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TRAINING MODULE

# How to integrate gender issues in climate-smart agriculture projects

Food and Agriculture Organization of the United Nations

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TRAINING MODULE

# How to integrate gender issues in climate-smart agriculture projects

This work is a co-publication of
the Food and Agriculture Organization of the United Nations and The World Bank
Rome, 2017

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ISBN 978-92-5-109409-9 (FAO)
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# Acknowledgements

This training module on *How to Integrate Gender Issues in Climate-smart Agriculture Projects* was prepared jointly by the Food and Agriculture Organization (FAO) and World Bank Group (WBG), with financial support from the Department for International Development (DFID). The module was developed by Kaisa Karttunen (International Consultant) and Ilaria Sisto (Gender and Development Officer, Training and Capacity Enhancement, FAO) under the guidance of Marc Sadler (World Bank). The coordination team consisted of Sanna-Liisa Taivalmaa (World Bank), and Minna Kononen (World Bank).

The training module builds on work presented in "Gender in Climate-Smart Agriculture," Module 18 of the *Gender in Agriculture Sourcebook* (World Bank, FAO, and IFAD 2015), in addition to other materials. The training materials presented in this module were tested in a May 2016 workshop organized in Dar es Salaam, Tanzania by the World Bank with FAO, the Alliance for Climate-Smart Agriculture in Africa, and CARE International. The team thanks Karl Deering (CARE), Aichi Kitalyi (consultant), and Sarah Simons (World Bank) for their valuable contributions during that training workshop and in testing the training materials. The team also appreciates the substantive suggestions and contributions of reviewers Daniel John Kirkwood, Allan Bomuhangi, Patti Kristjanson (all working for the World Bank), and Ilaria Firmian (IFAD). The team is very grateful as well to Preeti Ahuja (Practice Manager) for valuable guidance and support.

# Acronyms and abbreviations

| | |
|---|---|
| **CCAFS** | CGIAR Research Program on Climate Change, Agriculture, and Food Security |
| **CSA** | Climate-smart agriculture |
| **DAP** | Draught animal power |
| **DFID** | Department for International Development, United Kingdom |
| **FAO** | Food and Agriculture Organization of the United Nations |
| **IFAD** | International Fund for Agricultural Development |
| **IFPRI** | International Food Policy Research Institute |
| **IPCC** | Intergovernmental Panel on Climate Change |
| **NGO** | Non-governmental organization |
| **SEAGA** | Socio-Economic and Gender Analysis Programme (FAO) |
| **UN** | United Nations |
| **WB(G)** | World Bank (Group) |
| **WEAI** | Women's Empowerment in Agriculture Index |

# Executive summary

Climate change poses an increasing risk to the agricultural sector and food security, affecting poor men and women who live in rural areas and depend on agriculture, forestry, and fisheries for their livelihood. Changing climatic conditions jeopardize agricultural production and food security at a time when the world is working to eradicate hunger under the second Sustainable Development Goal: "End hunger, achieve food security and improved nutrition, and promote sustainable agriculture."

Climate-smart agriculture (CSA) is an approach that addresses food security and climate challenges jointly. The approach has three pillars: (1) sustainably increase agricultural productivity and incomes, (2) adapt and build resilience to climate change, and (3) reduce and/or remove greenhouse gas emissions where possible.

The gender gap in agriculture means that women and men farmers have differential access to the resources and services required to prepare for and respond to climate change. In most developing countries, women have less access than men to productive resources, financial capital, and advisory services. Women tend to be excluded from decision making and may not benefit from technologies and practices that could help them adapt to new climatic conditions. When it comes to developing and adopting CSA practices, men and women are not starting at the same point. There is now an international consensus that the design and implementation of climate change response strategies and projects must consider gender-specific differences in the capacity to adapt to and mitigate climate change.

In 2015 the World Bank, the Food and Agriculture Organization of the United Nations (FAO), and the International Fund for Agricultural Development (IFAD) developed the latest module of the *Gender in Agriculture Sourcebook,* "Gender in Climate-Smart Agriculture." The module includes tested good practices, innovative approaches, and technologies for gender mainstreaming in CSA.

As a follow up, the World Bank and FAO decided to collaborate on the development of this training module on *How to Integrate Gender Issues in Climate-smart Agriculture Projects*, with the aim of enhancing the technical capacities of development practitioners to address gender issues in CSA-related projects. The module builds on the following five key messages:

- Rural men and women have different access to productive resources, services, information, and employment opportunities, which may hinder women's productivity and reduce their contributions to agriculture and broader economic and social development goals.
- Climate change poses an increasing risk to the agricultural sector, food security, and nutrition.
- Climate-smart agriculture is an approach that jointly addresses food security and climate challenges.
- A gender-responsive approach to CSA identifies and addresses the different constraints faced by men and women and recognizes their specific capabilities.
- Gender-responsive CSA projects reduce gender inequalities and ensure that men, women, boys, and girls can equally benefit from CSA interventions and practices, thus achieving more sustainable and equitable results.

With those key messages in view, this training module provides theoretical and practical approaches for designing gender-responsive CSA projects. It uses lessons from previous work to illustrate ways of integrating gender issues throughout the project cycle to ensure that the specific needs and priorities of men and women are adequately addressed. The module also provides an overview of a gender-responsive planning and implementation processes, approaches and tools for conducting a gender analysis, a glossary of key terms and concepts of CSA and gender, and some checklists for gender integration in each phase of the project cycle.

# 1 Introduction

**Climate change poses a huge threat to the agricultural sector and food security:** about 75 percent of the world's poor men and women live in rural areas and depend on agriculture, forestry, and fisheries for their livelihood. Climate change jeopardizes agricultural production and food security at a time when the world is working to achieve the second Sustainable Development Goal, which aims to "end hunger, achieve food security and improved nutrition, and promote sustainable agriculture." At the same time, agriculture and other land-use sectors are one of the largest emitters of greenhouse gases.

**Climate-smart agriculture (CSA) is an approach to developing the technical, policy, and investment conditions to achieve sustainable agricultural development for food security under climate change.** The CSA approach integrates the economic, environmental, and social dimensions of sustainable development by jointly addressing food security and climate change challenges. The three main pillars of CSA – increasing agricultural productivity and incomes; adapting and building resilience to climate change; and reducing and/or removing greenhouse gas emissions where possible – are all integral to sustainable development.

**Climate change affects men, women, boys, and girls in different ways, and for CSA interventions to be more effective and sustainable, they must be designed to address gender inequalities and discrimination against people at risk.** Women farmers are more exposed to climate risks compared with men, for many of the same reasons that farm productivity is lower for female farmers than males – namely, women have fewer endowments and entitlements, they have less access to information and services, and they are less mobile. Access to markets may reduce certain climate-related risks for women (by reducing the risk of on-farm storage losses), but it can also increase them (through increased exposure to market price volatility). Women are often excluded from decision making and may not benefit from CSA technologies and practices that help agriculture adapt better to new climatic conditions. This situation has negative impacts not only on women but also on their households, communities, and on society as a whole, in addition to affecting agricultural production and sustainable development.

**This gender gap means that when it comes to developing and adopting CSA practices, men and women are not starting at the same point.** To succeed, CSA practices depend on institutional and behavioral changes that are not possible to achieve without first analyzing the social and gender issues influencing policies, projects, and other interventions aimed at achieving sustainable CSA. A growing body of evidence demonstrates that more equal gender relations within households and communities lead to better agricultural and development outcomes, including increases in farm productivity and improvements in family nutrition. There is now an international consensus that the design and implementation of climate change response strategies and projects must consider gender-specific differences in the capacity to adapt to and mitigate climate change.

Projects in Africa have generated concrete evidence on the acceptance of CSA practices among men and women farmers. The practices of zero-grazing, reduced tillage, improved manure management, agroforestry, soil and water conservation, crop rotation and mulching, and improved cooking stoves were all tested in Kenya and Tanzania by smallholder farmers. Data show that the adoption rate differed to some extent between male- and female-headed households, suggesting that differences in their access to labor and other resources, information, and extension services shaped the capacity of these households to seize these climate-smart opportunities (Rioux et al. 2016). A project in Zambia to scale up conservation agriculture among small-scale farmers gave special attention to addressing the barriers to rural women's socio-

economic empowerment, including their limited access to labor-saving technologies and productive resources such as credit, and established a target of 50 percent for women among the participants (FAO 2016a). In Mali, a gender analysis of stakeholder perceptions of climate change and the barriers to adoption of resilient practices has highlighted the need to design and implement inclusive, locally adapted strategies that also give particular attention to female farmers (Diiro et al. 2016). Box 1 presents some key messages related to addressing gender issues in CSA.

**In 2015, the World Bank, FAO, and IFAD jointly developed "Gender in Climate-Smart Agriculture," the latest module for the *Gender in Agriculture Sourcebook*.** The module provides development agencies and practitioners, policy makers, civil society organizations, research, academia and the private sector with tested good practices, innovative approaches, and technologies for gender mainstreaming in CSA. The experiences and approaches shared in the module are expected to help governments and other stakeholders in integrating gender into climate and agriculture strategies and policies, and in designing and implementing gender-responsive CSA projects and programs.

As a follow-up to this collaboration, the World Bank and FAO have jointly developed this training module on ***How to Integrate Gender Issues in Climate-smart Agriculture Projects***. Use of this module is intended to enhance the technical capacities of development practitioners to address gender issues in CSA-related interventions and policies, in order to improve the lives of smallholder farmers, fishers, and foresters and achieve more sustainable and equitable results. The demand for this training module came from practitioners who expressed a need for hands-on, practical training in approaches and tools to integrate gender issues in CSA projects.

This training module builds on several recently developed sources, including the *Gender in Climate-Smart Agriculture* module just mentioned (World Bank, FAO and IFAD 2015), the *Training Guide: Gender and Climate Change Research in Agriculture and Food Security for Development* (FAO and CCAFS 2013), the *Gender and Inclusion Toolbox* (Jost, Ferdous, and Spicer 2014), and *A Gender-Responsive Approach to Climate-Smart Agriculture* (Nelson and Huyer 2016). It also builds on the approach and tools available in FAO's Socio-Economic and Gender Analysis (SEAGA) Programme, *FAO's e-learning course on Gender in Food and Nutrition Security (FAO 2014a) and FAO's Guide to mainstreaming gender in FAO's project cycle (FAO 2017 forthcoming)*. For links to these and many other relevant sources, see Appendix 8.

**Box 1**
**Key messages related to addressing gender issues in climate-smart agriculture (CSA)**

- Rural men and women have different access to productive resources, services, information, and employment opportunities, which may hinder women's productivity and reduce their contributions to agriculture, food security, nutrition, and broader economic and social development goals.
- Climate change poses an increasing risk to the agricultural sector, food security, and nutrition.
- Climate-smart agriculture is an approach that jointly addresses food security and climate challenges.
- A gender-responsive approach to CSA identifies and addresses the different constraints faced by men and women and recognizes their specific capabilities.
- Gender-responsive CSA projects reduce gender inequalities and ensure that men, women, boys, and girls can equally benefit from CSA interventions and practices, thus achieving more sustainable and equitable results.

# 2 Learning objectives and structure of the training module

**The main objective of this training module is to help project designers and implementers develop their capacity to integrate gender issues in CSA projects and programs.** As a result of the training, learners are expected to have a better understanding of the gender roles in CSA and their critical impact on project outcomes and sustainability. The training will also provide different methods and tools enabling learners to identify, formulate, implement, monitor, and evaluate gender-responsive actions and practices in CSA development projects.

**Through the training, learners will become familiar with the main concepts of gender, climate change, and CSA.** They will also understand the relevance of the gender dimensions in climate change adaptation and mitigation and in developing gender-responsive CSA interventions. Furthermore, they will learn the steps to take and become familiar with the tools and approaches available for conducting a gender analysis and integrating gender issues in CSA project design, implementation, monitoring, and evaluation. The training module also presents gender, climate change, and CSA guidelines and other materials that learners can use in planning and implementing gender-responsive interventions.

**This training module provides basic knowledge and materials for organizing a two-day training workshop to develop gender mainstreaming capacities in CSA-related projects**, throughout the whole project cycle. When preparing for the workshop, the facilitators can develop a PowerPoint presentation with the main messages of this module or write them on a black/white board or flip charts to stimulate discussion during the workshop. If it is not possible to provide all participants with a copy the module, it is recommended that at least Appendices 2–6 and 8 are copied and distributed as handouts. The module focuses mainly on activities in the field. It is important to recognize, however, that gender-responsive CSA development also requires actions at the institutional and policy levels, as well as changes in social and cultural norms, and this module provides recommendations for improving the integration of gender issues in national CSA policies and strategies.

The module starts by outlining what learners are expected to understand upon completion of the training. It moves on to analyze the following topics that are relevant for gender integration in CSA projects:

1. Climate change, climate-smart agriculture and gender roles in CSA.
2. Gender analysis in CSA project identification.
3. Gender mainstreaming in CSA project formulation.
4. Gender integration in CSA project implementation, monitoring, and evaluation.
5. Working group exercises to apply lessons learned.

The module also offers tips for project designers and provides examples of lessons learned through experience with CSA practices and projects. The appendices include a detailed glossary, checklists, participatory gender analysis tools, material for the working group discussions during the workshop, references, and additional materials to support CSA project design, implementation, monitoring, and evaluation.

**The training module is primarily targeted to teams and individuals who are responsible for organizing gender and CSA training for development practitioners, and also for people who are involved in the design and implementation of gender-responsive projects.** The users include individuals from different backgrounds – such as government, development agencies, advisory services, non-governmental organizations (NGOs), civil society organizations, research, academia, and the private sector – who work on CSA projects and programs. The training participants are expected to have basic knowledge of gender issues in agriculture and climate change. The training module can also be used to raise gender awareness and as a stand-alone tool for individual learning by project designers and implementers committed to integrating gender issues in CSA projects and programs.

**The training is designed as a two-day workshop** (see the model agenda in Appendix 1), but its duration, content, and materials can be adapted in a flexible manner according to the specific needs, knowledge, and experience in these areas of the workshop participants. In the model agenda, Topics 1–4 listed above will each require approximately 1.5–2 hours, while the working group discussions on agroforestry and conservation agriculture can be split into two sessions of 1 hour.

**The team charged with planning and conducting the training workshop should include both a gender specialist and an agriculture and climate change expert** to ensure that technical capacities in gender analysis as well as CSA are both adequately covered. If possible, a separate facilitator could be included to help with the group exercises and plenary discussion.

Prior to organizing the training workshop, the organizers and facilitators might want to **carry out a pre-workshop needs assessment**. Appendix 7 presents a needs assessment questionnaire that could be adapted to the specific context of the training and target group, in order to identify their specific needs, experience, and knowledge of the issues that will be discussed in the workshop.

# 3 Climate change, climate-smart agriculture, and gender roles in CSA

The purpose of this session is to familiarize learners with climate change and CSA terminology and concepts, and also to give them a better understanding of gender concepts and gender analysis. The session helps learners discuss the relevance of gender dimensions in climate change adaptation and mitigation when developing gender-responsive and climate-smart interventions. The proposed structure of the session is described in Table 1 with a list of materials that could be used.

## 3.1 Climate change and CSA terminology and concepts

> *Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased.* IPCC (2013)

**Climate change has severe impacts on agriculture and on all dimensions of food security and nutrition. At the same time, the agricultural sector is among the largest emitters of greenhouse gases** (carbon

**Table 1**
**Outline for session on climate change, CSA, and gender roles in CSA**

| Topics of the session | Duration | Learning tools and facilitation notes |
|---|---|---|
| Introduction of climate change and CSA terminology and concepts | 30 min | Video: Understanding climate-smart agriculture (FAO, link: https://www.youtube.com/watch?v=lUdNMsVDIZ0) and/or Gender gap in agriculture (FAO, link: https://www.youtube.com/watch?v=uDM828TpVpY (Download the videos in advance as the internet connection may fail)<br>Handout: Glossary (see Appendix 2)<br>Presentation |
| Reaching a common understanding of gender concepts and what is gender analysis; relevance of gender dimensions in climate change and CSA | 30 min | Presentation and a short exercise.<br>Exercise: Think about common proverbs and sayings and how they can affect gender relations, to start introducing gender issues. For example, you could refer to the proverb: "A family is like a forest. When you are outside, it is dense. When you are inside, you see that every tree has its place." How does this proverb relate to gender roles in a household or a community? |
| Experiences in integrating gender issues in agriculture/ climate change strategies and policies | 30 min | It is recommended to invite a ministry representative to provide highlights of how gender issues are integrated in the national agriculture/ climate policy or strategic work. |
| Group exercise | 30 min | Exercise using the Margolis Wheel tool (Appendix 6) to discuss problems with gender integration in projects and generate potential solutions. |
| Total estimated time | 2 hours | |

> *Continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system. Limiting climate change will require substantial and sustained reductions of greenhouse gas emissions.* IPCC (2013)

dioxide, methane, and nitrous oxide): agriculture alone produces 10–12 percent of gases, and with land use, land-use change, and forestry the proportion rises to 24 percent (IPCC 2013). The first step in understanding these relationships is to become familiar with basic concepts related to climate change.

Box 2 presents some key concepts; others are explained in Appendix 2.

### Box 2
### Key concepts related to climate change

- **Climate change:** A change in climate attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural variability observed over a comparable period of time.
- **Climate change adaptation:** Initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects. Various types of adaptation exist, for example anticipatory and reactive and autonomous and planned adaptation.
- **Climate change mitigation:** Implementation of technological changes, such as cultivation practices, or substitution of technologies (such as substituting fossil fuels) to reduce greenhouse gas emissions and enhance greenhouse gas sinks.
- **Climate-smart agriculture:** Integrates the three dimensions of sustainable development by jointly addressing food security and climate challenges. It is composed of three main pillars: (1) sustainably increasing agricultural productivity and incomes; (2) adapting and building resilience to climate change; and (3) reducing and/or removing greenhouse gas emissions, where possible.
- **Disaster risk reduction:** Systematic efforts to analyze and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

In this module, the focus is on CSA, an approach to transforming and reorienting agricultural systems to support development and food security effectively and sustainably under a changing climate (FAO 2016b).

**To make agricultural systems climate-smart requires actions at different levels: policies, institutions, investments, and practices.** Any actions taken should be based on **evidence,** generated (for example) by identifying potential gender-responsive options for increasing agricultural productivity and incomes under existing agro-ecological conditions; analyzing historical and recent changes in relevant climate/weather variables; examining potential returns of different options (for example, returns in terms of productivity, food security, and resilience) under a range of climatic conditions; and assessing the potential mitigation benefits of the different options identified. **Enabling institutions and policies** are essential when making use of the evidence base to design more effective and sustainable interventions. The steps to build an enabling environment for CSA include:

1. Assessing the major barriers to the adoption of CSA options.
2. Analyzing the potential of local institutions to overcome these barriers.
3. Engaging in dialogues with local communities.
4. Developing capacities at different levels.
5. Supporting policy coordination.

Finally, securing financing for the necessary actions is key to their implementation (FAO 2014b).

As described previously, **when selecting appropriate CSA practices for a specific area, we need to analyze the site-specific socio-economic and institutional context, as well as the prevailing agro-ecological conditions and potential climate change scenarios, risks, impacts.** Furthermore, instead of assessing single practices we can widen our scope, for example by considering changing practices and at the farm, ecosystem, or landscape levels. CSA often also calls for integration at different levels: integrating crops, livestock, aquaculture, and trees; research, policy, and practices; or along the value chain from production to consumption. Table 2 presents an example of CSA practices adopted in eastern Africa, explaining their specific components and how they are climate-smart.

**Table 2**
**Examples of CSA practices adopted in eastern Africa**

| Practice | Components | How it is climate-smart |
|---|---|---|
| Conservation agriculture | ▸ reduced tillage<br>▸ crop residue management – mulching, intercropping<br>▸ crop rotation/intercropping | ▸ carbon sequestration<br>▸ reduction in existing emissions<br>▸ resilience to dry and hot spells |
| Integrated soil fertility management | ▸ compost and manure management including green manuring<br>▸ efficient fertilizer application techniques (time, method, amount) | ▸ reduced emissions of nitrous oxide and CH4<br>▸ improved soil productivity |
| Small-scale irrigation | ▸ year round cropping<br>▸ efficient water utilization | ▸ creating carbon sinks<br>▸ improved yields and food security |
| Crop diversification | ▸ popularization of new crops and crop varieties<br>▸ pest resistance, high yielding, drought tolerant, short season | ▸ food security<br>▸ resilience, improved incomes |
| Improved livestock feed and feeding practices | ▸ reduced open grazing, zero grazing<br>▸ forage development and rangeland management<br>▸ feed improvement<br>▸ livestock breed improvement and diversification | ▸ improved livestock productivity<br>▸ GHG reduction<br>▸ CH4 reduction |
| Other | ▸ In situ water conservation/harvesting<br>▸ early warning systems and weather information<br>▸ alternative energy – biofuels, efficient stoves<br>▸ crop and livestock insurance<br>▸ livelihood diversification (api/aquaculture)<br>▸ post-harvest technologies | ▸ resilience of agriculture<br>▸ improved incomes<br>▸ reduced emissions<br>▸ reduced deforestation<br>▸ reduced climate risk<br>▸ reduced losses |

*Source:* FAO 2016a.

The following examples of CSA practices as well as the examples in Table 2 are context specific and will be applied differently in each type of environment. In the adaptation of these practices, the different social and gender dimensions related to the area and culture where they are implemented need to be identified and addressed (World Bank, FAO, and IFAD 2015):

1. **Improved land and water management practices:**
   Agroforestry, terraces and bunds, water harvesting structures and systems, improved water management in agriculture, planting pits, and crop residue mulching.

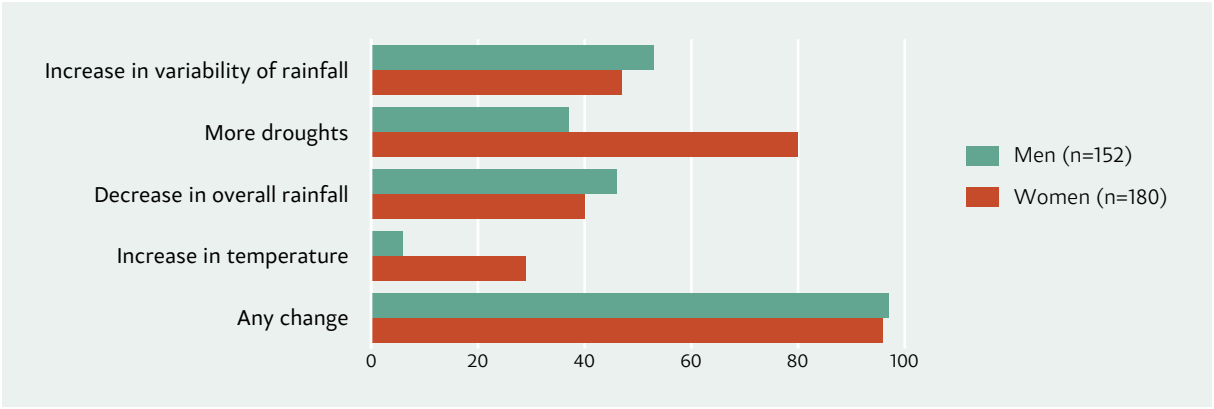
2. **Improved soil fertility and crop management practices:**
   Composting, cover cropping, conservation agriculture, efficient use of fertilizers, stress-tolerant varieties, no tillage or minimum tillage, and alternate wetting and drying of rice.

3. **Improved livestock management practices:**
   Improved feed management, manure management, destocking, switching to livestock species or breeds that are more adapted to water scarcity and resistant to disease, and pasture management.

4. **Other practices:**
   Improved post-harvest practices, more efficient cooking stoves, and fisheries and aquaculture technologies.

**Smallholder farmers may face several barriers to the adoption of CSA.** Addressing these barriers is critical, for example by ensuring an enabling policy and institutional environment; securing men and women farmers' access to extension and information services, productive inputs, land, markets, and financing; and developing the necessary capacities at all levels.

**Figure 1**
**Men and women perceive climate change differently in Rakai, Uganda**

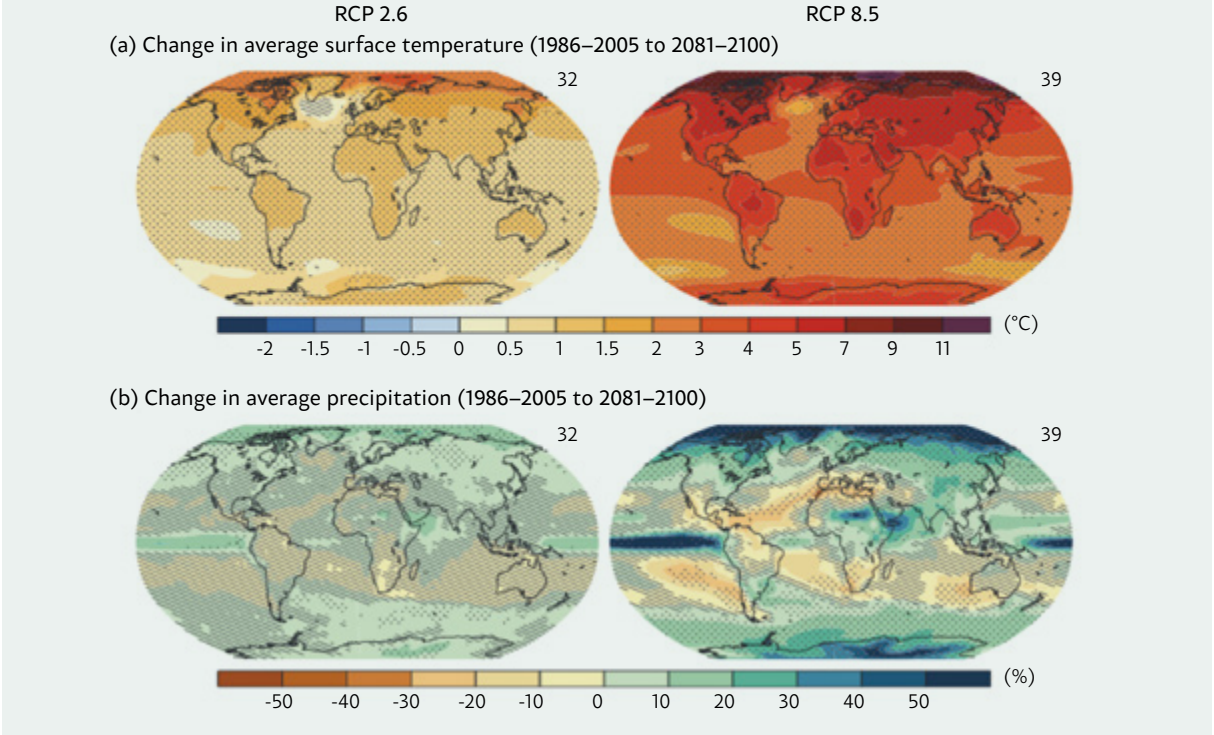



*Source:* Twyman *et al.* 2014.

Last but not least, **CSA is not gender-neutral**, and therefore a socio-economic and gender analysis will be critical for achieving sustainable and equitable results which will benefit both men and women. An example is provided in Figure 1 of how men and women perceive climate change differently, based on an intra-household survey conducted by the International Food Policy Research Institute (IFPRI) and the CGIAR Research Program on Climate Change, Agriculture, and Food Security (CCAFS) in Rakai, Uganda.

**When looking at climate change scenarios, we need to understand that significant uncertainty is attached to them.** We do not have precise answers to a number of questions: What will happen to rainfall patterns? How high can average temperatures get? What will be their impact on agriculture? How can we better forecast

**Figure 2**
**Possible scenarios for temperature and precipitation changes**




*Source:* IPCC, 2013 Assessment report.

extreme climatic events? Some indicative information on the direction of climate trends is available, however. For instance, the Intergovernmental Panel on Climate Change (IPCC) 5th Assessment Report (IPCC 2013) states that in many mid-latitude and subtropical **dry** regions, mean precipitation will likely decrease, while in many mid-latitude **wet** regions, it is likely to increase (Figure 2). National meteorological and agro-meteorological institutions often have more location-specific scenarios available. Which of the climate change scenarios will materialize in the future depends mostly on the future quantities of greenhouse gas emissions.

**We also need to differentiate between time horizons and forecasts.** Are we talking about weather: for instance, will it rain tomorrow? Or are we talking about seasonal forecasts: will it rain more than normal in the next growing season (an effect of El Niño, for example)? Or do we rather have a historical perspective: what is the average onset date of seasonal rains over the past 20 years? Weather and climate information becomes more useful when it is communicated together with expected levels of uncertainty and "translated" into information that can be used to make decisions for action. A good example of such an approach is CARE's Adaptation Learning Programme, which promotes a mechanism for improving the access to and the interpretation of forecasts, bringing together community members, meteorology experts, local government stakeholders, and local organizations to jointly analyze the forecasts and downscale them to correspond with the agro-climatic zones of the region (CARE 2016).

**The current knowledge of what makes agricultural practices climate-smart but also gender-responsive is still quite limited.** Both are very site-specific concepts. When localized projections for climate change impact are not available, a "no-regrets" approach is recommended. This approach involves adopting adaptive and CSA practices that will be beneficial even if future impacts are not certain and climate change threats do not occur exactly as anticipated. No-regrets actions can have significant development benefits under a range of climate change scenarios; they may include, for example, rainwater harvesting techniques and water reservoirs, increase in soil organic matter, and improved access to weather information. Another important approach is "**do no harm.**" In this context, doing no harm means (for example) that new practices or changes in farming systems for climate change adaptation, mitigation, or CSA will not compromise food security and create greater social inequality.

## 3.2 Reaching a common understanding of gender concepts and of what gender analysis is

> *Closing the gender gap in agriculture would raise total agricultural input in developing countries by 2.5–4 percent, reducing the number of hungry people by 12–17 percent in the world. If women had the same access to productive resources as men, they could increase yields on their farms by 20–30 percent. Female farmers are just as efficient as male farmers but they produce less because they control less land, use fewer inputs and have limited access to labour and important services such as extension.*
>
> Extracts from FAO (2011) and O'Sullivan et al. (2014)

**The gender gap in agriculture** refers to the fact that women typically have less access to and control over productive assets, inputs, productive resources, and services needed to make the most productive use of their time. Moreover, women often have less decision-making authority in the household and community. These social and institutional barriers lead to a gender gap that hinders women's productivity and reduces their contributions to agriculture and achievement of broader economic and social development goals.

**In many developing countries the agricultural sector is underperforming for a variety of reasons. One of the main underlying causes is that women lack resources, services, and employment opportunities,** although they play a major role in agriculture as farmers, workers, and entrepreneurs. Closing the gender gap in agriculture produces significant gains not only for women but for society as a whole, by increasing agricultural productivity, reducing poverty and hunger, and promoting economic growth.

**Governments, donors, and development practitioners recognize that agriculture is central to economic growth and food security, but they are often less committed to promoting gender equality and women's empowerment.** Gender may be mentioned as an issue in many national and regional agricultural and food security policies and plans, but it is not adequately elaborated. Many agricultural policies and plans still fail to consider basic questions about the differences in resources available to men and women, their roles, and the constraints they face – and how these differences might be relevant to proposed interventions. As a result, it is often assumed that interventions in areas such as technology (in this case, CSA practices), infrastructure, and market access have the same impacts on men and women, when in fact they may not.

**The agricultural sector is becoming more technologically sophisticated, commercially oriented, and globally integrated; at the same time, migration patterns and climate variability are changing the rural landscape** across the developing world. These forces pose challenges and present opportunities for all agricultural producers, but women face additional legal and social barriers that limit their ability to adapt to and benefit from change. Governments and donors have made major commitments aimed at revitalizing agriculture in developing regions, and their efforts will yield better results more quickly if they maximize the productive potential of women by promoting gender equality.

Women, like men, can be considered "productive resources," but they are also citizens who have an equal claim with men on the production opportunities and services provided by their governments and the international community. Therefore, **agricultural policy makers and development practitioners must ensure that women are able to participate fully in and benefit from the process of agricultural development.** Moreover, promoting gender equality in agriculture can help reduce extreme poverty and hunger. The roles and status of men and women in agriculture and rural areas vary widely by region, age, ethnicity, and social class, and they are changing rapidly in some parts of

## Box 3
## Gender-related concepts

**Gender** refers to socially constructed attributes and opportunities associated with being male and female. It has to do with how society defines masculinity and femininity in terms of what is appropriate behavior for men and women, and both play a crucial role in the social construction of gender.
**Gender analysis** is the study of the different roles of men and women in order to understand what they do, what resources they have, and what their needs and priorities are. It provides the basis for addressing inequalities in policies, programs, and projects, and it can be conducted at multiple levels (household, community, and national), across different life stages and in the various roles men and women play.

**Gender relations** refers to ways in which society defines rights, responsibilities, and identities of men and women in relation to one another, in all spheres of life – in private (family, marriage, and so on) and public domains (schools, labor markets, political life). Other intersecting factors to consider are ethnicity, age, class, religion, and geographic location. Gender relations determine:

- Gender entitlement systems: assets, opportunities, capabilities, and choices.
- Gendered divisions of labor and employment opportunities (such as unpaid and temporary work).
- Gendered patterns of production.
- Power sharing at all levels: decision making, control of resources, and so on.

**Gender roles** include: (1) productive roles that generate an income – women engage in paid work and income-generating activities, but gender disparities persist in terms of wage differentials, contractual modalities, and informal work; (2) reproductive roles related to social reproduction, such as growing and preparing food for family consumption and caring for children; (3) community managing roles that include unpaid and voluntary activities, mainly carried out by women, to complement their reproductive role for the benefit of the community, such as fetching water for the school; and (4) community or politics roles related to decision-making processes, such as membership in assemblies and councils. Women's role can be identified as reproductive, productive, and community managing, while men's roles are categorized mainly as either productive, community, or politics. Women's multiple and competing roles lead to their time poverty, which can imply asset and income poverty. The unequal value placed on roles of women compared with men is mainly responsible for their inferior status and the persistent gender discrimination they experience.

**Gender equality** is when men and women enjoy equal rights, opportunities, and entitlements in civil and political life, in terms of access, control, participation, and treatment.

**Gender equity** means fairness and impartiality in treating men and women in terms of rights, benefits, obligations, and opportunities. At times, special treatment/affirmative action/positive discrimination is required.

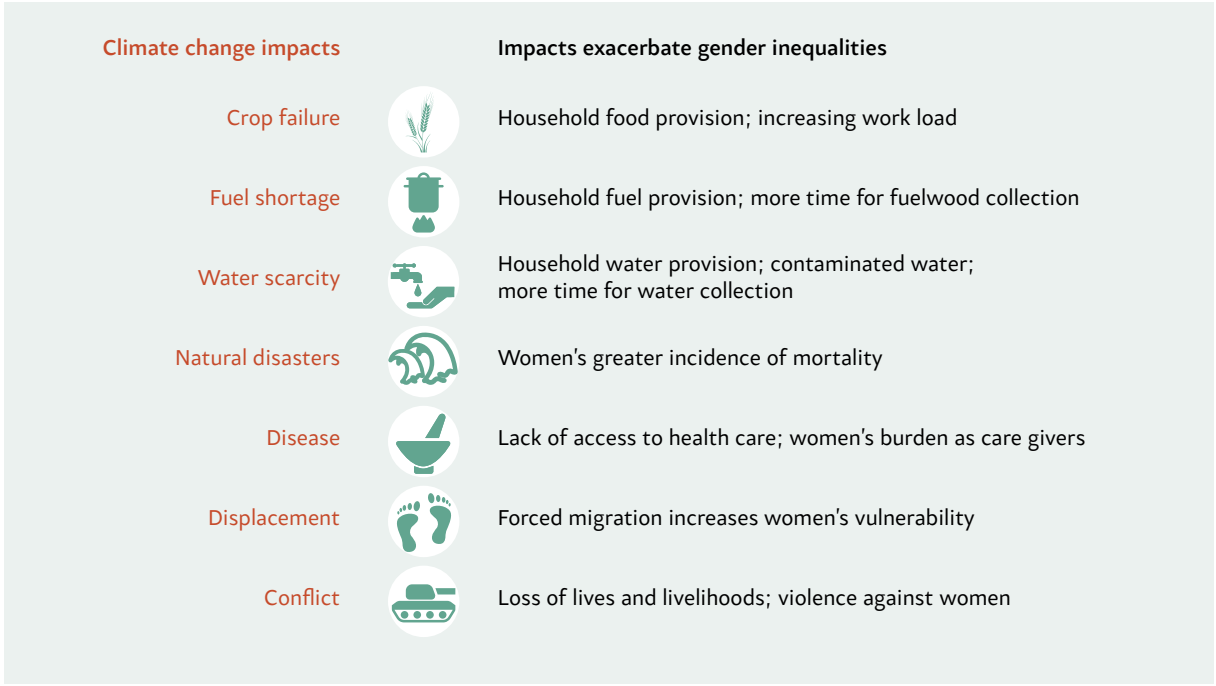
**Gender mainstreaming** is the process of assessing the implications for men and women of any planned action, including legislation, policies, and programs, in any area and at all levels. It is a strategy for making the concerns and experiences of women and men an integral part of the design, implementation, monitoring, and evaluation of policies and programs in all political, economic, and societal spheres, so that they benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality and gender equity.

**Gender-sensitive** approaches consider gender as a means to reach a development goal.

**Gender-responsive** approaches recognize and address the specific needs and priorities of men and women, based on the social construction of gender roles.

**Gender-transformative** approaches seek to transform gender roles and promote gender-equitable relationships between men and women. The ultimate aim of gender equality is for men and women to have equal participation in decision making; the same access and control over productive resources, services, and technologies; equal benefits from project results; and the same opportunities to access decent employment and livelihood systems.

**Figure 3**
**How climate change exacerbates gender inequalities**




*Source:* Adapted from WEDO 2012.

the world. To plan gender-responsive interventions in the agricultural sector, policy makers, donors, and development practitioners need information and analysis that reflect the diversity of contributions men and women make and the challenges that they confront.

Let us now clarify what is meant by gender, gender equality, and other concepts related to gender (Box 3; see also Appendix 2).

**Climate change can exacerbate existing gender inequalities in agriculture, but it may also increase the role of women as agents of change.** Some possible gender-related implications are as follows: increased (male) migration; changes in the division of labor, often with an increased work burden for women and children; comparatively higher vulnerability for women and youth; changes in livelihood strategies and income opportunities; women having less, or in some cases more, control of resources and services; and new household consumption patterns. In some places and instances, for example, when men migrate to cities or die prematurely, women are more able to make decisions and control resources. Figure 3 shows some examples of climate change impacts on women and gender inequality.

**Development interventions often perform poorly because they do not take gender-based differences into account**, nor do they address existing inequalities and discrimination. A project can easily fail if it does not pay attention to the different roles that men and women play, address unequal access to resources and services, and recognize the important contributions of women in agriculture. In the worst-case scenario, the project may not only fail but may actually create greater inequality and discrimination. For these reasons it is vital that strategies designed under a CSA approach take into account specific contexts and capacities, as well as prevailing economic, environmental, and social situations, including gender relations. A gender-responsive approach in CSA projects will achieve more effective, equitable, and sustainable outcomes, reduce project risks, and decrease the gender gap because it better reflects the realities of agricultural communities (World Bank, FAO, and IFAD 2015).

Because of the gender gap, much of the gender and climate change research and actions focus on the constraints that hinder women's potential to benefit from CSA. The intersection of gender and CSA is more complex, however, and it is good to remember that men's lives and opportunities under the changing climate are also shaped by gender and other social factors (Nelson and Huyer 2016).

**The aim of integrating gender in CSA practices is thus to reduce gender inequalities and ensure that men, women, boys, and girls can equally benefit** from interventions that sustainably enhance agricultural productivity and incomes; adapt and build resilience of agriculture to climate change; and reduce and/or remove greenhouse gases where possible. See

Example 1 for some gender-responsive interventions. Additionally, closing the gender gap in agriculture – for example, by ensuring that women have the same access to productive resources as men – would generate significant productivity gains, help to reduce poverty and hunger, and ultimately lead to more success in terms of the overall development objectives.

### Example 1
### Some gender-responsive interventions

- Substitute conventional technologies with more efficient ones for men and women, in terms of reducing time and energy requirements.
- Create new incentives for adoption and financing mechanisms, making them accessible to both men and women.
- Introduce gender-sensitive technologies and methodologies (such as machinery and tools easily handled by women and children).
- Build on men's and women's indigenous knowledge of local resources and climate change.
- Increase women's access to advisory services, education, information, and decision making.
- Organize tailor-made training on leadership and negotiation skills for men and women.
- Raise gender awareness of policy makers.
- Support the design of gender-responsive policies, strategies, and action plans.
- Organize gender-responsive capacity development and communication.
- Support men's and women's organizations and networks.

Analyzing how men's and women's constraints and opportunities may differ is the first step in understanding the range of issues that must be taken into account in project design to make agricultural systems more climate-smart and gender-responsive. Table 3 describes the relative contributions of a given practice to CSA goals – adaptation, mitigation, and food security and nutrition – as well as its gender impact from the perspectives of income and time use. As Table 3 indicates, women usually have more control over the income produced by home gardens, fodder shrubs, herbaceous legumes, and improved grasses, which require different amounts of time to yield benefits. Common CSA practices such as conservation agriculture and on-farm tree planting require a long time to yield benefits, and often women have limited control over the resulting income.

We are now approaching the end of the first workshop session. Before closing, it is recommended that participants carry out an exercise using the Margolis Wheel to discuss experiences and problems with gender integration in projects and generate potential solutions (the Margolis tool is introduced in Appendix 6).

### Table 3
### Some potential CSA practices and related gender implications

| CSA option/practice | Contribution to CSA goals | | | Gender impact | |
|---|---|---|---|---|---|
| | Climate change adaptation | Climate change mitigation | Potential household food security and nutrition impact | Women's control of income from practice | Relative amount of time until benefits are realized |
| Stress-tolerant varieties | High | Low | High | Low | Low |
| High-yielding varieties | Low | Low | High | Low | Low |
| Conservation agriculture | High | Medium | High | Low | High |
| Improved home gardens | High | Medium | High | High | Low |
| On-farm tree planting | High | High | Low–medium | Low | High |
| Composting | Medium | Medium | Medium | Medium | Low |
| Small-scale irrigation | High | Low | High | Low–medium | Low |
| Fodder shrubs | High | Medium–high | High | High | Medium |
| Herbaceous legumes | High | Medium | High | High | Medium |
| Improved grasses | High | Medium | High | High | Low |
| Livestock genetic improvement | High | Medium | Medium–high | Low–high | High |
| Restoration of degraded rangeland | High | High | Medium | Low | High |

*Source:* Adapted from World Bank, FAO, and IFAD 2015.

# 4 Gender analysis in CSA project identification

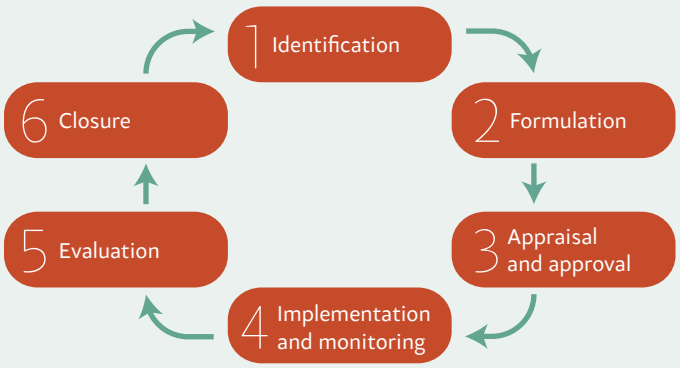
*Mainstreaming gender in the project cycle is a strategy for making women's and men's concerns and experiences an integral dimension of the cycle, so that they can benefit equally from development interventions and so that inequalities are not perpetuated.* ECOSOC (1997)

The purpose of this session is to present the relevance, during project identification, of gender issues in stakeholder, livelihood, and situation analyses – as well as needs assessment – to give learners an overall view of how to conduct an in-depth gender analysis (Table 4). Tools and methods to support gender analysis are presented, and users will have the opportunity to learn from the experience of conducting gender analysis in a project related to climate change.

**Table 4**
**Outline for session on gender analysis in CSA project identification**

| Topics of the session | Duration | Learning tools and facilitation notes |
|---|---|---|
| Gender issues in stakeholder analysis, livelihood analysis, context analysis, and needs assessment | 30 min | Presentation to introduce the topic and different types of analyses |
| Tools and methods available to support gender analysis | 20 min | Presentation and handouts: checklists and questions, tools for data collection for gender analysis, and references and additional materials (Appendices 3, 4, and 8)<br>Extracts from FAO's e-learning tool on Gender in food and nutrition security |
| Case study on local experiences of conducting gender analysis in a climate change project | 20 min | A representative of a local institution will present findings and lessons from their work |
| Buzz groups and discussions in plenary | 20 min | Question for the buzz groups: "How can gender analysis support your project identification? Please mention three issues." |
| Total estimated time | 1.5 hours | |

**Figure 4**
**The steps of a project cycle**




Every step of the cycle has its own gender issues to consider. A gender analysis at an early stage is key as it builds the basis for formulation of gender-responsive impact, outcomes, outputs and activities. Gender analysis results will also inform the selection of implementation strategies as well as setting of a baseline, indicators and data collection for the monitoring and evaluation system.

Addressing gender concerns in the project cycle (Figure 4) means understanding how men and women allocate their time, as well as their specific needs and access to and control over productive resources, services, and decision making; addressing gender issues from the very start of project identification and throughout the whole project cycle, to achieve gender equality and women's empowerment; and monitoring and evaluating gender impacts and taking corrective action, if needed. In practical terms, addressing gender concerns throughout the project cycle implies an analysis of how the project influences the role and/or status of rural men and women, especially those most vulnerable to risk, and the inclusion of gender-related special measures and components in the project's design.

The ultimate aim of promoting gender equality in the project cycle is to ensure that men and women have equal participation in decision making; the same access to and control over productive resources, services and technologies; equal benefits from project results; as well as equal opportunities for decent employment and livelihoods.

**Understanding and addressing differences between men's and women's roles, resources, needs, and priorities is key for successful interventions.** At the CSA project identification stage, we need to analyze the potential climate scenarios for the project location and integrate elements of social and gender analysis in vulnerability, risk, and impact analysis of climate change. Some possible issues that need clarity are:

- What are the impacts of climate change on individuals, households, and communities?
- Are men and women affected differently by climate change?
- How do men and women perceive climate change?
- What is the adaptive and mitigation capacity of men and women?

**Hence, the right time to start a gender analysis is early in the project**, during identification, but the results of the analysis can be used during various stages of the project cycle to:

- Design projects that transform gender dynamics and power relations to address the underlying causes of gender inequality.
- Build differentiated strategies for women and men, based on their particular roles, relations, and strategic and practical needs.
- Be accountable to the project's beneficiaries to avoid or minimize unintended harm.
- Assess how the project activities have contributed to the intended changes and monitor results.
- Build an evidence base that facilitates documentation and contributes to broader advocacy in favor of equal rights for men and women.

## 4.1 Gender issues in stakeholder, livelihood, and context analyses, as well as in needs assessment

At the outset of planning a CSA project, a gender analysis is necessary to study the different roles and priorities of men and women by answering the following questions (adapted from Nelson and Huyer 2016):

- Who (men or women) has what and why?
- Who does what and why?
- Who needs what and why?
- Who decides on what and why?

**Men and women engage in crop and livestock production, forestry activities, fisheries and aquaculture, marketing, and wage labor to secure their basic needs and to earn income.** This activity depends on their access to resources, such as land, water, capital, and technology. Within any given society, this access varies by gender, age, wealth, caste, and ethnicity. Responsibilities and opportunities vary within households by gender, age, and the individual's position in the household (male or female head, husband, wife, elder, or youth) (FAO 2001).

**In preparation for CSA interventions, a gender analysis will contribute to a better understanding of the site-specific gender, cultural, and socio-economic context.** This analysis explores the differences between men and women in terms of:

- Vulnerability to climate risks.
- Willingness and capacity to take on risk.
- Needs and participation rates.
- Access to and control over assets and productive resources.
- Power relations (for example in decision-making) within the household and the community.
- Access to information, services, and markets needed for CSA.

The analysis also identifies the underlying causes of gender inequalities, such as social, economic, legal, political, and cultural factors that affect men's and women's participation and productivity. Example 2 and Example 3 give concrete ideas for conducting gender analysis.

**FAO's SEAGA Programme** provides the following guiding principles for gender analysis, with a focus on climate change and agriculture projects (FAO 2001; FAO and CCAFS 2013):

1. **Gender roles and relations are of key importance:** In the context of climate change, the differences and similarities in terms of rights, opportunities, situations, outcomes, and agency between men and women mean that they often have different capacities to adapt to or mitigate climate change. Their perception of risk and their willingness to adapt and act are important additional components.
2. **Men and women from different socio-economic groups who are disadvantaged or discriminated against are a priority** because they are the most vulnerable to the impacts of climate change. Additionally, reducing their poverty is essential to achieve sustainable adaptation and mitigation solutions. Women are often disadvantaged in comparison with men, but not necessarily always. They are not a homogenous group, and other social attributes need to be taken into account, including age, social and marital status, education, the land tenure system they live under, race, ethnicity, religion, income level, and location.
3. **Participation is essential for sustainable development** – for example, local stakeholders should participate in identifying climate change solutions because they will be responsible for implementing the project activities. Climate change solutions often require that multiple institutions work together; if they are engaged from the beginning, this will strengthen their commitment.

### Example 2
### The gender analysis can focus on and reveal...

The gender analysis (with data disaggregated by sex and age) can focus on:

- Access to and control of land and water.
- Access to services, including credit, training, extension and supply sources, and markets.
- Use of seeds, fertilizers, and agrochemicals.
- Farming tools (for example, their ergonomic differences and mechanization).
- Livestock (restocking and processing, training and workload).
- Fisheries (boats, equipment, division of labor).
- Governance (participation in civil society and transparency of public management).

The gender analysis can reveal, for example:

- A project aimed at increasing cash crop production may add to women's workload (as weeding and harvesting are considered their tasks) and provide them with few benefits (as cash crops are usually under men's control).
- In the case of an irrigation project, a gender analysis may reveal the differences between men and women in the use of irrigation on their plots and access to and control of water, and also their specific roles in making decisions about water use. These differences need to be considered when planning an irrigation project to make sure that both men and women can equally benefit from it.

### Example 3
### Conservation agriculture in Zambia

The Conservation Agriculture Scaling Up project, carried out by FAO in Zambia, works with small-scale farmers to adopt conservation agriculture practices to enhance agricultural productivity and output, while also strengthening the resilience of agricultural systems and thus their capacity to adapt to climate change. In addition, the project addresses the barriers to rural women's socio-economic empowerment, such as their lack of access to labor-saving technologies and productive resources. The gender-responsive CSA practices promoted by the project are developed on the basis of sex-disaggregated data, followed by an **in-depth gender analysis** of men and women farmers' different activities and needs.

*Source:* Nelson and Huyer, 2016.

## How to conduct a gender analysis?

Different types of gender analyses – a context analysis, stakeholder analysis, livelihood analysis, and needs assessment – are briefly described below:

1. **Context analysis:** In this type of analysis we screen a number of socio-economic patterns that influence how men and women make a living, their strategies for coping with climate change, and their options for development (see Tip 1). These socio-economic patterns can either support or constrain the adoption of CSA. To collect data for the context analysis, the following participatory tools can be of great help: Village resources maps, Transect walks, Venn diagrams, and Institutional profiles (see Appendix 4).

2. **Gender-sensitive stakeholder analysis:** This type of analysis identifies the male and female stakeholders or institutions/groups to be involved in the project; establishes how a problem affects different stakeholders and their views on what will contribute to solving problems related to climate change; determines their priorities and decides how to best address their interests and needs; overcomes the constraints on their participation or access to the project's benefits; and finds out how different male and female stakeholders are likely to affect or be affected by the project, in order to make appropriate decisions on involving each stakeholder. Possible participatory tools to use for the stakeholder analysis are: Stakeholder Venn diagrams, Pairwise ranking matrix, Flow diagrams, and Problem analysis charts (see Appendix 4).

### Tip 1
### Checklist for a context analysis

- What are the most important environmental, economic, institutional, and social patterns?
- Do men and women have the same or different views on the patterns related to climate change?
- How does the climate change affect the livelihoods of men and women?
- Who (men and women) uses available resources and services, and for what purpose?
- What types of households are there? How many households are female-headed? Are these increasing?
- What were the past climate conditions like, what are they now, and what are the projections?
- Do men and women report changes or impacts due to climate change? What are their specific perceptions on what is getting better or worse in terms of climate?
- What policies and institutional support mechanisms exist for climate change adaptation and mitigation, CSA activities, and gender mainstreaming? What are the constraints on implementing them?
- Are men and women affected in different ways by these policies and institutions?

*Source:* FAO, 2001; FAO and CCAFS, 2013.

Some possible questions are:

- Who are the (male and female) stakeholders?
- What do they have at stake?
- What are the stakeholders' priorities?
- Are there gender-linked differences among stakeholder groups?

To conduct a gender-sensitive stakeholder analysis it is important to set up mechanisms to let women express their views and concerns; to not consider "women" and "men" as homogeneous categories, but take into account other issues such as age, class, ethnicity, and socio-economic status; and to let stakeholders from specific socio-economic groups that might lack power and capacities at organizational and institutional levels make their voices heard while identifying project priorities. As women and girls are often not adequately represented and have fewer opportunities than men to participate in decision making within households and communities, it is recommended to set up mechanisms to let them express their views and concerns.

3. **Gender-sensitive needs assessment** involves determining the specific needs and priorities of different socio-economic groups, setting priorities for action, collecting data disaggregated by sex and age for planning, and determining the anticipated impact of the project on the men and women most vulnerable to the risk of climate change.

   It is also important to distinguish between **practical** and **strategic gender needs:**

   - Practical gender needs relate to men and women's basic and material needs for their day-to-day survival, and refer to their living conditions (for example, employment opportunities, education, financial conditions, and natural resources) and can be seen immediately, as they are shorter and urgent needs (namely, food, water, and income). In meeting these needs, the existing division of labor is accepted and gender roles are not challenged. These needs can be satisfied without changing the status of women in society, and in some cases they enforce traditional roles. Practical needs are related to improvements in the conditions of men and women, by promoting the efficient use of resources, rather than addressing empowerment or equity.
   - Strategic gender needs challenge the existing gender identities and relationships between men and women in favor of equity for all. These needs are long-term interests and therefore sustainable and continuous needs (namely, social structures). After meeting the strategic needs, the division of labor would no longer be broadly determined by gender. Similarly, restrictions on access to and control of resources and benefits would be independent of gender. Strategic needs are related to the position of men and women (for example, working position, role in local associations, social structure, role in household, and participation in decision making) in the pursuit of empowerment and equity.

   There is no absolute division between the two types of needs. In some cases a project may address practical needs, whereas in a different context the same project would meet strategic needs. Table 5 presents examples of practical and strategic needs.

4. **Livelihood analysis:** This type of gender analysis tries to answer the questions of **who does what, who uses what, and who controls what.** It allows for learning about the activities of different people and their relative access to resources for basic needs and income, as well as their sources of expenditures and income. Gender and socio-economic group differences are shown with respect to labor and decision-making patterns. The participatory data collection tools to use in livelihood analysis comprise, among others: Farming system diagrams, Daily activity clocks, Seasonal labor calendars, Capacity and vulnerability analysis matrices, Changing farming practices, and Seasonal food security calendars (see Appendix 4).

   Possible questions to address are:

   - How do men, women, boys, and girls make their living? Are there differences between various socio-economic groups?
   - How do the livelihood systems of men and women from different socio-economic groups compare?
   - What are the most important sources of income for men and women? What are their main sources of expenditures?
   - What are the likely climate change impacts on current livelihoods? Are certain sectors or socio-economic groups more or less vulnerable than others? Why? What are the perceptions of men and women?
   - How diversified are the livelihoods of men and women? What specific solutions have they applied in response to the changing climate?

**Table 5**
**Examples of projects designed to meet practical and strategic gender needs**

| Practical gender needs | Strategic gender needs |
|---|---|
| ▸ Training on ecosystem services of agroforestry for women | ▸ Incentives and land renting agreements for landless women |
| ▸ Fishing gear maintenance skills training for men | ▸ Primary education for girls |
| ▸ Improved stoves and other labor-saving practices for women | ▸ Recruitment of both men and women for building and maintaining canals |

## 4.2 Tools and methods for gender analysis

**The gender analysis can be divided into three main steps** (adapted from FAO 2014a):

1. **Planning:** During this step, we need to select the framework for the gender analysis, what are the potential target groups (both men and women), what needs to be explored, what questions have to be asked, and what are the best methods for collecting sex-disaggregated data. Several alternative or complementary analytical frameworks exist for gender analysis, such as the Moser Gender Planning Framework, Harvard Analytical Framework, and Women's Empowerment Framework and Gender Analysis Matrix,[1] and they can prove helpful when planning gender analysis.

2. **Data collection:** Data required for gender analysis can be collected from different sources, using various data collection methods and tools, such as sex-disaggregated statistics (if available), meetings, interviews, focus group discussions, key informant interviews, discussions with different stakeholder groups, and participatory data collection methods. It is important to combine quantitative and qualitative data to gather the perceptions and points of view of men and women and different stakeholders, and to also employ triangulation, which uses different data collection methods and compares data from different sources to obtain a more reliable and comprehensive view of the situation.

3. **Analysis:** Data and information are then processed and analyzed to assess the most relevant gender issues. The results help in making informed decisions about the most effective project activities and how to implement and monitor the project in a gender-responsive way.

**Tip 2**
**Questions to initiate a gender analysis**

To start a gender analysis, you may consider the following set of questions, disaggregating data by sex and age:

- Labor: Who does what? How? Where? When? Why?
- Access: Who uses what? How? Where? When? Why?
- Decision making and control: Who controls what? How? Where? When? Why?
- Information: Who knows what? Where? When? Why?
- Benefit sharing: Who benefits from what? How? Where? When? Why?
- Participation: Who is included in what? How? Where? When? Why?

*Source:* FAO and CCAFS, 2013.

**Using participatory tools for data collection is highly recommended** to engage the intended beneficiaries from the start and also to give voice to disadvantaged and vulnerable groups of men and women.

Appendix 4 describes some common participatory tools for the context analysis, livelihood analysis, and stakeholder analysis, and it discusses how those tools can be used to collect data for a gender analysis in CSA interventions. Detailed guidance on the use of participatory gender analysis tools can be found in the "Training Guide: Gender and Climate Change Research in Agriculture and Food Security for Development" (FAO and CCAFS 2013), the "Gender and Inclusion Toolbox: Participatory Research in Climate Change and Agriculture" (Jost, Ferdous, and Spicer 2014), and the "SEAGA Field Level Handbook" (FAO 2001). Appendix 8 lists additional guidance documents, and Tip 2 proposes helpful questions to initiate a gender analysis. For more detailed sets of questions to guide gender analysis, see Appendix 3.

1 For additional information on the frameworks, see for example http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/EXTTOPPSISOU/0,,contentMDK:20589207~menuPK:1442609~pagePK:64168445~piPK:64168309~theSitePK:1424003,00.html

### Example 4
### Oxfam International's successful gender analysis

- To support the integration of gender dimensions in the climate change adaptation process in the United Republic of Tanzania, Oxfam International used the Gendered Enterprise and Market tool, which focuses on the market system, women's economic leadership, and climate change adaptation and risk reduction. The situational analysis focused on three levels: farm, household, and market. At the farm level, the analysis aimed to understand the community's agricultural production practices, gender roles, and relations; to see what men and women do, and why; and to identify potential crop options for a sustainable and equitable approach to market-driven development.
- At the household level, the questions addressed were, among others: What time, labor, finance, resources, and skills would be required for successful production and marketing of potential products? What assets do typical households have, and what access and control do women have over these? How many producers have the resources and business skills to work in markets? Can women access these resources and skills, and what gaps exist? What is the baseline weekly workload for women and men to provide the goods and services essential for household welfare? How could household tasks be redistributed or made more time-efficient so as to enable women's leadership? What are the risks, types of violence, or life-cycle events specific to women? How will change happen in women's rights and within households?
- At the market level, the key questions asked took into account gender differences: Which sectors or types of markets hold the highest potential for improving livelihoods? What is the market demand? Who are the market actors and service providers? What are the market power imbalances?
- The answers to these questions helped to determine which crops/products and value chains offer the greatest potential for poverty reduction and the economic empowerment of the most vulnerable women and men in the project area. Moreover, the analysis helped identifying the constraints that men and women face in their roles as suppliers or other actors in those value chains. These findings informed the project design: the team set a gender-responsive impact and outcome for the project, identified gender-responsive outputs and activities (with related gender-sensitive indicators), and selected appropriate implementation strategies to meet the needs of both poor men and women.

*Source:* Based on an Oxfam International presentation at a workshop in Tanzania on gender in CSA.

CARE International has developed a "Good Practices Framework for Gender Analysis," which identifies a series of guiding questions that include topics such as productive assets, decision making, and division of labor, space, and services. CARE's project teams can choose which of these questions best correspond with their interests, resources, time, and constraints.[2]

**Not all questions and tools are relevant for every intervention, and the scope of the analysis should be planned for the size and complexity of the program/project.** For a single project, the analysis may have a narrower focus than that of a comprehensive and long-term program (see Example 4 on Oxfam's experiences in Tanzania). Time and the financial and human resources available will also affect the scope and magnitude of data collection and analysis. For this reason, it is important to partner with others and, if feasible, combine data collection for gender analysis with other data collection activities.

We are now approaching the end of the session. Before closing, it is recommended that participants engage in a buzz group discussion to reflect some of the session's key messages. One possible discussion point is: "How can gender analysis support your project identification? Please mention three issues." The facilitators can also formulate other questions for the buzz groups. Each buzz group reports back to the other groups in a plenary discussion.

2 The CARE framework is accessible at http://gendertoolkit.care.org/Pages/core.aspx.

# 5 Gender mainstreaming in CSA project formulation

The purpose of this session is to explain how to address gender issues during the CSA project formulation phase and to identify the potential roles of men and women in the project (Table 6). This work includes assessing the potential impacts of the proposed CSA practices in terms of labor and time requirements, and of how women and men are expected to benefit from the planned activities.

## 5.1 Gender analysis during project formulation

Depending on the project context and the depth of gender analysis conducted during project identification, **data collection and analysis may need to be continued or supplemented during the formulation phase**. If an adequate understanding of gender relations in the project area already exists, the formulation phase can focus on setting/determining gender-responsive priorities and strategies, impacts, outcomes, and outputs, complemented by gender-sensitive quantitative and qualitative indicators.

**During project formulation, gender analysis can generate insights on how the project can contribute to men's and women's equitable access to resources and services** by addressing their different needs and capacities. To set priorities we need to consider the expected gender impacts, outcomes, and outputs that will be measured through gender-sensitive indicators. If a problem severely affects women, specific gender-responsive outcomes, outputs, and activities must be included. It is also important to conduct an institutional assessment to identify gender capacity gaps, and to see if the budget has allocated sufficient human and financial resources to ensure women's participation and benefits. Possible questions to ask for the gender analysis at this stage are as follows:

**Regarding the gender division of labor**

- How are roles and responsibilities distributed among men, women, boys, and girls in the agricultural sector relevant to the CSA project?
- What activities and tasks do each of them do in relation to relevant livelihoods, and how have they been adapted due to climate change?

**Table 6**
**Outline for the session on gender mainstreaming in CSA project formulation**

| Topics of the session | Duration | Learning tools and facilitation notes |
|---|---|---|
| Gender analysis during project formulation | 20 min | Presentation |
| Tools and methods available to support gender mainstreaming | 20 min | Presentation and material from FAO e-learning tool on Gender in Food and Nutrition Security<br>Handouts: checklists and questions, tools for data collection for gender analysis, and references and additional materials (Appendices 3, 4, and 8) |
| Case study on local experiences in gender integration in formulating a climate change project | 20 min | A representative of a local institution presents findings and lessons from their work |
| Buzz groups and discussion in plenary | 30 min | Question for the buzz groups: "In your view, is it better to have a gender specialist in the project team, or to ensure that all team members are familiar with gender issues? Why?" |
| Total estimated time | 1.5 hours | |

- How is men and women's time divided between household and productive activities?
- Are there any changes due to new climatic conditions?

**Regarding the access to and control of resources and services**

- Are there legal restrictions (within statutory or customary law systems) to women's ownership or inheritance of land or other assets?
- Do women and men have access to technologies and services that might improve their resilience to climate change and the efficiency of their work in the agricultural sector?
- What is their level of participation in training and access to extension services relevant to the project?

**Regarding participation and decision making**

- Are women represented in associations, producer organizations, or cooperatives active in the sector(s) of interest to the project? Do they actively participate in decision-making bodies and processes? Do they have leadership positions?
- Do women have control over, and do they benefit from, the resources and assets derived from their work or their participation in project activities?
- Who decides on the farming systems and the access to information and inputs, productive activities, and the processing and marketing of produce? Can women participate equally in decision making?

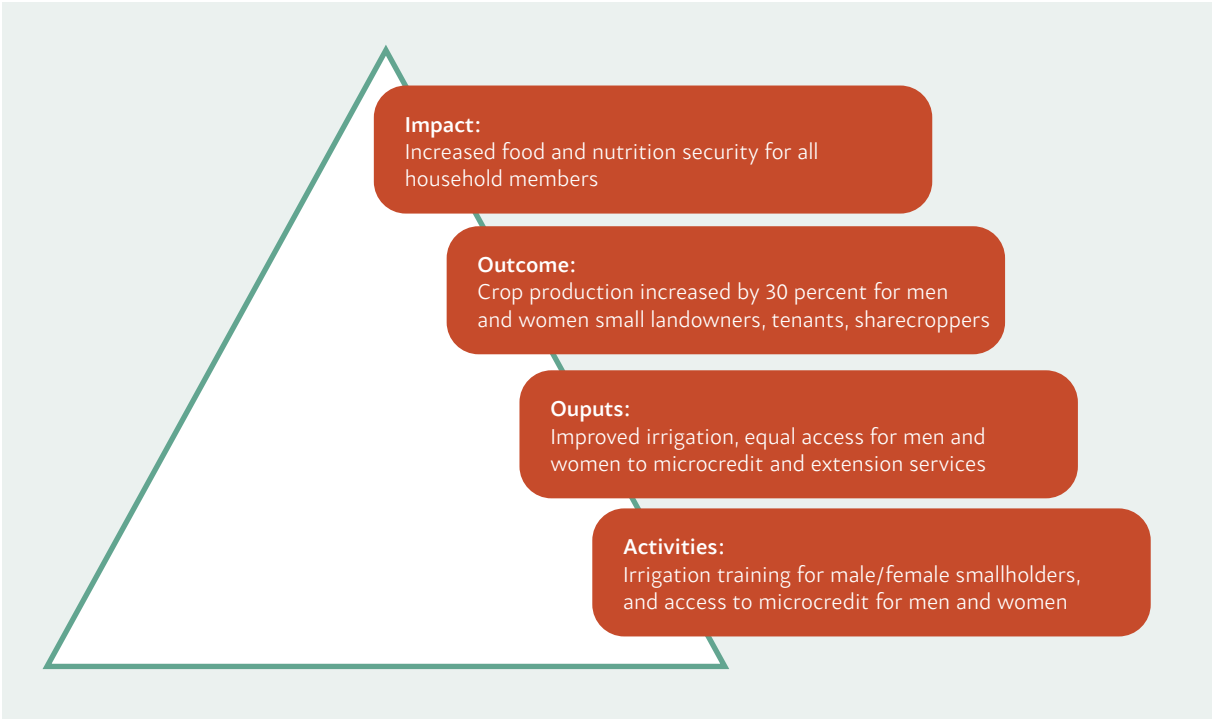
**First, a clear, gender-responsive objective or impact in relation to CSA needs to be defined for the overall project and for each component.** This task is followed by the development of a gender-responsive logical framework or results chain for the project: what outcome(s) is/are needed to achieve the objectives/impacts, and furthermore what outputs, activities, and inputs will generate these outcomes (World Bank, FAO, and IFAD 2015). When defining outputs and activities, tailor them to the specific needs and priorities of men and women of different ages, class, caste, socio-economic status, ability (and so on) as defined in the gender analysis (see Table 7 and Figure 5).

## Table 7
## Gender questions in the logical framework

| | Gender questions |
|---|---|
| Objective/impact | ▸ Is gender equality one of the overall objectives to which the project aims to contribute?<br>▸ Are men and women of different ages and socio-economic groups going to benefit equally from this long-term impact? |
| Outcome | ▸ Does the outcome include clear reference to men and women, and to the existing inequalities between them? Does the intervention have the potential to improve women's access to productive resources, services, technologies, information, training, markets, and employment opportunities? |
| Outputs | ▸ Do the outputs respond to the different needs and priorities of men and women, as identified in the gender analysis?<br>▸ Do the outputs challenge/redress existing gender inequalities and discriminatory norms and practices? |
| Activities | ▸ Are men and women given equal opportunities to plan, participate, monitor, and evaluate the project's activities?<br>▸ Do the planned activities take into account the roles and responsibilities of men and women in order to ensure equal opportunities and benefits from participation?<br>▸ What will be the implications in terms of labor and time requirements for men and women? |

*Source:* FAO 2017.

**Figure 5**
**Example of a logframe**




*Source:* Adapted from FAO 2017.

Gender-sensitive indicators can reflect quantitative or qualitative aspects of change in the contributing factors and livelihood outcomes for men and women (see Tip 3). These indicators may include the number of men and women engaged in testing or applying CSA practices, and they may also measure long-term change. These changes include increased control of productive assets, participation in decision making, greater knowledge, changes in behavior and attitudes, increased awareness, and improved economic status and food security and nutrition of men and women (Example 5) (Nelson and Huyer 2016). It is good to remember that "men" and "women" are not homogenous groups. A more nuanced view of the groups may be necessary – one that distinguishes, for example, between male-headed households, female-headed households, women in male-headed households, male agriculture workers, female agriculture workers, spouses, young men, young women, elderly men, elderly women, and others, as well as their ethnic group or education level.

**Tip 3**
**Setting gender-sensitive indicators**

Make sure your indicators are:

- Relevant to the needs and capabilities of the users.
- Easy to collect, use, and understand.
- Defined clearly, unambiguous, accurate, and reliable.
- Sensitive to recorded changes induced by the project.
- As few as possible, concentrating on measuring important project features.
- Based on data disaggregated by sex; quantitative and qualitative.

**Example 5**
**Examples of gender-sensitive quantitative indicators**

- Number or percentage of men and women attending CSA-related farmer field schools or farmer-to farmer extension
- Number or percentage of men and women working as farmer trainers in promoting CSA
- Number of female heads of household that received training in CSA practices
- Yield increases (in kilograms) in men's and women's plots
- Number and type of trees planted by men and women
- Number of gender-responsive CSA technologies demonstrated in the area
- Changes in property owned and controlled by men and women (e.g., land, livestock, trees) in different age and ethnic groups
- Proportion of CSA-focused credit and services going to men and women

**It is important to complement the information collected through quantitative indicators by also including some qualitative indicators** to learn about men's and women's perceptions of changes in behaviors, knowledge, skills, self-reliance, and satisfaction with the training. Possible issues to consider are: the perception of men and women on the quality of their participation and the impact of the project's activities on their lives; the degree to which they are aware of their legal rights; the perception of whether women are becoming more empowered, and the reasons why; and their opinion on how they were involved in CSA practice selection, and whether the CSA technologies and practices that were introduced have either improved or worsened their lives.

**During the project preparation phase, an institutional assessment may reveal gender-related capacity gaps in the participating organizations that the project will need to address** (such as gaps in the number of men and women participating in these organizations, and how they benefit from the services provided). For this assessment, it is essential to ensure that the project team has an adequate level of knowledge and experience of gender issues. More information on institutional assessment is available in Chapter 6.

**Gender-responsive budgeting and implementation structures are also important** for allocating sufficient human and financial resources to ensure equal participation and benefits for both men and women. The budget must allocate funds for the activities identified in the logical framework or results chain, ensuring that financial and human resources are adequate to address gender equality. For example:

- Funds are earmarked to support mainstreaming gender equality in the project, for instance by hiring a consultant, conducting gender analysis, and planning awareness-raising and capacity-development activities for project staff and national counterparts.
- Funds are allocated for specific women's empowerment activities, such as literacy classes, capacity development, and sensitization on their legal rights.
- The budgeting of project activities is gender-responsive – for example, in the way that credit funds and agricultural extension resources are divided between men, women, female-headed households, male-headed households, wealthier and poorer individuals, and so on.

**At the end of project formulation, we need to check once more that the project takes into consideration the priorities, opportunities, needs, constraints, and knowledge of both men and women**, as identified in the gender and stakeholder analysis. Furthermore, we need to check that the project includes activities and outputs that address existing gender inequalities and ensure that men and women benefit equally.

## 5.2 Tools and methods to support gender-responsive project formulation

**Several checklists and guidebooks presented in Appendices 3 and 8 can support gender-responsive project formulation.** For gender-sensitive CSA project design and indicators, see Technical Note 3 in "Gender in Climate-Smart Agriculture" (World Bank, FAO, and IFAD 2015) and "A Gender-Responsive Approach to Climate-Smart Agriculture" (Nelson and Huyer 2016). Section 3.2 ("Designing Gender-responsive Food and Nutrition Security Projects and Programs") of FAO's e-learning tool on Gender in Food and Nutrition Security (FAO 2014a) provides tips for gender-responsive project design, including budgeting. Tip 4 and Figure 6 provide practical guidance for integrating gender issues when formulating projects.

**Figure 6**
**Considerations for gender integration in the project design**

- Identifying joint priorities together with stakeholders
- Assessing options and their synergies and trade-offs
- Considering alternatives to mitigate negative trade-offs (e.g. combining various techologies and approaches)
- Setting gender-sensitive impact, outcomes, outputs and activities and related indicators
- Developing gender-responsive implementation strategies
- Designing gender-responsive budgets

*Source:* Adapted from FAO 2017.

When designing the project monitoring framework, it is important to incorporate **gender-specific financial indicators** into the monitoring process, so that expenditure for promoting gender equality can be periodically tracked. For example, the list of outputs might include the following items of expenditure, given as a percentage of the total budget and disaggregated by sex (FAO 2014a):

- Training of women and agricultural extension workers.
- Research into male- and female-managed crops.
- Subsidized credit to poor women and men producers.
- Training to raise gender awareness of line/project managers/service delivery personnel.
- Expenditures on irrigation for female-managed and male-managed crops.
- Expenditure on male- and female-defined priorities.

We are now approaching the end of the session. Before closing, it is recommended that participants engage in a buzz group discussion to reflect some of the session's key messages. One possible discussion point is: "In your view, is it better to have a gender specialist in the project team, or to ensure that all team members are familiar with gender issues? Why?" The facilitators can also formulate other questions for the buzz groups. Each buzz group reports back to the other groups in a plenary discussion.

**Tip 4**
**Questions for gender integration in project formulation**

- What are the potential roles of men and women in the project?
- What are the implications of adopting new CSA practices in terms of labor and time requirements for men and women?
- How will their different access to land, water, inputs, credit, and labor be considered in project design?
- In case of a change in household agricultural practices and farming systems, energy systems, or water use, how is the change likely to affect men and women?
- What will be the role of women, men, or youth groups during project implementation?
- Does the project's results chain or logical framework take into account gender differences?
- What are appropriate gender-responsive indicators to monitor progress and achievements?
- Is the project budget formulated in a gender-responsive way?
- Does the project team include adequate gender expertise?
- Is there a distinct budget allocated for gender activities (funds for gender expertise, gender analysis, gender training of staff and stakeholders, and actions targeted at women or youth)?
- Is the budget structured in a gender-responsive way: for example, are credit funds split between men and women?
- Does the project capacity development plan reflect gender needs?

# 6 Gender integration in CSA project implementation, monitoring and evaluation

The purpose of this session is to familiarize learners with ways of reinforcing gender integration during project implementation, monitoring, and evaluation (Table 8). It starts by referring to project appraisal as some project cycles include an appraisal step. This session also gives tips on how to adjust the project in case it becomes apparent that the project is not on track to achieve gender-responsive results.

## 6.1 Gender-responsive project implementation, monitoring and evaluation

**In most cases, a new project needs to be appraised and approved before implementation** of the planned activities begins. Possible gender questions to consider in the appraisal phase are:

- Have women's and men's needs, priorities, constraints, and challenges in relation to the project been mapped?
- Have their specific roles and responsibilities within the household, community, and sector(s) been analyzed?

**Table 8**
**Outline of the session on gender integration in CSA project implementation, monitoring and evaluation**

| Topics of the session | Duration | Learning tools and facilitation notes |
|---|---|---|
| Gender-responsive project implementation, monitoring, and evaluation | 20 min | Presentation |
| Tools and methods available to support gender mainstreaming in project implementation, monitoring, and evaluation | 20 min | Presentation and FAO e-learning tool on Gender in Food and Nutrition Security<br>Handouts: checklists and questions, tools for data collection for gender analysis, and references and additional materials (Appendices 2, 3, and 7) |
| Case study on local experiences in gender-responsive project monitoring and evaluation | 20 min | A representative of a local institution will present findings and lessons from their work |
| Buzz groups and discussion in plenary | 30 min | Questions for the buzz groups: "Could you mention some examples of appropriate gender-sensitive indicators for CSA projects? How would you best ensure that decision makers are supportive of gender integration?" |
| Total estimated time | 1.5 hours | |

- Are constraints and discrimination based on gender being mapped?
- Have both women and men (of different ages and socio-economic groups) been engaged in project planning and implementation?
- How does the project take into account the priorities, opportunities, needs, constraints and knowledge of both women and men, as identified by the gender analysis?
- Does the logframe define beneficiaries (disaggregated by sex, age, and socio-economic status)?
- Does the logframe include gender-responsive outputs and activities to address existing gender inequalities?
- Does the project aim to ensure that women and men benefit equally?
- Does the project document provide information on women's and men's access to assets, resources, services, technologies, and markets?
- Do activities/outputs have the potential to increase women's access to assets, resources, services, technologies, and markets?
- Does the monitoring and evaluation framework include gender-sensitive indicators?

*Source:* Adapted from FAO 2017.

**Careful planning and appraisal do not always guarantee that gender will be adequately integrated in the implementation of a project to generate sustainable and equitable results.** Given that some additional challenges may emerge during implementation, it is important to define potential risks and assumptions that could influence the results and impact of the project.

**One of the emerging challenges may be a weak enabling environment for gender equality.** A lack of political commitment or leadership on gender equality can prevent the uptake of a gender-responsive approach and represent another relevant risk (see the first bullet point in Tip 5). This risk can be caused by a lack of gender awareness, or by resistance to change and to incorporating gender issues in the work. Barriers can include lack of staff capacity or funding, or cultural barriers that limit women's participation and leadership. Addressing gender equality can be perceived as an "add-on" to the main work and hence not be given the importance it needs. Another group of challenges relates to time constraints, limited availability of gender expertise in the project team, lack of monitoring of progress and results, or insufficient funds dedicated to gender-related activities. All of these circumstances may affect the successful implementation of a gender-responsive project (Nelson and Huyer 2016).

**Tip 5**
**What can be done to mainstream gender in project implementation?**

- Secure an enabling environment (political commitment and leadership).
- Select appropriate implementation strategies and methods to ensure that women also benefit.
- Sensitize and train project staff in gender issues.
- Watch emerging gender-related issues, such as widening disparity.
- Share information with and listen to men, women, boys, and girls affected by the project.
- Integrate gender-responsive activities in work plans, to be monitored and reported.
- Ensure the engagement and adequate gender skills of implementing and partnering agencies.

- **Overcoming these challenges may require some extra effort during project planning and implementation**, including awareness raising and training sessions on why gender matters in CSA, as well as gender-responsive budgeting and incentives (Nelson and Huyer 2016). It could be that the government continues to be committed to climate change actions or that strategic partnerships are established with relevant institutions (training centers) working on gender and climate change issues. Specific actions might also be taken to reduce these risks, and well-defined assumptions must be included in the logical or results framework.
- Unless conducted earlier during the planning cycle, this is the right time for an **institutional assessment** to examine the gender capacity of the implementing institutions (See Figure 7).

**Figure 7**
**Issues to consider in an institutional assessment**

If not conducted during project formulation, do it now!

- Assessing the gender capacity of the implementing institutions. The outcome could be to include gender capacity development activities in the project to fill capacity gaps and raise gender awareness;
- Institutional culture: gender policies, strategies and institutional decision-making mechanisms;
- Existing gender expertise, competence and capacity in terms of gender mainstreaming in programmes and projects, including monitoring and evaluation systems; and
- Existing capacity of institutions /organizations representing the interests of the most marginalized men and women

*Source:* FAO 2014a.

During the project design, the outcomes, outputs, and activities were identified. Thanks to the results of the analyses, **we are now able to define what kinds of activities will be implemented for which groups of people.** When defining the details of the activities and how they will be carried out, we have to adjust our implementation methods to the different socio-economic groups, taking into account their needs and priorities as they emerged from the gender analyses (see Example 6).

The gender analysis may have shed light on differences in seasonal and daily activities between men and women. Furthermore, a gender gap might have been found in women's access to weather and climate information, extension services, agricultural inputs, land, and credit. **When designing project implementation strategies, these differences and gaps need to be taken into account.** As our aim is for both men and women to benefit from the project, we must ensure, for example, that the extension methods are such that women can also participate (in terms of sex of the extension agent, timing and geographic location of the extension events, childcare, separate men's and women's groups or mixed groups, women's time poverty, and other considerations; see Tip 6). Demonstrations and study tours are usually an effective way of exposing farmers to new CSA practices, but enabling women's participation may require special arrangements. When improving farmers' access to credit, men and women farmers may need different solutions, especially if land is used as collateral. To cite another example, if we want to improve men's and

**Example 6**
**Illiterate women and printed manuals**

In a rural area affected by food and nutrition insecurity, an NGO sought to increase agricultural production by introducing high-quality seeds and improved use of fertilizer. But in the project area, illiteracy rates among women were very high (70 percent) compared with men (30 percent). Men provided the labor to clear the field, while women planted, weeded the fields, and also took care of fertilizer application. Both men and women participated in harvesting. As farmers had never used this type of fertilizer before, it was important for them to understand how to apply it correctly. The NGO distributed a manual, "Maximizing fertilizer use efficiency," to each farmer, but project staff did not realize that most of the women who were going to use the fertilizer were illiterate and could not gain access to this critical information. As women were in charge of fertilizer use, most benefits were lost.

*Source:* FAO 2014a.

**Tip 6**
**Organizing a workshop**

- The training methodology should target the different knowledge and skills of men and women.
- Avoid workshops lasting several days, as women usually cannot stay away for the night. Avoid locations that are too far away, because poor people will not be able to reach them, and women will not be able to get there alone. Organize childcare facilities during the workshop.

*Source:* FAO 2014a.

women's access to weather and climate information, we may need to use different channels for men and women if we are to reach both groups (Example 7).

**It is important for the project team to be aware of the gender-related issues in their field of technical expertise and how to use this knowledge to make the project gender-responsive.** If staff members do not have these requirements and are already employed, on-the-job training could be considered to develop gender skills and competences. This would include the planning of capacity development for staff on gender-related topics in their field of work (FAO 2014a)

**Gender-sensitive monitoring and evaluation provides feedback on how the activities affect the various beneficiary groups,** including women and men, disaggregated by age, caste, education, employment, and location. It helps assess whether the project's planned activities are achieving gender equality goals. Gender-sensitive monitoring and evaluation also allows us to measure and evaluate gender-related changes over time, showing how far and in what ways the gender equality objectives are being achieved.

### Example 7
### Gender differences in information dissemination

- In the United Republic of Tanzania and in Malawi, Farm Radio International and Farm Radio Trust, together with CCAFS, interviewed 1,280 male and female farmers and pastoralists to assess the potential for interactive radio to deliver climate services. Farmers and pastoralists rated radios and mobile phones as having great potential to be trusted and effective channels for climate information. Women and men had different habits with respect to the amount of time they spent listening to the radio and the amount of mobile phone airtime they purchased. Women were more interested in radio listening clubs than men, and more men owned mobile phones than women, who borrowed airtime from friends and family. The gender differences, however, were not as large as expected.
- Based on the study results, Farm Radio International and Farm Radio Trust are developing interactive radio programming for climate services that best respond to men and women farmers' climate information needs and preferred channels. Short weekly radio programs are anticipated, with the option of daily forecasts or interpretations (women's preference), together with services via mobile phone (mostly accessible by men).

*Source:* Adapted from World Bank, FAO and IFAD 2015.

**In project monitoring and mid-term evaluation, we need to assess if the priorities set by men and women in the identification and formulation phases have been met.** We also must ensure that all groups have an opportunity to voice their views on the CSA practices that have been implemented and whether those practices respond to their needs. As part of the project monitoring and reporting system, the project progress reports (quarterly, biannual, and annual) should also reflect any progress that has been made in gender integration and describe problems that were encountered or may possibly be encountered. The project should have a mechanism to adjust its activities on the basis of monitoring information (see Example 8) (World Bank, FAO, and IFAD 2015; FAO 2014a).

**At an early stage of project implementation, a baseline will be set to monitor the project's achievements.** The final setting of gender-sensitive indicators and performance targets for a CSA project can be done only when adequate baseline data are collected. The information collected for gender analysis can often establish part of the baseline.

**Whenever possible, monitoring should be carried out in a participatory way**, for example through regular meetings or workshops with men and women farmers, field staff, government representatives, and community organizations. Participatory impact assessments enable community members to provide feedback and express their views on the project's progress and impact.

To draw lessons and recommendations for future interventions, the **final evaluation** will analyze and document (1) progress achieved by the end of implementation, (2) the project's strengths and weaknesses, and (3) the differential effects and potential long-term impacts on women and men.

### Example 8
### Corrective action following evaluation

A project aimed to increase food security and nutrition in an area where local market prices for fresh produce were extremely high. It assisted low-income women farmers in establishing backyard vegetable gardens. The evaluation showed that food availability in the households did not improve significantly, because men would bring the produce to the market but would not then use the revenues to buy food for their families. Corrective action was taken, which included a door-to-door campaign and community training to raise awareness on gender equality and nutrition at the household level.

*Source:* FAO 2014a.

## 6.2 Tools and methods to support gender mainstreaming

**During implementation, monitoring, and evaluation, we need to reinforce gender integration by making any changes needed in the project if it becomes apparent that the anticipated gender-responsive results will not be achieved** and that existing inequalities will not be reduced. The following questions can help to secure gender integration into project implementation:

- Is gender integrated in the project implementation plan and other relevant documentation?
- Does the project environment support gender integration? If not, should the project take special measures to overcome resistance to addressing gender issues? What kind of measures?
- Does the chosen implementation strategy take into account the results of the gender analysis, such as differences in seasonal and daily activities of men and women?
- How are the baseline data collected? Will sex-disaggregated data be part of the baseline?
- Will the monitoring and evaluation system gather relevant sex-disaggregated data and gender-sensitive indicators?
- Is there a mechanism for taking corrective action in case the project monitoring reveals that gender targets are not likely to be met?
- Will men and women from different socio-economic groups have an opportunity to voice their views on the CSA practices that have been implemented and whether those practices respond to their needs?
- Are the activities taking place as scheduled? How are male and female beneficiaries responding to the project?
- Are the gender-related assumptions identified in the logical framework relevant? Have any new risks of reinforcing existing inequalities and discrimination appeared?

Figure 8 presents additional considerations for designing a project implementation strategy.

**Possible methods for generating feedback on the implementation process include:**

- Male and female beneficiary tracking: to understand which categories of people the project is reaching and to make mid-term adjustments to better target poor households, women, youth, ethnic minorities, and others.
- Beneficiary assessment: to generate direct feedback from male and female beneficiaries at different levels on their perceptions of the project, its benefits and weaknesses, and areas for improvement.

**Figure 8**
**Considerations for project implementation**

*Source:* FAO 2014a.

A useful tool for monitoring a project's impact from a gender perspective is the **Women's Empowerment in Agriculture Index** (WEAI), which was launched in 2012 by IFPRI, the Oxford Poverty and Human Development Initiative, and USAID's Feed the Future. The WEAI is a standardized measure to directly capture women's empowerment and inclusion levels in the agricultural sector. The index can be used to measure changes in the roles and extent of women's engagement in the agricultural sector in five domains: decisions about agricultural production; access to and decision-making power over productive resources; control over use of income; leadership in the community; and time use.[3]

Example 9 and general guidance for gender-sensitive project implementation, monitoring, and evaluation can be found in Module 16 of the *Gender in Agriculture Sourcebook*[4] (World Bank, FAO, and IFAD 2008). Additional useful tips and examples for gender-sensitive monitoring and evaluation are presented in "Technical Note 3: Monitoring and Evaluating Gender through the CSA Project Cycle," of the "Gender in Climate-Smart Agriculture" module of the *Sourcebook* (World Bank, FAO, and IFAD 2015). Tip 7 provides a checklist for integrating gender in project monitoring and evaluation.

We are now approaching the end of the session. Before closing, it is recommended that participants engage in a buzz group discussion to reflect some of the session's key messages. Possible discussion points are: "Could you mention some examples of appropriate gender-sensitive indicators for CSA projects? How would you best ensure that decision makers are supportive of gender integration?" The facilitators can also formulate other questions for the buzz groups. Finally, each buzz groups reports back to other groups in a plenary discussion.

### Example 9
### Indicators used for monitoring and evaluation in Kyrgyzstan

At the design stage of an agricultural area development project in Kyrgyzstan, rural women were identified as a highly disadvantaged group. Particular attention was given to mainstreaming gender issues, and efforts were made to increase the project's inclusiveness. The monitoring and evaluation system examined the project's effects with respect to gender, including women's ownership of land; their access to and membership in producer organizations; their participation in training events and the types of training they were given; changes in women's incomes compared with men; and the relative social position of women-headed households.

*Source:* World Bank, FAO, and IFAD 2008.

### Tip 7
### Checklist for gender integration in monitoring and evaluation

Check that:

- The indicators and targets are gender-sensitive.
- The baseline reflects gender equality issues.
- The project has a mechanism for corrective action.
- In data collection, sex-disaggregation is the minimum, and it is also important to consider age, ethnic group, and social status.
- Project expenditures are monitored from a gender perspective.
- The project has mixed male-female teams for data collection and possibly also for project implementation.
- The project beneficiaries (both men and women) can participate in monitoring and evaluation.
- Opportunities for self-evaluation are considered.

3 Additional information and guidance on the use of the WEAI can be found at http://www.ifpri.org/topic/weai-resource-center.

4 Available at http://siteresources.worldbank.org/INTGENAGRLIVSOUBOOK/Resources/CompleteBook.pdf.

# 7 Introduction to group exercises

**The purpose of the group exercises is to familiarize the training participants with the gender dimensions of agroforestry and/or conservation agriculture**, which are widely considered to be climate-smart practices in many countries. Appendix 5 presents background material to introduce the gender considerations of these two practices and support the group discussions. As time may not allow all groups to discuss both topics, it is advisable that the groups select either agroforestry or conservation agriculture.

The first working group session focuses on gender analysis. The participants are asked to discuss two topics centered on the following questions: What are the three main gender issues when promoting agroforestry or conservation agriculture in your country? Why these three? Would these issues create barriers to adoption of agroforestry or conservation agriculture? If yes, how could they be overcome?

The second working group session relates more closely to project design and implementation. The questions for the groups are as follows: When you start designing a gender-responsive agroforestry or conservation agriculture project, what are the first three steps to take? Why these three? What gender issues do you need to consider in the design of the activities and implementation strategy for a gender-responsive agroforestry or conservation agriculture project?

# Appendix 1

# A model agenda for a two-day training workshop

### Training Workshop for Gender in Climate-Smart Agriculture for Development Practitioners Agenda

#### Day 1

| Time | Topic |
|---|---|
| 08:30 – 09:00 | Registration and welcome |
| 09:00 – 10:30 | **Session 1:** Introduction<br>▸ Opening, introductions and objectives of the workshop<br>▸ Review of the results of the pre-workshop survey |
| 10:30 – 11:00 | Coffee Break |
| 11:00 – 13:00 | **Session 2:** Climate change, climate-smart agriculture and gender<br>▸ Terminology and concepts<br>▸ Gender dimensions in climate change adaptation, mitigation and CSA<br>▸ A local case: Gender integration into national level agriculture and climate policies (preferably by a representative of the local Ministry of Agriculture) |
| 13.00 – 14:00 | Lunch Break |
| 14:00 – 15:30 | **Session 3:** Gender analysis in CSA project identification<br>▸ Gender in stakeholder analysis, livelihood analysis, needs assessment and situation analysis<br>▸ A local case study by an NGO or other practitioner, and discussions |
| 15:30 – 16:00 | Coffee Break |
| 16:00 – 17:00 | **Session 4:** Working Groups, first session<br>▸ Gender issues in conservation agriculture and agroforestry |
| 17:00 – 17:30 | **Session 5:** Discussion and closing of Day 1 |

#### Day 2

| Time | Topic |
|---|---|
| 08:30 – 09:00 | **Session 6:** Opening session<br>▸ Recap of the previous day |
| 09:00 – 10:30 | **Session 7:** Gender mainstreaming in CSA project formulation<br>▸ Gender analysis during formulation; good practices and tools and methods available<br>▸ A local case study by an NGO or other practitioner, and discussions |
| 10:30 – 11:00 | Coffee Break |
| 11:00 – 12:30 | **Session 8:** Gender integration into CSA project implementation and M&E<br>▸ Gender-responsive project implementation and M&E; good practices and tools and methods available<br>▸ A local case study by an NGO or other practitioner, and discussions |
| 12:30 – 13:00 | **Session 9:** Preparing for the Working Groups |
| 13.00 – 14:00 | Lunch Break |
| 14:00 – 15:00 | **Session 9 continues:** Working Groups, second session<br>▸ Gender issues in conservation agriculture and agroforestry project cycles |
| 15:00 – 15:30 | **Session 10:** Discussion<br>▸ Presentation of the main findings of the working groups |
| 15:30 – 16:00 | Coffee Break |
| 16:00 – 17:00 | **Session 11:** Summary, evaluation and closing of the workshop |

# Appendix 2
# Glossary

**Climate:** Climate is usually defined as the "average weather" or more rigorously as the statistical description of the weather in terms of the mean and variability of relevant quantities over periods of several decades. These quantities are most often surface variables such as temperature, precipitation, and wind, but in a wider sense the "climate" is the description of the state of the climate system (IPCC).[5]

**Climate change:** A change in climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is (in addition to natural variability) observed over a comparable period of time (IPCC).

**Climate change adaptation:** Initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects. Various types of adaptation exist, such as anticipatory and reactive, private and public, and autonomous and planned. Examples include raising river or coastal dikes, or substituting temperature-sensitive plants with plants that resist temperature shocks, among others (IPCC).

**Climate change mitigation:** Technological change and substitution that reduces and/or removes net greenhouse gas emissions or emissions per unit of output. Mitigation means implementing policies to reduce greenhouse gas emissions and enhance sinks (FAO 2013).

**Climate-smart agriculture:** Agriculture that integrates the three dimensions of sustainable development (economic, social, and environmental) by jointly addressing food security and climate change challenges. It is composed of three main pillars: (1) sustainably increasing agricultural productivity and incomes; (2) adapting and building resilience to climate change; and (3) reducing and/or removing greenhouse gas emissions, where possible (FAO 2013).

**Disaster risk reduction:** The concept and practice of reducing disaster risks through systematic efforts to analyze and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events (FAO 2013).

**Gender:** Gender refers to culturally based expectations of the roles and behaviors of men and women. The term distinguishes the socially constructed from the biologically determined aspects of being male or female (IFAD).[6]

**Gender analysis:** The study of the different roles of women and men in order to understand what they do, what resources they have, and what their needs and priorities are.

**Gender discrimination:** Refers to any exclusion or restriction made on the basis of gender roles and relations that prevents a person from enjoying full human rights (FAO).

**Gender equality:** Equal participation of men and women in decision making, equal ability to exercise their human rights, equal access to and control over resources and the benefits of development, and equal opportunities in employment and all other aspects of their livelihoods (FAO and CCAFS 2013).

**Gender equity:** Fairness and impartiality in the treatment of men and women in terms of rights, benefits, obligations and opportunities (FAO).

**Gender mainstreaming:** The process of assessing the implications for women and men of any planned action in all areas and at all levels (UN). Gender mainstreaming is the globally recognized strategy for achieving gender equality.

5 IPCC (www.ipcc.ch/publications_and_data/publications_and_data_glossary.shtml).

6 IFAD (2015) gender glossary (available at www.ifad.org/gender/glossary.htm).

**Gender-responsive:** Gender-responsive policies and practices recognize and address the specific needs and realities of women and men based on the social construction of gender roles (World Bank, FAO, and IFAD 2015).

**Gender-responsive approach to climate-smart agriculture:** An approach where the particular needs, priorities, and realities of men and women are recognized and adequately addressed in the design and application of CSA, so that both men and women can equally benefit.

**Gender-transformative:** Gender-transformative interventions seek to transform gender roles and promote more gender-equitable relationships between men and women. They challenge the underlying causes of gender inequality that are rooted in broad political, economic, and socio-economic structures (World Bank, FAO, and IFAD 2015). These interventions encourage awareness of gender roles, improving the position of women, challenging the imbalance of power between men and women, and addressing power differences between women and service providers. Gender-transformative approaches seek to challenge rigid gender roles and relations, and often go beyond the individual level to focus on interpersonal, social, structural, and institutional practices that address gender inequalities.

**Gender gap in agriculture:** The constraints in accessing productive resources, markets, and services are usually more severe among women farmers, farm workers, and rural entrepreneurs than among men. This gender gap affects women's productivity and reduces their contribution to output of the agricultural sector (FAO 2011).

**Vulnerability:** The degree to which a system (or an individual) is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, as well as its sensitivity and its adaptive capacity (IPCC).

**Weather:** Climate and weather are often used interchangeably, but this is not correct – each refers to conditions and behavior of the atmosphere over a different period of time. Weather is what is happening now, today, yesterday, this season, or over the past few years – the temperature, cloud cover, humidity, wind direction and speed, and rainfall. Climate refers to average weather conditions over a longer period of time, generally a period of 30 years or more, and how the atmosphere has behaved on average over this time period (Simpson 2016).

# Appendix 3

# Checklist with gender-relevant questions to guide data collection and project formulation, implementation, and monitoring and evaluation

This appendix, which is mostly based on FAO's *SEAGA Field Handbook* (FAO 2001) and FAO's and CCAFS's *Training Guide: Gender and Climate Change Research in Agriculture and Food Security for Development* (FAO and CCAFS 2013), provides examples of questions that can guide: (1) gender-responsive information collection during project identification and design and (2) gender-responsive project implementation and monitoring and evaluation. The relevance of the questions depends, for example, on the size and focus of the project or program as well as on resources available for data collection and analysis. This is why the questions need to be adjusted and the most relevant ones selected for each context.

While the answers to these questions can be obtained through different means – for instance, through farmer interviews, key informant interviews, farmer workshops, and national/local statistics – the use of participatory research tools is encouraged. Whatever the means, it is important to ensure that men, women, boys, and girls from different socio-economic groups have a chance to speak and be adequately represented.

During **project identification** it is important to analyze the relationship between the nature of the problem to be addressed and the stakeholders affected, in particular the target beneficiaries.

## 1. Questions for a context analysis

Rural life is continually changing due to environmental crises, economic trends, social patterns, and institutional changes. These forces influence the livelihoods and development opportunities of rural men and women and require them to adjust to, cope with, and survive numerous changes. **Possible questions to be asked in assessing the context, taking gender into account, are:**

- What are the most important environmental, economic, institutional, and social patterns in the village? Do men and women have the same views on these patterns? What are the main differences between the views of men and women?
- How do these environmental and economic trends impact the livelihoods of men and women?
- What are the main natural resources and the available services? Who uses them and for what purposes?
- What types of households are there? How many households are female-headed? Is the number growing? If so, why?
- What were the past climate conditions like, what are they now, and what are the projections? Do men and women report seeing changes or impacts? What are men's and women's perceptions of those changes or impacts? What is getting better in the village in terms of climate, and what is getting worse?
- What are the policies and institutional support mechanisms for climate change adaptation and mitigation, CSA activities, and gender mainstreaming? What are the constraints caused by policies or institutions?

## 2. Questions to guide a vulnerability and capacity analysis

It is important to assess the main sources of vulnerability of men and women, who are most affected by climate change, and to strengthen their resilience, taking into account their existing capacity.

- Who in the household is vulnerable to climate change and why? How is this vulnerability differentiated according to gender, age, and other social indicators?

- Who in the community is most vulnerable to climate change?
- What do men and women perceive to be at risk due to changes in climate?
- How do men and women currently deal with climatic risks?
- What is the existing capacity of affected men and women to cope with climate change? Do they have access to resources and services to better cope with the impacts of climate change? What is the difference between men's and women's capacities?
- What are the coping mechanisms of men and women?
- Who decides what risk reduction and adaptation strategy to implement? Who takes actions and implements the strategy, and is he/she involved in the decision-making?
- What are the implications of a given risk reduction and adaptation strategy on men's and women's use of time and labor?
- What information is needed to implement the risk reduction and adaptation strategy? Is this information shared in the household?
- How is the risk reduction and adaptation strategy likely to affect household and individual food security and nutrition?

## 3. Questions for a stakeholder analysis

Identifying relevant stakeholders helps us to make sure that interventions are realistic and that we identify both partnerships and possible conflicts in order to reach consensus and build commitment.

- For each adaptation, mitigation, or CSA activity being considered, who are the stakeholders (individuals, households, communities, organizations, and others)? Do they include women, men, boys, and girls? Do they include different socio-economic groups?
- Are there certain groups that stand to gain or lose more than others? Men and women? Rich or poor?
- Is there a conflict between the different stakeholders? Are there partnerships?
- How do different stakeholders perceive the risks associated with climate change? How do they perceive the benefits of mitigation, adaptation, or CSA activities?
- Who participates and who has a say in decision making (including young people, and women- and men-headed households)?
- What adaptation and resilience-building activities do different men and women propose?
- What kind of CSA activities best support the goal of men and women benefiting equally from the project?
- What kind of activities best support the principle of giving priority to disadvantaged groups?
- Is equal access to resources and information among stakeholders ensured?
- Is participation of women ensured?
- Is the participation of disadvantaged groups ensured?

## 4. Questions for assessing the institutional setting

It is important to identify relevant local groups and institutions, clarifying decision-making roles and existing linkages between institutions at different levels (such as the field and macro levels).

- Are there local groups that are organized around natural resources and environmental issues (for example, climate change, water and forest use)? Do both men and women participate in these?
- Are there local groups that are organized around an economic issue, such as savings and credit or agriculture?
- Are there local groups that are organized around social issues, such as health and youth?
- Are there linkages between local groups and macro-level institutions?
- Are there groups exclusively for women or men? Are there groups from which women or men are excluded? Which ones? Why?
- Are poor men and women excluded from any of these local groups?
- Are boys or girls excluded from any of these groups?
- Are there groups exclusively for youth?
- What are the institutional supports and constraints for gender-responsive CSA development at the local level?

## 5. Questions for a livelihood analysis

A livelihood analysis answers the questions of who does what, who uses what, and who controls what, allowing us to learn about the activities of different people and their relative access to resources, both for basic needs and income.

- How do men, women, boys, and girls make their living? Are there differences between different socio-economic groups?
- How do the livelihood systems of men and women (or those of different socio-economic groups) compare?
- What are the most important sources of income of different groups, including men and women?
- What are the most important expenditures of different groups, including men and women?
- What are the likely climate change impacts on current livelihoods? Are certain sectors or groups of people more or less vulnerable than others? Why? What are the perceptions of men and women on these questions?
- Are households and individuals able to meet their basic needs?
- How diversified are the livelihoods of men and women? What solutions have men and women applied in response to the changing climate?
- What are the patterns for use and control of key resources by gender, age, and socio-economic group?
- How is climate change likely to affect the use of resources among men and women?
- How is work in agriculture, forestry, and fisheries/aquaculture shared between men and women? What are the main sources of the work burden for women? How can we reduce their time poverty?
- What are men's and women's roles in decision making on agricultural/forestry/fisheries/aquaculture practices? Do they participate equally?
- Does land tenure of men and women differ, and does it affect their decision making on which agricultural practices to employ?

## 6. Questions for analyzing access to resources and services

We need to understand the gender-based use and control of resources within the household and the community, in order to see who has access to and control over these resources and services.

- What are men's and women's resources for coping with climate change?
- Do men and women access climate and weather information? In what form? How do they use this information?
- What information is available to men and women, and male- and female-headed households, about the various CSA practices and farming systems?
- What are the formal and informal institutions that supply men and women with the resources needed for adaptation, mitigation, or CSA activities, including information, financial resources, and inputs?
- Do men and women have access to the labor market to earn income in times of need?
- Are men and women able to access the resources they need (such as cash, labor, and land)?
- Do men and women, and male- and female-headed households, have access to agricultural inputs?
- Who owns, controls, and uses the agricultural resources in the household (specifically land, trees, water, seeds, manure, livestock, pest control systems, and other resources)?

## 7. Questions for a needs assessment

We need to identify both practical and strategic needs of men and women in order to better respond to their priorities and develop their capacity.

- What are men's and women's priorities in terms of short-term and long-term adaptation and CSA needs?
- Does meeting men's needs compromise women's needs, and vice versa?
- Is a gender-differentiated climate vulnerability analysis available to assess the needs and constraints of men and women?

- What is the literacy level among men, women, boys, and girls?
- Do the proposed adaptation, mitigation, and CSA activities meet the food security and nutrition needs of men, women, boys, and girls?
- Do these activities entail changes that affect men and women? What kind of changes and within which sector?

## 8. Questions to guide project formulation

The gender analysis guides the formulation of the project so that it will provide benefits for both men and women or reduce the gender gap. During this phase, the questions become more concrete and future-oriented. Some examples are provided below:

- What are the potential roles of men and women in the project?
- What are the implications of adopting the new CSA practices in terms of labor and time requirements for men and women?
- How will men's and women's different access to land, water, inputs, credit, and labor be taken into account in project design?
- In case of a change in agricultural practices and farming systems, how is it likely to affect men and women?
- In case of a change in household energy systems, how is it likely to affect men and women?
- In case of a change in water use, how is it likely to affect men and women?
- Are women's, men's, or youth groups active in the community, and what could their role be in project implementation?
- What are the gender-responsive objectives, outcomes, and outputs in relation to CSA for the overall project and for each component?
- What are appropriate gender-sensitive indicators for monitoring progress and achievements?
- Does the project staffing plan include adequate gender expertise?
- Is a distinct budget allocated for gender-responsive activities (for example, funds for gender expertise, gender analysis, gender training of staff and stakeholders, and actions specifically targeted at women or youth)?
- Does the project capacity development plan reflect gender needs?

## 9. Questions to guide gender-responsive project implementation, monitoring, and evaluation

During implementation, monitoring, and evaluation, we need to reinforce gender integration by making any changes needed in the project, if it becomes apparent that the anticipated gender-responsive results will not be achieved and that existing inequalities will not be reduced.

- Is gender integrated in the project implementation plan and other relevant documentation?
- Is the project environment supportive of gender integration? If not, should the project take special measures to overcome resistance to addressing gender issues? What kind of measures?
- Does the chosen implementation strategy take into account the results of the gender analysis, such as differences in seasonal and daily activities of men and women?
- How is the baseline data collected? Will sex-disaggregated data be part of the baseline?
- Will the M&E system gather relevant data from the gender perspective, with the inclusion of gender-sensitive indicators?
- Is there a mechanism to take corrective actions in case the project monitoring reveals gender targets are likely not to be met?
- Will men and women from different socio-economic groups have an opportunity to voice their views on the CSA practices that have been implemented, and on whether those practices respond to their needs?
- Are the activities taking place as scheduled? How are male and female beneficiaries responding to the project?
- Are the gender-related assumptions identified in the logical framework relevant? Have any new risks of reinforcing existing inequalities and discrimination appeared?

# Appendix 4

# Tools to support gender analysis and gender mainstreaming

This appendix is mostly based on FAO's SEAGA Field Level Handbook (2001) and FAO's and CCAFS's Training Guide: Gender and Climate Change Research in Agriculture and Food Security for Development (2013). Additional information on the tools mentioned in this module and other participatory tools can be found in the following guidelines and materials:

- FAO (2001), "SEAGA Field Level Handbook" (available at www.fao.org/docrep/012/ak214e/00.ppdf).
- FAO and CCAFS (2013), "Training Guide: Gender and Climate Change Research in Agriculture and Food Security for Development" (available at www.fao.org/docrep/015/md280e/md280e00.htm).
- FAO's e-learning tool on Gender in Food and Nutrition Security (2014) (available at http://www.fao.org/elearning/#/elc/en/courses/GEND).
- FAO (2017), "Guide to mainstreaming gender in FAO's project cycle" *(2017, forthcoming)*
- Jost, C., Ferdous, N., & Spicer, T.D. (2014), "Gender and Inclusion Toolbox," CCAFS, ICRAF and CARE (available at https://ccafs.cgiar.org/gender-and-inclusion-toolbox-.WG-zC5LQ_sl).
- Mwongera, C., Shikuku, K.M., Winowiecki, L., Twyman, J., Läderach, P., Ampaire, E., van Asten, P. & Twomlow, S. (2015), "Climate-smart Agriculture Rapid Appraisal (CSA-RA): A Prioritization Tool for Outscaling CSA. Step-by-step guidelines" (available at https://ccafs.cgiar.org/publications/climate-smart-agriculture-rapid-appraisal-csa-ra-prioritization-tool-outscaling-csa#.VwdgK3o-7Ao).

## 1. Context analysis toolkit

In a particular community, a number of socio-economic patterns influence how people make their living and their options for change. Using the context analysis tools helps us to understand these patterns.

**Village resource map:** helps us to learn about a community and its resource-base. The primary concern is with getting useful information about local men and women's perceptions of resources. Users should determine the contents of the map focusing on what is important to them. The map may include some of the following information: roads, houses, buildings, water sites and sources, agricultural lands, forest lands, fish ponds, grazing areas, shops, markets, health clinics, schools, and waste sites, among others.

**Transect walks:** for learning about the community's natural resource base, land use, location, sizes of farms, availability of infrastructure and services, and economic activities. Transects build directly upon the Village resource map. It is a kind of one-dimensional map of a line cut through a village. The purpose of the walk is to organize and clarify spatial information and summarize local conditions in the area in question. The information is gathered through direct observations while walking a straight line through the community.

**Venn diagram:** helps us to learn about local groups and institutions and their linkages to outside organizations. This exercise is used to document the key local groups and institutions which operate in the area and are utilized by the project target population, or that are part of providing a specific service. Additionally, it can be used to illustrate linkages, conflicts, and collaborations between different groups and institutions. A Venn diagram can be used on its own or serve as a foundation or a supplement for the institutional profiles tool.

**Institutional profiles:** help us to learn about the goals, achievements, and needs of local groups and institutions. They help to clarify decision-making roles and identify potential areas of conflict. Moreover, they can be used to identify the extent to which men and women farmers can get support (information, advice, resources, credit, and so on) from existing institutions, and to identify areas for improvement. A chart of key institutions that are potentially involved in the CSA project is prepared jointly with the participants.

## 2. Livelihood analysis toolkit

Livelihood analysis focuses on how individuals, households, and groups of households make their living, as well as their access to resources to do so. It reveals the activities men, women, boys, and girls undertake to meet basic needs and generate income. Gender and socio-economic group differences are shown with respect to labor and decision-making patterns.

**Farming system diagram:** helps us to understand household members' on-farm, off-farm, and non-farm activities and resources. It thus clarifies how rural households' livelihoods are assembled. It works with input-output diagrams and stream lines. The diagram is designed to highlight the farming system, including on-farm activities (such as crop and livestock production), off-farm activities (such as paid employment in urban areas), and non-farm activities (such as marketing). It also shows the flow of resources to and from the household and who is involved, by gender. The diagram may show how livelihoods depend on different resources and how vulnerable they are to weather and climate change. In addition, the diagram can illustrate men's and women's specialized knowledge linked to different areas of the farming system – knowledge that can be built upon for adopting CSA practices.

**Daily activity clocks:** for learning about the division of labor and labor intensity by gender and socio-economic group. These clocks can illustrate all the different types of activities carried out by an individual in one day. They are useful for looking at relative workloads between different groups of people in the community (men, women, wealthy, poor, young, and elderly). Daily activity clocks can also illustrate seasonal variations in workload, or the workload at a particular time of the year. Furthermore, they provide a baseline of what people do now in order to understand how modifications to farming practices may increase or decrease the tasks and work burdens of different groups.

**Seasonal calendars** are used to learn about the seasonality of men's and women's labor, food and water availability, income and consumption patterns, and so on. They also guide farmers' perceptions of typical seasonal conditions, including rainfall amounts and timing. It is useful to discuss the entire year, rather than the growing season only, as events over the year have an impact on each other. This tool allows for discussion of the linkages between climate variability and specific key activities and resources that occur or are available at different points during the year. The tool also helps to determine whether workloads or timing of the activities have shifted from one season to another compared with previous years, by inquiring whether the seasonal calendar has changed over time.

**Capacity and vulnerability analysis matrix:** used to understand the resources and needs of men and women. It supports long-term planning to address underlying population vulnerabilities. Data disaggregated by sex, age, disability, health status, location, ethnicity, and other sociocultural factors are key: they enable a better understanding of the vulnerabilities and capacities of different socio-economic groups. Three components of capacities and vulnerabilities are considered: physical and material resources; social and other institutions and relationships; and motivational and attitudinal factors.

**Changing farming practices:** this tool documents how a change in farming practices (planting trees, change in use of external inputs, new soil management practices) affects the activities of men and women. It can also augment discussion on how the change in farming practice came about, roles in decision making, and access to any benefits created by the change.

**Seasonal food security calendar:** documents connections between seasonal climatic conditions and food security over the course of the year. Creating two seasonal food security calendars, one for normal climatic conditions and one for abnormal climatic conditions (e.g. a very dry year), makes it possible to document how food security shifts under different conditions. It can also be used to document coping strategies and to assess if food security has changed over time.

**Climate-related risk management practices:** this tool captures men and women farmers' perceptions of cause and effect of a major past climate-related event, as well as the impact and responses, particularly as regards food security. The tool helps also to understand various risk management strategies.

## 3. Stakeholders' priorities analysis toolkit

**These tools help to identify people and institutions who have a stake in, and who stand to gain or lose from, the proposed activities. For every adaptation, mitigation, and CSA activity proposed, the different stakeholders are identified, also revealing conflicts and partnerships. In this toolkit, the focus is on learning about people's priority problems and the opportunities to address them.**

**Venn diagram of stakeholders:** helps us to learn about the insider and outsider stakeholders for each action proposed. This is the same Venn diagram as in the context analysis toolkit. A stakeholders' conflict and partnership matrix can be added to learn about conflicts of interest and common interests among the stakeholders.

**Pairwise ranking matrix:** helps us to learn about the priority climate-related problems of men and women and different socio-economic groups. It also allows for easy comparison of different people's profiles. Many priority problems are related to the day-to-day struggle to meet basic needs, while others relate to aspirations for the future. Some problems are gender-related, such as women's lack of control over resources, or the gender-based division of labor. Pairwise ranking highlights how the priority problems of men and women differ, and where they overlap. Similarly, the ranking reveals needs of members of different socio-economic groups.

**Flow diagram:** helps us to understand the causes and effects of priority problems in the area. It builds on the Pairwise Ranking Matrix and provides views on people's understanding of the causes of their problems and the effects resulting from these problems. It can also be used for identifying possible solutions. The diagram can show which problems have local solutions, which ones require external assistance to solve, and which ones (such as extreme weather events) require risk reductions (such as preparedness).

**Problem analysis chart:** brings together the priority problems of all different groups in the community to help explore local coping strategies and identify opportunities to address the climate change-related problems. With this tool, all the different problems are presented and discussed with the community as a whole, showing where different people's priorities overlap and where they differ. We can also learn about the causes of problems and coping strategies and whether efforts to address a particular problem have already been made. The chart process will also look at opportunities for CSA practices. For this phase, external expertise is required to provide information on different solutions and to assess people's ideas.

# Appendix 5

# Material for working group discussions on agroforestry and conservation agriculture

This appendix provides materials related to agroforestry development and conservation agriculture that workshop facilitators can use to organize group discussions aimed at making learners reflect on the gender implications of these potential CSA practices. Depending on the interests of the participants, they may choose to discuss topics related either to agroforestry or conservation agriculture. For each exercise, the appendix provides a detailed description of the expected results and suggests steps to guide the discussion in the working groups, along with background information on gender-related evidence from past interventions.

## Working group session 1: Agroforestry

### Exercise: Analyzing gender aspects to identify an agroforestry development project

**Expected result:**
At the end of this exercise, the trainees are expected to become more aware of the gender dimensions of agroforestry development, and be able to better analyze gender issues when they identify a CSA project.

**Proposed steps:**

1. Form small working groups of four to five participants.
2. Review and discuss the background information on the gender dimensions in agroforestry development.
3. Answer the probing questions described at the end of the handout to guide the discussion and reporting.
4. Report the results of the working groups in plenary.

### Background information on the gender dimensions in agroforestry development[7]

Agroforestry practices include fodder shrubs, "fertilizer trees" to improve soils, fruit and vegetable production and processing, nuts, and woodlots, among others. Fodder shrubs are usually protein-rich legumes grown along boundaries and pathways or in lines forming terraces, and are used to reduce erosion, provide fuelwood, and feed cows and goats. They can be beneficial to women for the income obtained, and can also free up their time for other productive enterprises. Promising "fertilizer tree" options include improved tree fallows (planting fast-growing leguminous trees or shrubs in rotation with crops), biomass transfer (cutting and incorporating leaf biomass from trees and shrubs as green manure) and mixed intercropping (planting nitrogen-fixing trees).

Agroforestry practices for replenishing soil fertility are attractive to women farmers in particular because, like fodder shrubs, they involve low inputs and labor, often have high returns (high maize yields, for example), produce fuelwood, and reduce weeds. Other relevant agroforestry practices include woodlots, fruit and vegetable production and processing practices, medicine, gums, resins, nuts, and local fruits, which can provide women with significant income (from processing and selling jam, wine, and juice from indigenous fruits, for example). By providing nutrients for crops, these agroforestry practices can potentially help farmers improve their soils and incomes, thereby increasing food security.

Women are attracted to agroforestry because of the minimal inputs and labor required, particularly with regard to cash outlays, and also because of the substantial benefits in terms of food, fuelwood, fodder, and other products and services that they receive (particularly in times of need). These practices play an important role in enterprises that are considered to be women's domain, such as indigenous fruit and vegetable products and processing, fodder, and mulch.

7 Adapted from Kiptot and Franzel (2011).

Some crops, such as *Vitelleria paradoxa* (shea) and *Gnetum africanum*, can also be used as vegetables. Timber products are considered a cash crop and primarily reserved for men's use.

Women are frequently responsible for managing trees and carrying out most of the work, especially during the establishment stages (planting, weeding, and watering). Men and women often have different objectives when planting trees: men are more interested in trees for commercial purposes, while women prefer tree products for subsistence use such as fuelwood, soil fertility, improved fodder, and fruit. Women are usually limited to products considered to have little or no commercial value, while men reserve higher-value products for themselves.

## Key gender issues to consider in agroforestry development

1. **Women's access to productive resources and services:**
   Agriculture is underperforming in many developing countries in part because women lack resources, services, and employment opportunities to make the most productive use of their time. It is important to identify specific "gender gaps"; invest in programs and policies that eliminate discrimination against women under the law (such as land tenure laws that do not allow women to own land); and make rural institutions gender-aware to ensure that both men and women are equally served by these institutions. These efforts start by the creation of an evidence base (through sex-disaggregated data and performance indicators) to support policy makers with gender-responsive planning and assessment of the gender impacts of agroforestry interventions.

2. **Women's access to agroforestry information and training:**
   Men typically receive more support than women from extension services. Women's low engagement results from the bias of predominantly male extension workers to focus mainly on men; local sociocultural barriers that limit communication between male extension workers and women; women's lack of time to participate in extension activities and off-farm training; and their limited education and ability to use technical information. In cases where female farmers have increased their knowledge and access to information about CSA technologies, there is evidence that they adopt those technologies, resulting in stronger resilience to climate change for their households, communities, and food systems.

3. **Women's involvement in agroforestry product markets:**
   Women's involvement in marketing agroforestry products is usually confined to small retail trade, while men dominate the wholesale trade. Female traders also tend to receive lower marketing margins than men. The reason for this disparity is that men usually have more stock than women, as they have better access to capital and to market information systems. Women's lower literacy level represents another important disadvantage in marketing that prevents them from benefiting from expanding national and international markets.

## What can be done to increase women's participation in agroforestry?

Based on experience, a series of technical, policy, and institutional recommendations can be made to promote the active participation of women in agroforestry, taking care to adapt to the local context:

**Technological interventions**

1. **Domestication of agroforestry species:**
   Many tree products that benefit women are collected from forests, woodlands/rangelands, parklands, or on farms. With the increase in population, some products are becoming scarce, and women must walk longer distances to obtain them. Promoting participatory domestication will help integrate valuable species into appropriate farming systems and technologies that are socially, culturally, and economically acceptable. Such initiatives can result in the uptake of appropriate propagation methods and cultivars that meet a range of market requirements (such as fruit meeting specific criteria for size, taste, and maturity period), allowing farmers, especially women, to have a year-round flow of cash from agroforestry products.

2. **Development of appropriate storage and processing methods:**
   Many agroforestry products, particularly fruit, have a very short shelf-life. It is important to develop techniques that improve the post-harvest quality of fruit, such as regulating harvest time to

maximize post-harvest fruit color and sweetness; improving artificial ripening under different post-harvest incubation regimes; and extending shelf-life with and without refrigeration. Where there is a demand, marketing products that are processed appropriately can also increase women's incomes. Most women still use traditional processing techniques that are strenuous and time-consuming. Tools and practices that help reduce the drudgery and time requirements of women's tasks, such as de-husking, drying kernels, land preparation, and weeding, will free up their time considerably for other productive activities. Such interventions should be accompanied with training to develop women's business, marketing, and leadership skills.

**Policy interventions**

1. **Increasing women's access to extension services:**
   Entry points to increase women's access to extension services include: training women extension officers and/or volunteer women farmer-trainers, particularly to serve communities that have strong traditions prohibiting male extension officers from interacting with women farmers; targeting women's groups for assistance; supporting local advisory centers, where men and women can access technical agricultural information; finding out from women in which periods of the season and day they are free to attend meetings/field days/seminars; holding separate meetings for men and women; creating video tutorials for women who are not able to participate in tours; establishing a fixed quota for women (for instance, that at least half of the participants must be women); and ensuring that extension activities address different group interests (for example, women are more interested in products such as fruit, fuelwood, and vegetables, whereas men prefer trees for timber and poles).

2. **Supporting women's access to market information:**
   For women to benefit from market information, deliberate efforts must be made by governments, the private sector and NGOs to specifically target their needs and priorities. Efforts might involve subsidizing the provision of mobile phones to women, or offering specialized training on how to use available agricultural services (such as market price services, texting for agricultural advice, farm radio and television shows, and so on). With access to market information, women farmers can greatly reduce losses caused by wastage – the result of lack of buyers – as they will be able to make informed decisions about when to produce, what to produce, for whom to produce, and when and where to sell their products.

3. **Improving women's access to finance from microcredit institutions:**
   To increase women's access to financial services, governments need to intervene and encourage the development of rural institutions (such as microcredit institutions) whose regulations are friendly to women and respond to their specific needs. Potential interventions include accepting alternative forms of collateral other than land, such as machinery, furniture, and other tangible assets that women may have; strengthening the capacity of existing social organizations (such as women's groups); and linking these groups to financial institutions.

**Institutional interventions**

1. **Strengthening local institutions and farmers' organizations:**
   Women producers are largely still trapped at the production end of the agrifood value chain. Governments, NGOs, and the private sector can intervene by fostering the emergence of women entrepreneurs, facilitating them to form and strengthen farmers' groups, and linking them up with markets and industry. By engaging in collective action, women can gain a more powerful position in the value chain, which is advantageous in several ways: it gives them stronger bargaining power and capacity to buy and sell inputs in bulk (ensuring sustainable productivity); it reduces their transaction costs; it helps them to attract more and larger buyers; it increases their access to outside resources (such as extension and development assistance) and markets (including lucrative fair-trade and other certified markets); and above all, it allows them to contribute to the policy formulation process.

2. **Development of new products:**
   For women to equally compete and have an edge, they must expand and diversify into new high-value products such as oil, soap, juices, body lotions, wine, and leaf meal.

3. **Investment in gender-aware research:**
   Key research areas for further investigation include: (1) measuring actual income women receive from agroforestry, relative to non-agroforestry enterprises; (2) assessing the effectiveness and impact of alternative dissemination methods on women's participation and benefits; (3) determining how different categories of women (such as female-headed households and women in male-headed households) benefit from agroforestry; (4) identifying success stories and assessing the factors that contributed to their success; (5) documenting cultural beliefs or taboos regarding tree planting and how they influence adoption of agroforestry by women; (6) developing mechanisms to help increase women's participation in marketing and income generated from marketing; (7) determining how gender roles influence women's adoption of agroforestry practices; and (8) increasing women's participation in the production of tree crops that are traditionally the domain of men, such as coffee, cocoa, and oil palm.

### Probing questions to guide discussion and reporting

1. What are the three main gender issues to consider when you identify a project aimed at agroforestry development? Why these three gender issues?
2. Would these gender issues create barriers to the adoption of agroforestry practices? If yes, how could they be overcome?

## Working group session 2: Agroforestry
## Exercise: Analyzing gender aspects during the design, implementation, monitoring, and evaluation of gender-responsive agroforestry projects

**Expected result:**
At the end of this group exercise, the training workshop participants are expected to have acquired a better understanding on how to analyze the gender dimensions of agroforestry development when they design, implement, monitor, and evaluate a CSA project, and to be able to identify the most relevant gender issues related to their own projects.

**Proposed steps:**

1. Form small working groups of four to five participants (preferably the same group as in the session 1 working group described above).
2. Review and discuss the case study described below related to an agroforestry development program.
3. Analyze the checklist included in the box to start a discussion on the gender implications of the proposed program.
4. Answer the last two probing questions mentioned at the end of the handout to guide the reporting.
5. Report the results of the working groups in plenary.

### Case study on agroforestry

An agroforestry program is to be launched. The agroforestry systems promoted through the program aim at increasing productivity, improving soil and water conservation, and reducing greenhouse gas emissions. These systems constitute a transformation from the traditional slash-and-burn method of farming to an integrated production system that allows farmers to control soil erosion and water retention by growing staple crops interspersed with native trees. The four pillars of the proposed systems are:

1. Integration of tree and crop species in the farm management system.
2. Avoiding use of fire to clean up the land.
3. Use of mulching and minimum tillage.
4. Use of good quality seeds sown at an adequate planting distance.

The traditional system combines staple crops with trees, and consists of letting crop residues decompose, which creates mulch. Together with the trees, this practice helps to restore and maintain soil humidity and fertility. Other annual crops, like maize, beans, and sorghum, are combined with trees using the slash and mulch technique (with no burning), with yearly thinning and pruning of trees and vegetation to ensure adequate light for crops, improve soil water retention, and decrease erosion.

It is expected that 800 households will benefit directly from the program, and at least 55 percent of participants will be women.

The expected results and proposed activities of the program are as follows:

**Result 1:** Improved knowledge and awareness on the part of the local, national, and regional civil society and government institutions as to the importance of climate-smart agroforestry systems in public policies.

**Activities:**

1. Strengthen national and local platforms for multisectoral dialogue on management of climate change risks for the promotion of agroforestry systems.
2. Analyze the political, legal, and institutional framework, and identify conditions and restrictions regarding adoption and dissemination of agroforestry systems.
3. Promote a policy dialogue with government stakeholders to strengthen agroforestry systems.
4. Identify and disseminate agroforestry practices, taking into account local knowledge.
5. Enhance the capacity of national and subnational stakeholders to promote adoption of agroforestry systems.

**Result 2:** Enhanced sustainable productivity and conservation of soil and water through the use of agroforestry systems and technologies that reduce wood consumption and increase water availability.

**Activities:**

1. Identify a target area and beneficiaries using participatory methods and gender analysis.
2. Implement and adapt agroforestry systems suitable to local socio-economic and agro-ecological conditions.
3. Develop a system for monitoring and evaluating soil erosion and water retention of existing agroforestry systems.
4. Strengthen the capacity of extension services, local institutions, and civil society on soil and water conservation and the use of efficient stoves.
5. Introduce efficient stoves and water harvesting practices in pilot areas.

Based on the above information as well as your own knowledge and expertise, analyze which are the main gender implications to take into account prior to implementation. You may use the checklist presented in Box 4 to start the discussion prior to focusing on the last questions proposed for the reporting.

### Box 4
### Checklist for gender analysis during project design and implementation

1. Does the program recognize the differences in the roles and needs between men and women in agroforestry? What can be done to address these issues?
2. Based on your own experience in agroforestry, whose access to resources will be improved?
3. How can the program ensure that both men and women will benefit?
4. Whose participation in decision-making will be strengthened?
5. Will the program meet both practical and strategic gender needs?
6. How can the program empower women?
7. What factors may inhibit women's full participation in the program? How may they be overcome?
8. What will be the likely impact of the program on women's workloads? Will it be necessary to take any remedial measures?

## Questions for reporting

1. When you start designing a gender-responsive agroforestry project, what are the first three steps to take? Why these three?
2. What kind of gender issues do you need to consider in the design of your activities and the implementation strategy for a gender-responsive agroforestry project?

## Working group session 1: Conservation agriculture

### Exercise: Analyzing gender aspects in conservation agriculture project identification

**Expected result:**
At the end of this exercise, the training workshop participants are expected to become more aware of the gender dimensions of conservation agriculture, and be able to better analyze gender issues when they identify and design a gender-responsive CSA project.

**Proposed steps:**

1. Form small working groups of four to five participants.
2. Review and discuss the background information on the gender dimensions in conservation agriculture.
3. Answer the probing questions described at the end of the handout to guide the discussion and reporting.
6. Report the results of the working groups in plenary.

### The gender dimensions in conservation agriculture[8]

**Conservation agriculture** (CA) involves maintaining a permanent organic soil cover by using cover crops, intercrops, mulch, or residues of previous crops; minimizing soil disturbance from tillage and cultivation; and diversifying crop rotations, especially by including high-protein legumes. CA can enhance soil health, contribute to higher and more stable yields, and reduce production costs.

It is important to introduce good agricultural practices that are adapted to the specific agro-ecological and socio-economic context, so that they can build climate resilience by improving soil structure, fertility, and moisture retention, thus lessening the effects of drought and reducing irrigation requirements. Promising solutions often focus on technology, however, and do not necessarily take into account gender and social disparities.

CA interventions are not always gender-neutral in terms of labor requirements, empowerment, or economic benefits and costs. It is not necessarily possible to predict how the introduction of new agricultural technologies may affect patterns of labor and the allocation of land and other resources between men and women. CA practices may have positive implications for women in terms of improving their conditions and increasing their agricultural production, and often imply some changes in gender relationships that support women's empowerment. Usually women have good knowledge of managing natural resources, which represents an important advantage in pursuing CA. This practice can also provide some economic benefits for women – for example, by reducing the workload and enabling involvement in other productive activities – especially if CA operations are mechanized.

Gender is a determining factor in defining who does what, who has what, who decides what, and who has power. To date, however, cropping and farming system research and development has paid little attention to gender issues.

Unless gender differences are adequately taken into account, the promotion of CA for smallholders in developing countries may have undesired effects from a **gender perspective**, specifically concerning drudgery, nutrition and food security, residue use, assets, mechanization, and extension. Many agricultural development interventions (including home gardening, livestock, mixed garden and livestock production, cash cropping and irrigation) have indeed increased food production, but they have not necessarily improved food and nutrition security in the target populations.

CA practices may affect nutrition in terms of availability of particular crops, wild plants, insects, and small animals. They also have important implications for labor requirements and allocation both within and outside the household, which can either reduce or increase women's workloads – even though usually CA reduces workloads overall, especially after the initial years of implementation. The direction and magnitude of potential trade-offs depend on the local context and the specific intervention.

In this respect, it is important to identify who benefits from CA and in what way, taking into account gender relations within the specific social context, gender roles in decision making over technology adoption, the form of farming practiced (plow- or hoe-based), access to and control over productive assets, and women's specific roles in the production system. Cultural norms and gender-biased access to productive resources, such as livestock or mechanized equipment, affect women's roles differently in animal-drawn tillage systems as opposed to mechanized tillage systems. Although women generally do not access

8 Text adapted from: Beuchelt and Badstue (2013); World Bank, FAO, and IFAD (2015).

small-scale farm machinery when farmers can afford it, they may benefit indirectly in terms of labor-saving.

It is important to analyze the gender division of labor. For instance, in hoe-based systems in Southern Africa, women are responsible for land preparation; CA disturbs the soil on a smaller area because they dig planting basins rather than following the traditional practice of inverting soil across the entire field. Digging planting basins increases women's labor in the first years of adopting CA, but over time their labor in land preparation decreases compared with traditional hoe tillage.

By contrast, in areas farmed with plows, men are typically responsible for land preparation, and the practice of minimum tillage reduces the time spent in preparing the land. Nevertheless, this practice actually increases women's labor requirements for weeding, because more weeds grow when using minimum tillage. Weeds can also increase in hoe-based minimum tillage systems, so in both cases it is important to address concerns related to economizing women's labor, including issues with obtaining herbicides and the potential negative impacts on health (herbicides affect women and men in different ways and to various degrees) and the environment. When a new agricultural technology is characterized as labor-saving, it is important to determine whose labor is saved, at what point during the agricultural season, and in which specific production tasks.

Leaving crop residues on fields to create mulch, another common CA practice, can make weeding more labor-intensive and reduce the fodder for livestock (although not in all instances, as the rotation crop can be grown for livestock). Women responsible for feeding the livestock or grazing small stock may be forced to travel longer distances or purchase a resource that was previously provided freely in the field. Conflicts may also arise between CA adopters and pastoralists. To avoid these situations, prior to CA introduction and adaptation it is essential that the crop-livestock interactions are adequately understood and resolved among farmers and local stakeholders, with local by-laws explaining to rural men and women what the role and benefits of residues for CSA and CA practices are. Crop residues or living cover crops can be used for improving soil organic matter and soil fertility, and for building the resilience of soils to climate change effects. Soil cover can reduce the work burden as it may suppress weeds.

Where land is plentiful, reduced tillage may encourage men to enlarge the area they farm, generating more labor for women in harvesting and post-harvest operations. In this case, the peak labor requirement shifts from land preparation to harvesting and from men to women, with positive or negative effects depending on the importance of women's labor as a source of income.

Promoting herbicide use as a CA practice can have negative consequences by eliminating weeding, which can be an important source of **wage income for women**. It is also important to define what we mean by "weeds," as many plants destroyed by herbicides may be important foodstuffs collected by women when they weed, and therefore herbicides affect their household food and nutrition security. Herbicide application can negatively affect intercrops, especially when instructions on how to apply them are not fully understood or adequate products are not available. Some herbicides like glyphosate or atrazine can contaminate groundwater and affect human and animal health. Labor-saving technologies for land preparation, sowing, weeding, or threshing can also reduce traditional work, resulting in less income opportunities for poor women or landless groups.

The farming household should not be assumed to operate as a unified economic entity. It is important to consider women's and men's roles and work responsibilities in the farming household, and how decisions are taken on allocating resources or adopting technologies in farming systems. Resources are usually allocated according to the priorities of the most powerful household member, in most cases a male.

The introduction of **improved technologies**, like a mechanical thresher or plastic row/drum sowing technologies, usually helps to reduce family farm labor and does not require hired labor. Nevertheless, these technologies may negatively affect poor and landless women, who can lose an important source of income and have less access to extension services to learn about new technologies. In Zambia, women were reluctant to introduce maize-bean intercropping because they feared to lose control over bean cropping and their entitlements to the beans, which are considered women's crops. The use of other technologies can be exhausting for women and can reduce their capacity to perform other household chores, implying trade-offs with their reproductive role. Although men typically focus on crops with higher market value, prioritizing yield, appearance, and market demand, women prioritize crops that are more nutritious, better tasting, and easier to cook, and also less risky in terms of food security. These different priorities must be recognized to avoid resistance against adoption of these new technologies.

## Checklist to explore potential effects of CA on women and men in smallholder agricultural systems

| Category | Questions for exploring potential effects of CA on women and men |
|---|---|
| Food security and nutrition diversity | ▸ Is there potential for a yield increase? Who benefits from this?<br>▸ Will crop rotation/intercropping affect nutrition diversity and food security? How?<br>▸ Will herbicides and mulch layers affect traditional intercrops and wild vegetables (often planted/controlled by women)? If so, will this affect nutrition diversity, food security, or increase gender disparities?<br>▸ Does anyone depend on crop residues? Is there a risk that livestock farmers will be negatively affected if residues are retained for mulching? What are the gender implications?<br>▸ Will food or cash crops be grown? If cash crops are used, who controls the income, and is it allocated to household food and health expenditure?<br>▸ What is the risk of yield reduction, and how will it affect food security?<br>▸ What types of crops provide more/less risks for food security? Who will be most affected?<br>▸ What types of crops for intercropping provide more/less risk for food security?<br>▸ Who decides, and who will be most affected by, decisions taken by others? Is there any specific gender impact? |
| Health | ▸ Will yield increase or crop diversification improve nutrition? How? Will household members benefit equally? How will this lead to better health?<br>▸ Is there a risk that herbicide use may lead to health hazards? How? Who will be affected?<br>▸ What are the effects of increased labor requirements on household members, especially women and children? For example, is there a risk that children's welfare and nutrition may be negatively affected? |
| Access to information and technology | ▸ Do extension services target women and men equally? Are the extension services gender-responsive – i.e., do they consider women's special needs?<br>▸ Will the understanding of agricultural management practices be increased? Whose understanding? Is there a risk this may increase gender disparities? Who will be targeted and who will benefit?<br>▸ Will other sustainable agricultural technologies be discussed as alternatives to CA?<br>▸ What are women's specific needs and constraints in the farming system? Are these taken into account? Is there a risk that women may be excluded from the use and benefits of mechanization due to prevailing gender norms? |
| Resources and labor | ▸ How will the introduction of CA change the division of tasks and the roles of men and women?<br>▸ Who will benefit from reduced drudgery due to mechanization and/or reduced tilling?<br>▸ Will labor requirements for land preparation increase in the short term? Who will do this labor?<br>▸ Whose labor will be reduced when herbicides are introduced? To whom is this a benefit?<br>▸ Who can lose out from a reduction in labor requirements?<br>▸ Are herbicides available and affordable? To whom? Who decides on herbicide use?<br>▸ Who has access to and control over land? Is there a risk that land improvement through CA can lead to loss of access to land and/or water?<br>▸ Is there a risk that crop rotation/intercropping will lead to "men's crops" encroaching on females' plots? Is there a risk that women may lose access to land or control of traditional "women's crops" and/or related income?<br>▸ Is there a risk that labor requirements to obtain alternative livestock feed or fuel will increase if residue availability is reduced? Who will be affected by this?<br>▸ Who, if anybody, is affected when herbicides/mechanization replace labor? Women or men? Do they have alternative income opportunities? What does it mean for their families and for food security? |
| Income, marketing, and value chains | ▸ Who benefits from and decides on the use of additional income or savings? Is there a risk that this may lead to an increase in gender disparities?<br>▸ Who is affected when wild plants can no longer be harvested and consumed or sold?<br>▸ What are the effects when crop residues left in the field become private property? How does this affect shepherds/livestock producers?<br>▸ What are the effects of investment in CA technologies on households' financial situations?<br>▸ Who (men or women, or both) markets the crops?<br>▸ Are CA products recognized by traders, retailers, and consumers?<br>▸ What types of markets are accessible to men and women, such as group marketing, local markets, supermarket chains, and retailers? |

**Land tenure** is another relevant issue because of the significant and long-term investment in soil improvement. Where land tenure is uncertain, farmers may be reluctant to adopt CA because they risk losing their investment if the land is reallocated or reclaimed by others. Farmers often prefer to experiment with new technologies, including CA, on a rented plot. If they decide to adopt new technologies, they typically do so on their own land, where they have secure control of their investment. Another important issue to take into account is the access to water and the related gender differences.

For all of these reasons, it is important to conduct broad consultations with both men and women prior to introducing CA practices, with an adequate assessment of how they will be affected. Moreover, some aspects require additional knowledge generated by research and experimenting.

### Questions for reporting

1. What are three main gender issues when promoting conservation agriculture? Why these three gender issues?
2. Would these issues create barriers to adopting conservation agriculture? If yes, how could they be overcome?

## Working group session 2: Conservation agriculture

### Exercise: Analyzing gender aspects during the design, implementation, monitoring, and evaluation of gender-responsive conservation agriculture projects

**Expected result:**
At the end of this exercise, the training workshop participants are expected to have acquired a better understanding of how to analyze the gender dimensions of conservation agriculture when they design, implement, monitor, and evaluate a CSA project, and to be able to identify the most relevant gender issues related to their own projects.

**Proposed steps:**

1. Form small working groups of four to five participants (preferably the same group as in the session 1 working group).
2. Review and discuss the case study described below related to a conservation agriculture project.
3. Analyze the checklist included in the box to start a discussion on the gender implications of the proposed project, taking into account your own experience with these issues.
4. Answer the last two probing questions mentioned at the end of the handout to guide the reporting.
7. Report the results of the working groups in plenary.

### Why do we consider gender issues when introducing conservation agriculture?

Fostering the adoption of conservation agriculture (CA) has the potential to address three areas of crucial importance to smallholder farmers:

1. **Food security:** CA can contribute to household food security by making more efficient use of rainwater and by increasing soil fertility, through the introduction of nitrogen-fixing cover crops.
2. **Demands on household labor:** HIV/AIDS and other diseases, and urban migration and education, reduce labor availability in rural households and increase the burden of labor-intensive activities among women and children. CA technologies can reduce labor requirements (especially in peak seasons) for land preparation and weeding.

3. **Household incomes:** CA could reduce expenditure on hiring farm power services and purchasing fertilizer, while generating additional revenue through production of fodder and cash cover crops.

A program plans to introduce CA with an emphasis on reduced tillage systems to address concerns about the impact of conventional tillage practices on land degradation. The main farming system in the region is small-scale mixed farming with hand-hoe and draught animal power (DAP). The poorer households struggle to make a living, principally through casual labor augmented by petty sales of crops and small livestock. They may own a few chickens or goats, depending entirely upon hand power; or they may look after the livestock owned by wealthy groups. Poor households cultivate less than 1 hectare or rent it from middle-income households in return for labor. They rarely purchase inputs, and make limited use of DAP.

Interestingly, female-headed households (which constitute 30 percent of total households) are overrepresented among the wealthier households in one area and among the poor in another pilot area. In addition to selling their produce, female-headed households earn extra income by working in businesses such as hotels, shops, bars, and schools. The gender division of labor is influenced by the source of farm power, activity, sex of household head, and household wealth.

- From field data it is found that: All operations directly related to the use of DAP or tractors are performed by men in both conventional and reduced tillage systems.
- Women sometimes plant behind the draught animals, but only men plant behind tractors; herbicide applications are done only by men.
- In hoe and DAP households, the household head (female or male) tends to take the lead in many activities.
- In richer households, most of the operations are performed by hired male laborers (female household members sometimes help with weeding and harvesting).
- There is a slight tendency for women to play a greater part in weeding, but often the associations noted above are more dominant.
- In many instances, who (men or women) benefits from the labor saving associated with reduced tillage combined with cover crops is household specific.
- For some activities, gender roles take precedence over household type: men benefit from the time saved using DAP or tractors more efficiently, while women benefit from DAP-related technologies (such as the no-till planter or the ripper planter) that reduce planting activities and time spent weeding.

## Checklist to address gender issues in conservation agriculture

- What changes are made in the farming system?
- Who decides to make the change, women or men?
- Who implements the changes, women or men?
- Who needs the new CA technology, men or women?
- If the change requires new technology, who owns the technology, women or men? Who uses it, women or men?
- Because of this new practice, do the responsibilities of men and women change? Do some members of the household have new responsibilities?
- Do men and women have more free time because of this change?
- Are there any financial benefits or burdens from making this change? For whom?
- Will the change create any problems? For women or men? Are there any measures to mitigate the trade-offs?

## Questions for reporting

1. When you start designing a gender-responsive CA project, what are the first three steps to take? Why these three?
2. What kind of gender issues do you need to consider in the design of your activities and the implementation strategy for a gender-responsive CA project?

# Appendix 6

# Introduction to the Margolis Wheel Tool

It is suggested that this Margolis Wheel exercise be carried out at the beginning of the workshop to encourage the exchange of experiences and lessons learned among the participants and the organizers/facilitators.

Objectives:

- Give participants the opportunity to discuss real problems with gender integration in their project and generate potential solutions.
- Encourage participants to share problems and actively seek experiences and suggestions from each other.

Materials:

- Two sets of five or six chairs arranged in two concentric circles, the inside ones facing the outside; or people can stand in two concentric circles with those inside facing out.
- A watch or electronic timer to time each round.
- Object to make a noise (cup and spoon, bell, and so on).

Time: 20 minutes

## Procedure

1. Ask participants to reflect on particular problems they will face when dealing with gender integration in their project. This reflection can be focused on a recent session and could include:
   - Challenges in identifying gender-related issues.
   - Problems/difficulties likely to be encountered when you involve women in the project's activities.
2. Then ask participants to sit in any seat, or stand in circles opposite someone else. Instruct them that those sitting in the inside circle will be the consultants or solution-suggesters. Explain that each pair has 3 minutes to discuss problems and potential solutions.
3. After 3 minutes, the outside circle rotates by one chair, bringing a new client to face each consultant.
4. Give another 3 minutes for discussion.
5. Then give 2 minutes for all clients and consultants to write down a summary of problems and solutions.
6. After this process is complete, the clients and consultants change circles and reverse roles. The exercise is repeated.

## Comments

You could give an example from your own experience to demonstrate this exchange. The exercise is most effective when there has been prior discussion of problems and constraints, for example if participants are with colleagues from the same institution, programs, or department, discussing what should happen after the workshop. Break the discussion by using the Margolis Wheel, as this will permit participants to discuss problems and relevant solutions.

This exercise usually generates highly animated discussions. It is important that participants write down a clear statement of the problems and potential solutions. These statements can then be used in a follow-up discussion, such as the elaboration of their participant action plan approach.

Basically, the exercise allows people to realize that very often the solutions to what seem very difficult problems lie within us (individually or as a group) and can be discussed given the right setting, time, and circumstances. This tool can be very empowering if used properly!

*Source:* Alan Margolis, personal communication

# Appendix 7

# Pre-workshop needs assessment questionnaire

Prior to the workshop, participants are kindly requested to complete the attached needs assessment questionnaire and return it by (DATE) to:

(NAME AND E-MAIL ADDRESS)

The results of this needs assessment will assist the facilitators in designing the content for the sessions of the workshop and selecting the most appropriate materials for the participants.

**We look forward to having the opportunity to work with you!**

## 1. Professional profile

1.1 Name:

1.2 Sex: Female____ Male____

1.3 Where do you work, and what is your title?

1.4 What are your main tasks and responsibilities?

## 2. Gender

2.1 How would you define gender?

2.2 How is your work related to gender and climate change issues?

2.3 What have been the major challenges in your work (if any) to integrating gender issues?
In general:
In climate change or climate-smart agriculture work:

2.4 List at least three ways in which you (or your organization) address these challenges

2.5 Do you use gender analysis in your work? If so, which tools/methods/models do you use?

2.6 Have you ever attended a course on gender analysis, gender integration or gender mainstreaming?
Yes____ No ____ If yes, describe briefly:

## 3. Workshop topics

3.1 Please prioritize the following areas in terms of issues you would like to see covered:
H = High priority, M = Medium priority, L = Low priority

| Topic | H, M or L |
|---|---|
| Gender analysis and gender concepts: this helps in understanding how men and women manage and negotiate their roles and responsibilities in their households, communities and society, as well as changes in divisions of labor, decision-making patterns, and so on | |
| Analysis of impacts of climate change on women, men, boys and girls, as well as related socio-economic issues | |
| Climate change and climate-smart agriculture terminology and concepts | |
| Situation analysis: analysis of gender dimensions of climate-smart agriculture, exploring existing gender relations and inequalities, their causes, and their impact on socio-economic development | |
| Stakeholder analysis: indicates the different priorities, risks and vulnerabilities linked to climate change, what people have at stake, what they are willing to invest in changing, and what benefits they can expect to get from a proposed intervention | |
| Livelihood analysis: a gender-sensitive analysis that allows us to understand men's and women's options; their access to services, education and markets; their vulnerabilities to climate change; and their coping strategies and opportunities | |
| Identification of gender issues in needs assessment and targeting of CSA interventions | |
| Gender mainstreaming in CSA project and program formulation | |
| Gender-sensitive monitoring and evaluation systems in CSA interventions | |

# Appendix 8

# References and additional materials


**Aguilar, L., Granat, M., and Owren, C.** 2015. "Roots for the Future: The Landscape and Way Forward on Gender and Climate Change." International Union for Conservation of Nature (IUCN) and Global Gender and Climate Alliance (GGCA), Washington, DC (available at https://portals.iucn.org/library/sites/library/files/documents/2015-039.pdf).

**Ahmad, N., El-Fatal, L., Pehu, E., Poutiainen, P., and Vyzaki, M.** 2014. "Gender, Agriculture, and Climate Change." Agriculture and Environmental Services Department, World Bank, Washington, DC (available at http://documents.worldbank.org/curated/en/2014/02/18967283/gender-agriculture-climate-change).

**Barnard, J., Manyire, H., Tambi, E., and Bangali, S.** 2015. "Barriers to Scaling up/out Climate Smart Agriculture and Strategies to Enhance Adoption in Africa." Forum for Agricultural Research in Africa (FARA), Accra (available at http://faraafrica.org/wp-content/uploads/2015/10/Barriers-to-scaling-up-out-CSA-in-Africa.pdf).

**Bernier, Q., Franks, P., Kristjanson, P., Neufeldt, H., Otzelberger, A., and Foster, K.** 2013. "Addressing Gender in Climate-Smart Smallholder Agriculture." ICRAF Policy Brief 14. World Agroforestry Centre (ICRAF), Nairobi (available at https://cgspace.cgiar.org/handle/10568/27836).

**Bernier, Q., Meinzen-Dick, R., Kristjanson, P., Haglund, E., Kovarik, C., Bryan, E., Ringler, C., and Silvestri, S.** 2015. "Gender and Institutional Aspects of Climate-Smart Agricultural Practices: Evidence from Kenya," CCAFS Working Paper No. 79. Copenhagen, CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) (available at www.ccafs.cgiar.org).

**Beuchelt, T.D., and Badstue, L.** 2013. "Gender, Nutrition, and Climate-smart Food Production: Opportunities and Trade-offs." *Food Security* 5:709–21 (available at http://link.springer.com/article/10.1007%2Fs12571-013-0290-8).

**Bishop-Sambrook, C., Kienzle, J., Mariki, W., Owenya, M., and Ribeiro, F.** 2004. Conservation Agriculture as a Labour-Saving Practice for Vulnerable Households: Suitability of Reduced Tillage and Cover Crops for Households under Labour Stress in Babati and Karata Districts, Northern Tanzania. A joint study by the International Fund for Agricultural Development (IFAD) and Food and Agriculture Organization (FAO).

**Bryan, E., Bernier, Q., Espinal, M., and Ringler, C.** 2016. "Integrating Gender in Climate Change Adaptation Programmes. A Research and Capacity Needs Assessment for Sub-Saharan Africa." Working Paper No. 163. Copenhagen, CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) (available at https://cgspace.cgiar.org/handle/10568/72482).

**CARE.** 2010. "Adaptation, Gender, and Women's Empowerment." CARE International Climate Change Brief (available at http://www.care.org/sites/default/files/documents/CC-2010-CARE_Gender_Brief.pdf).

**CARE.** 2016. "ALP Results, Outcomes, and Impacts Report, January 2010 to June 2015." Adaptation Learning Programme for Africa (available at http://careclimatechange.org/publications/alp-report-2010-2015/).

**CARE and Food Tank.** 2015. "Cultivating Equality: Delivering Just and Sustainable Food Systems in a Changing Climate." (available at http://www.care.org/sites/default/files/documents/CARE-Food%20Tank-CCAFS_Report_Cultivating-Equality.pdf).

**CCAFS** (CGIAR Research Program on Climate Change, Agriculture and Food Security). 2013. "Big Facts on Climate Change, Agriculture, and Food Security." Copenhagen (available at https://ccafs.cgiar.org/bigfacts/#).

**CCAFS** (CGIAR Research Program on Climate Change, Agriculture and Food Security). 2015. "Supporting Women Farmers in a Changing Climate: Five Policy Lessons." Policy Brief 10,. Copenhagen (available at https://cgspace.cgiar.org/bitstream/handle/10568/68533/CCAFS%20PB10.pdf?sequence=2&isAllowed=y).

**CCAFS and FAO** (CGIAR Research Program on Climate Change, Agriculture and Food Security and Food and Agriculture Organization). 2014. "Climate-Smart Agriculture: What is it? Why is it needed?" (available at http://www.fao.org/3/a-i4226e.pdf).

**CTA** (Technical Centre for Agriculture and Rural Cooperation). 2016. "Climate Solutions that Work for Farmers." Stories from the Field No. 1. Wageningen (available at http://publications.cta.int/media/publications/downloads/1867_PDF_PBBJWiT.pdf).

**Diiro, G., Petri, M., Zemadim, B., Sinare, B., Dicko, M., Traore, D., and Tabo, R.** 2016. "Gendered Analysis of Stakeholder Perceptions of Climate Change, and the Barriers to its Adaptation in Mopti Region in Mali." Research http://oar.icrisat.org/9512/1/Text%20Gender%20Analysis.pdf).

**ECOSOC. 1997.** Coordination of the policies and activities of the specialized agencies and other bodies of the United Nations system. Mainstreaming the gender perspective into all policies and programmes in the UN system (available at http://www.un.org/womenwatch/osagi/pdf/ECOSOCAC1997.2.PDF).

**El-Fattal, L.** 2012. "CSA is 'smarter' when informed by a gender perspective." WOCAN Policy Brief. Women Organizing for Change in Agriculture and Natural Resource Management (WOCAN), Bangkok (available at http://www.wocan.org/system/tdf/FINAL%20120919_WOC_Policy_Brief_3_vol1.pdf?file=1).

**FAO** (Food and Agriculture Organization). 2001. "Field Level Handbook." Socio-Economic and Gender Analysis Programme (SEAGA), Rome (available at http://www.fao.org/docrep/012/ak214e/ak214e00.pdf).

**FAO** (Food and Agriculture Organization). 2011. "The State of Food and Agriculture 2010–2011. Women in Agriculture: Closing the gender gap for development." Rome (available at http://www.fao.org/docrep/013/i2050e/i2050e00.htm).

**FAO** (Food and Agriculture Organization). 2014a. E-learning course on gender in food and nutrition security. Rome (available at http://www.fao.org/fsnforum/news/new-fao-e-learning-gender-food-and-nutrition-security).

**FAO** (Food and Agriculture Organization).2014b. "Climate-Smart Agriculture Sourcebook." Rome (available at http://www.fao.org/docrep/018/i3325e/i3325e00.htm).

**FAO** (Food and Agriculture Organization).2014c. "How Do We Actually Change the Business as Usual Management of Agricultural Systems? A Methodology for Building Climate-smart Agriculture." Rome (available at http://www.fao.org/publications/card/en/c/e11b18f6-41a2-4413-b958-32159ed2435d/).

**FAO** (Food and Agriculture Organization).2015. "Smallholder Productivity under Climate Variability: Adoption and Impact of Widely Promoted Agricultural Practices in Tanzania." EPIC Policy Brief 2. Rome (available at www.fao.org/3/a-i4708e.pdf).

**FAO** (Food and Agriculture Organization). 2016a. "Mid-term evaluation of the Conservation-Agriculture Scaling-Up Project." Office of Evaluation, FAO, Rome (available at http://www.fao.org/3/a-bq888e.pdf).

**FAO** (Food and Agriculture Organization). 2016b. "Eastern Africa Climate-Smart Agriculture Scoping Study: Ethiopia, Kenya, and Uganda." By E. Njeru, S. Grey & E. Kilawe. Addis Ababa (available at http://www.fao.org/3/a-i5485e.pdf).

**FAO** (Food and Agriculture Organization). 2016c. "Gender Integration into Climate-smart Agriculture. Tools for Data Collection and Analysis for Policy and Research." Rome (available at http://www.fao.org/3/a-i5299e.pdf).

**FAO** (Food and Agriculture Organization). 2016d. "Gender-Responsive Disaster Risk Reduction in the Agriculture Sector: Guidance for Policy-makers and Practitioners." Rome (available at http://www.fao.org/3/b-i6096e.pdf).

**FAO** (Food and Agriculture Organization). 2017 (forthcoming). Guide to Mainstreaming Gender in FAO's Project Cycle.

**FAO and CCAFS** (Food and Agriculture Organization and CGIAR Research Program on Climate Change, Agriculture and Food Security).2013. "Training Guide: Gender and Climate Change Research in Agriculture and Food Security for Development." Rome (available at www.fao.org/docrep/015/md280e/md280e00.htm).

**Farnworth, C., Fones Sundell, M., Nzioki, A., Shivutse, V., and Davis, M.** 2013. "Climate-smart Agriculture and Beyond." Chapter 9 in *Transforming Gender Relations in Agriculture in Sub-Saharan Africa*. Swedish International Agricultural Network Initiative (SIANI), Stockholm (available at http://www.siani.se/book/gender_relations).

**Grist, N.** 2015. "Topic Guide: Climate Change, Food Security, and Agriculture." UK Department for International Development (DFID) (available at http://www.evidenceondemand.info/topic-guide-climate-change-food-security-and-agriculture).

**IFAD** (International Fund for Agricultural Development). 2014a. "Household Methodologies Toolkit." Rome (available at https://www.ifad.org/topic/household_methodologies/overview/tags/knowledge_notes).

**IFAD** (International Fund for Agricultural Development). 2014b. "Reducing Rural Women's Domestic Workload through Labor-saving Technologies and Practices Toolkit." Rome (available at https://www.ifad.org/topic/gender/overview/tags/knowledge_notes).

**IFAD** (International Fund for Agricultural Development). 2016. "How to Do Designing and Implementing Conservation Agriculture of IFAD investments in Sub-Saharan Africa." Rome (available at https://www.ifad.org/documents/10180/d9b6c0af-9a1b-4428-8cf9-cd54876e0fe4).

**IPCC** (Intergovernmental Panel on Climate Change). 2013. "Climate Change 2013: The Physical Science Basis. Summary for Policymakers." Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge and New York (available at http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WGIAR5_SPM_brochure_en.pdf).

**IUCN, GGCA, and UNDP** (International Union for Conservation of Nature, Global Gender and Climate Alliance, and United Nations Development Programme). 2009. "Training Manual on Gender and Climate Change." San José, Costa Rica (available at https://cmsdata.iucn.org/downloads/eng_version_web_final_1.pdf ).

**Jost, C., Ferdous, N., and Spicer, T.D.** 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 World Agroforestry Centre (ICRAF), Copenhagen (available at https://ccafs.cgiar.org/gender-and-inclusion-toolbox -.WG-zC5LQ_sl).

**Kiptot, E., and Franzel, S.** 2011. "Gender in Agroforestry in Africa: Are Women Participating?" ICRAF Occasional Paper No. 13. Nairobi (available at http://www.worldagroforestry.org/downloads/Publications/PDFS/OP16988.pdf).

**Lipper, L., Thornton, P., Campbell, B.M., Baedeker, T., Braimoh, A., Bwalya, M., Caron, P., Cattaneo, A., Garrity, D., Henry, K., Hottle, R., Jackson, L., Jarvis, A., Kossam, F. Mann, W., McCarthy, N., Meybeck, A., Neufeldt, H., Remington, T., Sen, P.T., Sessa, R. Shula, R., Tibu, A., and Torquebiau, E.F.** 2014. "Climate-smart Agriculture for Food Security." *Nature Climate Change* 4:1068–72 (available at http://www.nature.com/nclimate/journal/v4/n12/pdf/nclimate2437.pdf).

**Mwongera, C., Shikuku, K.M., Winowiecki, L., Okolo, W., Twyman, J., and** Läderach, P. 2014. Climate-Smart Agriculture Rapid Appraisal Report from the Southern Agricultural Growth Corridor of Tanzania (available at https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/28703).

**Mwongera, C., Shikuku, K.M., Winowiecki, L., Twyman, J., Läderach, P., Ampaire, E., van Asten, P., and Twomlow, S.** 2015. "Climate-smart Agriculture Rapid Appraisal (CSA-RA): A Prioritization Tool for Outscaling CSA. Step-by-step guidelines." International Center for Tropical Agriculture (CIAT), Cali (available at https://cgspace.cgiar.org/handle/10568/69250e).

**Nelson, S., and Huyer, S.** 2016. "A Gender-responsive Approach to Climate-Smart Agriculture: Evidence and Guidance for Practitioners." CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), Copenhagen (available at https://cgspace.cgiar.org/handle/10568/73049).

**Nyasimi, M., Amwata, D., Hove, L., Kinyangi, J., and Wamukoya, G.** 2014. "Evidence of Impact: Climate-Smart Agriculture in Africa." CCAFS Working Paper No. 86. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), Copenhagen (available at https://cgspace.cgiar.org/rest/bitstreams/35815/retrieve).

**O'Sullivan, M., Rao, A., Banerjee, R., Gulati, K., and Vinez, M.** 2014. "Levelling the Field: Improving Opportunities for Women Farmers in Africa." World Bank Group, Washington DC (available at http://documents.worldbank.org/curated/en/579161468007198488/Levelling-the-field-improving-opportunities-for-women-farmers-in-Africa).

**Perch, L.** 2014. "Towards More Equitable and Sustainable Development: Mainstreaming Gender Appropriate Strategies for CSA in Southern Africa. Methodological approach." RIO+ World Center for Sustainable Development. Report Series No. 2 (available at https://www.researchgate.net/publication/271505255_TOWARDS_MORE_EQUITABLE_AND_SUSTAINABLE_DEVELOPMENT_MAINSTREAMING_GENDER-APPROPRIATE_STRATEGIES_FOR_CSA_IN_SOUTHERN_AFRICA_-METHODOLOGICAL_APPROACH).

**Pretty, J.N., Guijt, I., Thompson, J., and Scoones, I.** 2003. "Participatory Learning and Action: A Trainer's Guide." International Institute for Environment and Development (IIED), London.

**Rioux, J., Gomez San Juan, M., Neely, C., Seeberg-Elverfeldt, C., Karttunen, K., Rosenstock, T., Kirui, J., Massoro, E., Mpanda, M., Kimaro, A., Masoud, T., Mutoko, M., Mutabazi, K., Kuehne, G., Poultouchidou, A., Avagyan, A., Tapio-Bistrom, M.-L., and Bernoux, M.** 2016. "Planning, Implementing, and Evaluating Climate-smart Agriculture in Smallholder Farming Systems." FAO (Food and Agriculture Organization), Rome (available at www.fao.org/3/a-i5805e.pdf).

**Rwehumbiea, F.B.R.** 2014. "A Comprehensive Scoping and Assessment Study on Climate-Smart Agriculture Policies in Tanzania." FANRPAN (available at http://www.fanrpan.org/documents/d01763/).

**Simpson, B.M.** 2016. "Preparing Smallholder Farm Families to Adapt to Climate Change. Pocket Guide 1: Extension Practice for Agriculture Adaptation." Catholic Relief Services, Baltimore (available at http://www.crs.org/sites/default/files/tools-research/pocket-guide-1.pdf).

**Swai, O.W., Mbwambo, J.S., and Magayane, F.T.** 2012. "Gender and Adaptation Practices to the Effects of Climate Change in Bahi and Kondoa Districts, Dodoma Region, Tanzania." *Journal of Sustainable Development* 5(12) (available at http://www.ccsenet.org/journal/index.php/jsd/article/view/22624).

**Twyman, J., Green, M., Bernier, Q., Kristjanson, P., Russo, S., Tall, A., Ampaire, E., Nyasimi, M., Mango, J., McKune, S., Mwongera, C., and Ndourba, Y.** 2014. "Gender and Climate Change Perceptions, Adaptation Strategies, and Information Needs: Preliminary Results from Four Sites in Africa." CCAFS Working Paper No. 83. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), Copenhagen (available at https://cgspace.cgiar.org/bitstream/handle/10568/51391/WP83.pdf).

**UNDP and GGCA** (United Nations Development Programme and Global Gender and Climate Alliance). 2012a. "Gender and Adaptation." Gender and Climate Change Africa Capacity Development Series, Training Module 2. New York (available at http://www.undp.org/content/undp/en/home/librarypage/womens-empowerment/gender_and_environmentenergy/gender_and_climatechange-africa.html).

**UNDP and GGCA** (United Nations Development Programme and Global Gender and Climate Alliance). 2012b. "Gender, Agriculture, and Food Security." Gender and Climate Change Africa Capacity Development Series, Training Module 4 (available at http://www.undp.org/content/undp/en/home/librarypage/womens-empowerment/gender_and_environmentenergy/gender_and_climatechange-africa.html).

**UNDP and GGCA** (United Nations Development Programme and Global Gender and Climate Alliance). 2012c. "Overview of Linkages between Gender and Climate Change." Gender and Climate Change Africa, Policy Brief 1. New York (available at http://www.undp.org/content/undp/en/home/librarypage/womens-empowerment/gender_and_environmentenergy/gender_and_climatechange-africa.html).

**UNFCCC** (United Nations Framework Convention on Climate Change). 2016. "Guidelines or Other Tools for Integrating Gender Considerations into Climate Change Related Activities under the Convention." New York (available at http://unfccc.int/resource/docs/2016/tp/02.pdf).

**Vermeulen, S.J.** 2015. "Closing the Gender Gap in Climate-smart Agriculture." CCAFS Info Note. August. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), Copenhagen (available at https://cgspace.cgiar.org/rest/bitstreams/58883/retrieve).

**Vermeulen, S.J., Campbell, B.M., and Ingram, J.S.I.** 2012. "Climate Change and Food Systems." *Annual Review of Environment and Resources* 37:195–222 (available at http://arjournals.annualreviews.org/eprint/EBIXxM7sNxrBJyuRYgki/full/10.1146/annurev-environ-020411-130608).

**WEDO, 2012.** "Women making the case for U.S. action on climate change." Article by Rachel Harris (available at http://wedo.org/women-making-the-case-for-u-s-action-on-climate-change/)

**Westermann, O., Thornton, P., and** Förch, W. 2015. "Reaching More Farmers: Innovative Approaches to Scaling up Climate-smart Agriculture." CCAFS Working Paper no. 135. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), Copenhagen (available at https://cgspace.cgiar.org/rest/bitstreams/60041/retrieve).

**World Bank.** (no date). Conceptual Framework for Gender Analysis and Planning (available at http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/EXTTOPPSISOU/0,,contentMDK:20589207~menuPK:1442609~page-PK:64168445~piPK:64168309~theSitePK:1424003,00.html).

**World Bank.** 2015. "The Cost of the Gender Gap in Agricultural Productivity in Malawi, Tanzania, and Uganda. Washington, DC (available at http://documents.worldbank.org/curated/en/2015/10/25155021/cost-gender-gap-agricultural-productivity-malawi-tanzania-uganda).

**World Bank, FAO** (Food and Agriculture Organization), **and IFAD** (International Fund for Agricultural Development). 2008. *Gender Issues in Monitoring and Evaluation. Module 16 of the Gender in Agriculture Sourcebook* (available at http://siteresources.worldbank.org/INTGENAGRLIVSOUBOOK/Resources/CompleteBook.pdf).

**World Bank, FAO** (Food and Agriculture Organization), **and IFAD** (International Fund for Agricultural Development). 2015. *Gender in Climate-Smart Agriculture. Module 18 for the Gender in Agriculture Sourcebook* (available at www.fao.org/3/a-az917e.pdf).

## Videos, e-learning courses and websites

FAO/MICCA: Understanding Climate-Smart Agriculture
https://www.youtube.com/watch?v=lUdNMsVDIZ0

FAO/MICCA: Climate-Smart Agriculture in Action
https://www.youtube.com/watch?v=OzFSNZfBcFc&list=PLzp5NgJ2-dK7wTr_-SNbSEzBd98a32OZX&index=11

FAO: Gender Gap in Agriculture
https://www.youtube.com/watch?v=uDM828TpVpY

World Bank Institute: Climate-Smart Agriculture – A Triple Win
https://www.youtube.com/watch?v=G0YTZ9K3CCE

CIAT: Gender inclusive research; Why and How
https://www.youtube.com/watch?v=ony2GHjYEro

FAO e-learning tool 2014: Gender in Food and Nutrition Security
http://www.fao.org/elearning/#/elc/en/courses/GEND

World Bank Group: CSA guide of the Climate-Smart Agriculture Global Solution Group
https://csa.guide

TRAINING MODULE

# How to integrate gender issues in climate-smart agriculture projects

Climate-smart agriculture (CSA) is an approach aimed at sustainably increasing agricultural productivity and incomes; adapting and building resilience to climate change; and reducing and/or removing greenhouse gas emissions. When it comes to developing and adopting CSA practices, men and women are not starting at the same point, due to their different access to productive resources, financial capital, and advisory services. There is now an international consensus that the design and implementation of climate change response strategies and projects must consider gender-specific differences in the capacity to adapt to and mitigate climate change.

The training module *How to Integrate Gender Issues in Climate-smart Agriculture Projects* provides practical approaches for designing gender-responsive CSA projects. It uses lessons from previous work to illustrate ways of integrating gender issues throughout the project cycle to ensure that the specific needs and priorities of men and women are adequately addressed. The module also provides an overview of gender-responsive planning and implementation processes, approaches and tools for conducting a gender analysis, a glossary of key terms and concepts of CSA and gender, and checklists for gender integration in each phase of the project cycle.

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ISBN 978-92-5-109409-9
9 789251 094099
I6097E/1/04.17