on an on-going basis. A good management information system is vital to ensure lessons are being picked up and translated into activities and measurements.



Sweet potato growers in Chakwé, Goma, Mozambique. © ILRI, Flickr

CARE has also adopted the Millennium Development Indicators “plus” (MDI+) approach to help develop a set of outcome indicators intended to measure the long-term impact of its programmes.¹⁰ They start from the Millennium Development Goals and their related indicators, but then add indicators in each field that draw on CARE’s experience developing and applying women’s empowerment and governance indicators. With regard to MDG 3, gender equality, CARE has added the following indicators:

- Percentage of men and women reporting meaningful participation of women in decision-making at the household level in a domain previously reserved for men;
- Percentage of men and women reporting meaningful participation of women in the public sphere;
- Percentage of men and women with changed attitudes toward gender-based violence;
- Percentage of couples making informed joint decisions regarding sexual and reproductive health;
- Percentage of men and women reporting that women are able to effectively control productive assets;
- Percentage of women reporting an improvement in their psychosocial well-being;
- Average number of hours per day spent on house work, and in relation to the duration of the working day, by sex.

Two frameworks for measuring gender equality in agriculture: GAAP and WEAI

The conceptual framework for IFPRI’s Gender, Agriculture, and Assets Project (GAAP)¹¹ offers a way to map the gendered pathways through which men and women accumulate, control and dispose of assets, separately and jointly, and evaluate every aspect of those pathways, including differences in the kinds of assets that each sex is likelier to own. The framework also provides a way to test different hypotheses about the potential impact of different interventions, such as whether a greater stock and diversity of assets will result in greater well-being; whether increasing men’s and women’s stock of a particular asset will improve their bargaining power; and whether policies and programmes that reduce the gender gap in assets can more effectively improve food security, health, nutrition and other aspects of well-being. GAAP applies this framework in work with agricultural development projects in South Asia and sub-Saharan Africa to identify how development projects impact men’s and women’s assets; clarify which strategies are successful at reducing gender gaps in assets; and improve partner organizations’ ability to measure and analyze qualitative and quantitative gender and assets data.

The Women’s Empowerment in Agriculture Index, developed by USAID, IFPRI and the Oxford Poverty and Human Development Initiative (OPHI), measures the empowerment, agency, and inclusion of women in agriculture and, more broadly, women’s control over

10 See <http://pqdl.care.org/gendertoolkit/Pages/understanding%20change.aspx> for a description of MDI+ in the broader context of CARE’s tools for monitoring, evaluation and impact measurement.

11 To learn more about GAAP, see <http://gaap.ifpri.info>. The conceptual framework has been published as Meinzen-Dick, R., et al. (2011). *Gender, Assets, and Agricultural Development Programs: A Conceptual Framework*. CAPRI Working Paper No. 99, CGIAR Systemwide Program on Collective Action and Property Rights. International Food Policy Research Institute, Washington, DC. <http://dx.doi.org/10.2499/CAPRIWP99>.

critical parts of their lives in the household, community, and economy.¹² It is meant to help identify women who are disempowered and understand how to increase their autonomy and decision-making power, and also to serve as a tool for tracking progress toward gender equality. The WEAI is based on data from individual men and women in households, and is reported at the country or regional level. It is composed of two sub-indexes:

- Five domains of empowerment (5DE): This measures (1) women’s role in making decisions about agricultural production, (2) access to and decision-making power over productive resources, (3) control over use of income, (4) leadership in the community, and (5) time use. This sub-index is meant to capture women’s empowerment within their households and communities.
- Gender Parity Index (GPI): This sub-index reflects the percentage of women who are as empowered as the men in their households, based on interviews with both the principal male and the principal female in each household.

The CARE tools, the GAAP framework and WEAI show that significant conceptual advances have been made, and several options are now available for agricultural programmes to measure gender gaps and monitor progress towards closing them. Still, many development partners have yet to incorporate such tools and associated indicators into their programme formulation, monitoring and evaluation frameworks. Even when asked to “include or mainstream gender” into their work, many development partners and initiatives provide just the “requisite gender paragraph”, or just count how many women are involved in events or training – but they don’t look at women in relation to men, or at the quality of participation.

Moving towards gender-responsive data capture

Improving data systems to better capture gender inequality and support efforts to address it will require several steps. First, all programme and project stakeholders need to understand what is meant by “gender issues”, and in particular the significance of addressing the relevant “gender issues” involved in their wider programme outcomes – for instance, improved household-level planning and improved agricultural productivity. A vital component of tracking outcomes is the ability to collect and interpret sex-disaggregated data effectively, and to use it continually for planning, monitoring and evaluation.

Second, there is a need for capacity-building among staff who design agricultural monitoring and evaluation systems and data collection instruments. Agriculture M&E field staff are usually more comfortable with data on numbers of people using a specific technology or number of hectares under cultivation, but they can find it more difficult to identify appropriate outcome indicators related to gender equality or build tools to measure them.

Third, it is vital to apply conceptual rigour to data collation, analysis and interpretation. We need more realistic, better-informed understandings of women’s lives in the places where they live. At the very least, indicators and data should be disaggregated along the lines of sex and rural/urban location. Other variables including age are also important for

12 WEAI was developed for the U.S. government’s Feed the Future programme and has been tested extensively within that programme since the index’s launch in February 2012. To learn more, see <http://feedthefuture.gov/article/release-womens-empowerment-agriculture-index>.



Umwizero activities in Bujiga, Burundi. ©Andrea Ciannovelli

distinguishing the progress made by women at different stages in their lives. Data capable of capturing relative progress is also essential to help build an understanding of how subsets of women and men advance in comparison with their peers. We need to collate and work with indicators that examine average annual dietary intake per capita; access to productive resources and financial services including land, credit, extension; and prevalence of gender-based violence and knowledge, attitudes, and perceptions about it.

Fourth, working with women and men in communities to develop their own indicators of empowerment is likely to lead to more relevant strategy development and more meaningful measurement of impact. CARE Burundi did this with its project *Umwizero: A Positive Future for Women in Burundi*.¹³ Funded by the Norwegian government, Umwizero conducted research with women and men to identify their own empowerment indicators and establish locally defined reference levels. Key insights gained include:

1. Men need to be sensitized in good management and control of household goods; this is linked to the importance of integrating men into the programme.
2. Stakeholders need to be sensitized in how to treat human rights violations so that they can justly resolve these complaints.
3. A study on cultural barriers is needed, to discover why women are attached to traditions and customs that oppress them.
4. A study is needed on how to lighten women's workload so they can participate, with ease, in solidarity groups.

¹³ See CARE International Burundi (n.d.). *Women's Empowerment Indicators in Northern Burundi*. Report by the project team for Umwizero: A Positive Future for Women. <http://pqdl.care.org/sii/compendium/Original%20documents/Burundi%20SII%20Empowerment%20report.doc>. [Accessed 3 May, 2013]. See also <http://www.care.org/careswork/projects/BDI056.asp>.

5. Physical hygiene must be integrated into programme activities to reflect their perceived importance in driving change towards empowerment.

Fifth, it is important to work with both qualitative and quantitative indicators. Most gender-sensitive indicators tend to measure inputs (number/percentage of women/men accessing services/training) or outputs (number/percentage of women/men trained/reached), rather than impact. This approach is further developed in the literature surrounding the “outcome mapping” school of monitoring, where different “boundary partners” are identified and behavioural change on their part is documented.¹⁴

Sixth, it is central to use as few indicators as possible. All too often, indicator “neglect” and under-reporting is simply due to a lack of organizational capacity to monitor indicators, an ineffective M&E system, or simply the inclusion of too many indicators. Avoiding indicator exhaustion/neglect means striking a fine balance between capacity and resources available, and data needs.

Finally, data must be presented in formats useful to different data users, including community members, policy-makers, planners, statisticians and researchers. It is important to consider the target audience: Is a general audience with little background on data and statistics, or an audience that is well-versed in such issues? Visuals often work for those less knowledgeable about the issue; charts and graphs can be more straightforward to understand than tables. Where relevant (audience, purpose), include comparisons of men to women (urban/rural) and other variables (i.e. age). Reporting for communities can be in visual or oral form, including through pictures and drawings as well as through drama or story-telling.

Gender-responsive logistics

Many opportunities for “quick wins” in gender transformative approaches are overlooked. Investing in gender-responsive logistics is a fundamental starting point. Here, we examine how to select the best gender personnel for a particular situation, how to ensure that the voices of women are heard, and the logistical support that women may need to participate in training programmes.

Gender personnel

There are a number of options regarding how to source gender analysis expertise for programmes. These include hiring university-based or consultant experts (male or female) on a one-off basis, establishing continuing links with NGO partners, training women lab-based scientists in basic gender analysis and field work skills, supporting local women professionals (such as teachers) who may be present in the research area to carry out gender analyses of all kinds including small group discussions, surveys, etc., and training male scientists in gender analysis. Each offers advantages and disadvantages, as shown in Table 3.1. It is likely that over the life-time of a project that a mix of skills will be needed. Capacity building to overcome the likely constraints of each type of personnel should be offered to improve their ability to contribute fully and to enhance their accountability to the people they work with.

14 See <http://www.outcomemapping.ca> for an extensive collection of resources on outcome mapping.

TABLE 4.1 Merits and constraints of personnel options for gender analysis¹⁵

Who	Merits	Constraints
University-based socio-economic experts (national or international)	Knowledgeable of the theory Good analytical and writing skills	Theoretical understanding and methodological practice in gender analysis may not be strong Not always available when needed Usually distant from field site
PhD students and post-doctoral fellows in gender and agriculture disciplines	Theoretical knowledge Good analytical and writing skills Could help to develop gender-responsive programs based on good data	Experience applying gender analysis methodologies may be weak
Master's level research students	Could help to compile data (quantitative/qualitative) or analyze existing data	Experience applying gender analysis methodologies may be weak
Consultants	May have strong theoretical knowledge and analytical and writing skills Can be chosen for expertise in gender analysis	Expensive Limits to continuing linkages Quality control can be problematic if project team does not select or know the person
NGO partners	Strong knowledge of context Established working relations with target communities Focused on practical field experience	May lack women field workers or gender analysis expertise May lack formal report writing and/or formal analytical skills May lack adequate technical understanding
Women lab-based scientists	Exposure to the field builds human capital within science establishment Have strong science background	May be reluctant to travel/work in the field May lack sufficient in-depth understanding of social/gender relations and theory to provide adequate analysis Cannot assume women are interested in gender issues by virtue of their sex
Local women professionals	Strengthens local participation Builds local human capital May have special insights because of existing social/family links	May experience time constraints Own identity/position may make it difficult to address certain issues or involve particular groups Cannot assume women are interested in gender issues by virtue of their sex

15 Adapted from Farnworth, C. R. and Jiggins, J. (2003). *Participatory Plant Breeding and Gender Analysis*. PPB Monograph 4. Participatory Research and Gender Analysis Program, CGIAR, Cali, Colombia.

Who	Merits	Constraints
Male researchers	<p>Strengthens the public perception of professionalism within group</p> <p>May be able to interact better with men</p>	<p>Training in gender analysis may be required</p> <p>May bring gender biases to the work</p> <p>May not be able to gain access to women, or may encounter cultural barriers</p>

Interviewer-respondent interactions

Does the sex of the gender analysis practitioner affect process or outcome? The answer appears to be contextual: in some societies, it is absolutely not acceptable for women to be interviewed or otherwise interact with male “outsiders”. In other circumstances the presence of a young boy as “family chaperone”, a shift in the interview setting from home to a more public place where women usually gather, or a switch in method from individual interviews to group interviews, may overcome constraints.

This said, in many cases, interactions between people of the same sex produce higher-quality data. Both women and men are likelier to adjust what they say to match social norms when they are in mixed-sex interview settings—for example, if asked who is responsible for household expenditures. The distinct views and experiences of women and men are best captured by having someone of the same sex interview them separately. In male-headed households, it may also be useful to have male and female interviews occur simultaneously, so neither can intervene in the other’s interview.

Training and employing a cadre of enumerators with an equal number of women and men will incur higher upfront costs, but this will be repaid in terms of much higher data validity. Women enumerators will need safe and secure accommodation and safe travel arrangements, and may need chaperones. Rules to prevent sexual harassment must be strictly adhered to and enforced. All this should be budgeted for.

Ways forward

This chapter has highlighted the need for high-quality gender data collation, interpretation and management. It has also presented new conceptual frameworks to ensure the data gathered – and its interpretation – will be meaningful and robust. CARE’s Umwizero work in Burundi highlights the value of empowering communities themselves to set their data priorities, and to help analyse that data in order to take transformative action. Data can never be “collected”. It does not lie around waiting for a researcher to find it. Rather, data is produced through interactive relationships, and can thus be quite subjective. The quality of the relationships will fundamentally shape the data that is produced. Taking steps to ensure that women can talk openly and freely is essential.