

A Gender-responsive Approach to Climate-Smart Agriculture

Evidence and guidance for practitioners



Overview of practice

Taking a gender-responsive approach to Climate-Smart Agriculture (CSA) means that 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.



GLOBAL ALLIANCE FOR
CLIMATE-SMART AGRICULTURE

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KEY MESSAGES

- 1** The gender gap in agriculture affects how men and women access and benefit from CSA.
- 2** A gender-responsive approach to CSA addresses this gap by recognizing the specific needs and capabilities of women and men.
- 3** Site-specific CSA practices that are also gender-responsive can lead to improvements in the lives of smallholder farmers, fishers and foresters, as well as more sustainable results.



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Overview of gender-responsive approach

The gender gap in agriculture is a pattern, documented worldwide, in which women in agriculture have less access to productive resources, financial capital and to advisory services compared to men (FAO, 2011). In the context of Climate-Smart Agriculture (CSA), this gap means that men and women are not starting off on a level playing field. While gender shapes both men's and women's lives, the tendency is for women to have a more disadvantaged position in comparison to men. This can have significant implications for the adoption and sustainability of practices under a CSA approach. Further, there is a risk that, if this gap is not taken into consideration, the development of site-specific CSA options could reinforce existing inequalities.

The aim of this brief is to explain how to take into account the gender gap in agriculture in the development of site-specific CSA-sensitive practices, such as those described in other briefs in this series, through the adoption of a **gender-responsive** approach. This approach means that the particular needs, priorities, and realities of men and women need to be recognized and adequately addressed in the design and application of CSA so that both men and women can equally benefit (World Bank, FAO and IFAD, 2015). It also means that, as changes in agriculture are pursued in response to a changing climate, there needs to be a consideration of ongoing socio-economic changes. An example of a socio-economic change is the move of more women into agriculture as men exit, and the related inequities in rights over resources including land, water, trees, livestock, grazing and fisheries (Huyer et al., 2016). Lastly, a gender-responsive approach means that the monitoring and assessment of CSA needs to include gender-sensitive indicators which help track progress in closing the gender gap in agriculture¹ (Huyer et al., 2015).

It is important to note that this brief was developed under the Global Alliance for Climate-Smart Agriculture and is part of a series of briefs on practices. As such, the focus here is primarily on practices, but a gender-responsive approach across the entire field of CSA is needed to enhance them. Additional gender-responsive efforts in the field of CSA, which are outside the scope of this brief,

include the following: giving attention to gender issues in CSA policymaking; building an evidence base on gender in CSA; developing financial instruments that respond to women's and men's needs; and introducing institutional change to develop capacity and build commitment on gender equality and women's empowerment (Huyer et al., 2015; Lipper et al., 2014).

Key concepts

Climate-Smart Agriculture (CSA)

CSA is an approach to developing the technical, policy and investment conditions to achieve sustainable agricultural development for food security under climate change. It integrates the three dimensions of sustainable development (economic, social and environmental) 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.

Gender – "Gender" refers not to male and female, but to masculine and feminine – that is, to qualities or characteristics that society ascribes to each sex. People are born female or male, but learn to be women and men. Perceptions of gender are deeply rooted, vary widely both within and between cultures, and change over time. But in all cultures, gender determines power and resources for females and males (FAO, 2009). For example, ethnic, gender, and seniority hierarchies were found to shape the processing of climate information among different groups in Uganda (Roncoli, 2006; Moser, 1993; Boyd, 2010).

Equality between women and men (gender equality)

Gender equality is a state in which women and men enjoy equal rights, opportunities and entitlements in civil and political life. It implies equal participation of women and men 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 in all other aspects of their livelihoods (FAO, 2009).

¹ For sample indicators, see World Bank, FAO & IFAD, 2015.

How to adopt a gender-responsive approach to CSA

As explained above, the gender gap in agriculture is of relevance to CSA as it potentially puts women and men in unequal positions in terms of participating in and benefitting from site-specific CSA practices and options. How can CSA-sensitive practices be identified, designed and implemented in a way that takes into account the local, existing

differences and inequalities between men and women, and contributes to the promotion of gender equality?

The following Table 1 presents recommended criteria for evaluating whether CSA-sensitive practices are following a gender-responsive approach to better respond to the needs and views of women and men.

Table 1. Criteria for evaluating whether a gender-responsive approach is used in CSA-sensitive practices

Criteria	Explanations of criteria
1. The development and application of the practice have been informed by gender analysis	<p>Gender analysis: At the outset of the work to develop or introduce a practice, an analysis of who has what and why, who does what and why, who makes decisions and why, and who needs what and why is carried out to develop an understanding of the site-specific gender, cultural and socio-economic context. This analysis explores differential vulnerability of men and women to risk, opportunities and benefits, power relations within the household and the community, willingness to take on risk, and modes of access to sources of information. Findings of this analysis inform the application of the practice.</p> <p>For additional guidance on carrying out gender analysis in the context of climate change and agriculture, see FAO and CCAFS, 2012.</p>
2. All work related to the practice has involved the participation and engagement of men and women, in particular those who implement the practice	<p>Participation and engagement: Female and male farmers are involved in developing, adapting, testing and adjusting practices to meet their needs, preferences, and opportunities. Communities and experts work together to understand local problems, climate projections and available assets and services, and to identify and test potential solutions, reducing existing gender inequalities and discrimination. Institutions are strengthened to continue fostering stakeholder engagement.</p> <p>For additional guidance on promoting participation in the context of climate change, see CARE, 2009.</p>
3. Efforts are made to reduce the constraints to uptake of the practice	<p>Constraints to uptake of practices are addressed: Findings of the gender analysis are used to understand where there may be constraints to uptake of the practice, such as unequal roles in decision-making, unequal access to information or credit, and unequal ownership of land. By promoting an equitable access to resources and participation in household decision-making, all potential end-users can benefit from information and capacity development related to the opportunities of CSA-sensitive practices.</p>
4. The practice results in immediate benefits for men and women	<p>Immediate benefits: The practice itself is designed to produce benefits for both men and women. These benefits include improvements in agricultural yields; reduction in the time, energy and labour spent by food producers, particularly women, on their agricultural activities; and increases in women's access to and control of agricultural inputs and income.</p>
5. The practice results in long-term benefits for men and women	<p>Long-term benefits: The practice itself contributes to longer-term changes in equality between men and women. It may enhance men's and women's resilience and agricultural productivity; increase women's control of resources; and increase participation of women and youth and other easily marginalized groups in decision-making at household and community levels.</p>

Challenges to adoption of a gender-responsive approach

Gender-responsive approaches to agricultural development in general have been promoted for decades. While the application of these approaches in the context of CSA is at an early stage, there is significant knowledge to draw upon in order to identify and overcome challenges that may arise. Main challenges include:

Weak enabling environment: A lack of political commitment or leadership on gender equality, due to a lack of gender awareness or resistance to incorporating gender issues into the work, can prevent the uptake of a gender-responsive approach. Lack of staff capacity or funding, or cultural barriers limiting women's participation and leadership in activities and organizations can also pose barriers (Bryan et al., 2016). Often, addressing gender equality may be viewed as an "add-on" to the main work activities and it will not be given the importance it requires.

Logistical hurdles: Time constraints, no or limited availability of gender expertise among team members, lack of monitoring of progress and results, or reduced funds dedicated to gender-related activities may hinder the completion of gender analysis and related activities.

To overcome these challenges, awareness-raising on why gender equality matters in CSA can be carried out at the beginning of the planning process. In addition, training, gender-responsive budgets, and incentives can be useful in overcoming logistical challenges².

Analysis of lessons learned, results and benefits of using a gender-responsive approach will improve further adoption of this approach.

Gender equality in the three pillars of CSA

A gender-responsive approach will achieve more effective and equitable outcomes, reduce project risks, and reduce the gender gap in outcomes from climate change activities (Green Climate Fund, 2015) because it better reflects the lives and experiences of agricultural communities. The following discussion explains why gender equality is relevant in all three pillars of CSA, and is then followed by Table 2

² See FAO, 2014 for further guidance.

in which the gender considerations of some CSA-sensitive practices are presented.

The majority of the research referenced here examines cases in which the gender gap hinders women's possibilities to benefit from CSA, however it is noted that the intersection of gender and CSA is more complex. Men's lives are shaped by gender (as well as other social factors), and further study is needed into their particular constraints or challenges, such as additional stress experienced during times of environmental change (Lambrou and Nelson, 2009).

Pillar 1. Sustainably increase agricultural productivity and incomes

It is common for men and women within the same agricultural household to pursue separate but interrelated livelihoods and to incorporate different technology and production management options. Thus, it is important to look at how these differences, shaped by social norms and intra-household decision-making, may affect men's and women's participation in more sustainable agricultural practices and the consequent benefits. At the same time, an awareness of the importance of gender equality in improving productivity in the agricultural sector is needed. As summarized in *Gender in Climate-Smart Agriculture: Module 18 for Gender in Agriculture Sourcebook*: "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" (World Bank, FAO and IFAD, 2015).

In concrete terms, efforts at project and broader, policy-level scales are needed. Efforts to address gender in the context of Pillar 1 include:

- systematic gender analysis to identify where there may be differences in men's and women's productivity;
- resolution of the challenges women experience in accessing, using, and supervising farm labour;
- improvement in women's access to productive inputs and resources such as extension and technologies (FAO, 2011);
- improvement in women's use of agricultural inputs; and
- improving their tenure of natural resources, as women's lack of access to secure land tenure is a major constraint

on adopting CSA (study from Niger and Malawi in World Bank, FAO and IFAD, 2015; Goldstein and Udry, 2008; and Quisumbing and Kumar, 2014).

A participatory approach that identifies income-generating opportunities for women can achieve positive outcomes for the whole family, such as a rangeland rehabilitation project in the Syrian Arab Republic, which increased women's income (IFAD, 2012, as in FAO, 2013).

Pillar 2. Adapt to and build resilience to climate change

The impacts of climate change and related adaptive strategies are not gender-neutral because vulnerability is often determined by socio-economic factors, livelihoods, people's capacity and access to knowledge, information, services and support – all of which may differ along lines of gender. In addition, men and women may have different coping strategies. Case studies show that one of the important effects of environmental stress in farming systems is the intensification of women's workloads and decreases in assets of poor households (Jost et al., 2015; Agwu and

Okhimamwe, 2009; Goh, 2012). Meanwhile, men and women are taking up new agricultural practices that are likely to enhance resilience to the effects of climate change (World Bank, FAO and IFAD, 2015).

In some cases, women have less access to climate information, such as weather forecasts through SMS or radio, in comparison to men (Twyman et al., 2014; Tall et al., 2014; FAO, 2013b; Kyazze et al., 2012). However, when women have access to information on CSA, they are often just as likely as men, if not more so, to adopt the practices. In Kenya, the most rapid adoption of drought-resistant crops was among women whose husbands were away and not making the day-to-day decisions (Twyman et al., 2014; Goering, 2015).

Addressing gender inequalities in the context of adaptation and resilience means developing an understanding of the different ways in which distinct socio-economic groups are affected by and are responding to climatic changes. Then, as resilience-enhancing practices and approaches are developed, it is critical that information is made available and accessible to men and women, boys and girls, and that any potential increase in workload is minimized.

Table 2. Potential gender considerations of various CSA-sensitive practices (Source: World Bank, FAO and IFAD, 2015; modified by authors of this brief)

CSA-sensitive practices	Gender impact	Requirements for adoption of practice					
	Women's control of income from practice	Relative amount of time until benefits are realized	Potential for women to benefit from increased productivity	Female and youth labour availability	Female access to and control of land	Female access to water for agriculture	Female access to cash and ability to spend it
<i>Conservation agriculture</i>	Low	High	High	Low–Medium	High	Low	Low
<i>Improved home gardens</i>	High	Low	High	High	High	High	High
<i>On-farm tree planting</i>	Low	High	Medium	High initially; Low later	High	High	Medium
<i>Small-scale irrigation</i>	Low–Medium	Low	High	Medium	High	High	Medium
<i>Livestock genetic improvement</i>	Low–High	High	High	Low–High	Low	High	Medium

Pillar 3. Reduce and/or remove greenhouse gas emissions, where possible

According to the definition of climate-smart agriculture, reducing and removing greenhouse gases often comes as a co-benefit of activities enhancing productivity, resilience and/or efficiency and reducing waste and losses along the food chain. The ability to adopt climate-smart agricultural practices that also reduce greenhouse gas emissions appears to be affected by gender inequalities. For example, in sub-Saharan Africa, insecure land tenure, workload, heavy tools, lack of capital and limited farm inputs posed major barriers to the adoption of conservation agriculture and agroforestry (often regarded as climate-smart) by women farmers.

When pursuing practices that contribute to climate change mitigation, it must be acknowledged that women and men are often in different starting positions to take them up. For example, agroforestry may be less accessible or offer fewer incentives to those with weaker tenure rights, and soil and water conservation may be difficult if hiring labour is not possible. On the other hand, some practices, like improved cooking stoves, biomass for energy and biogas, may be more attractive to women for their labour-saving features. Proposed mitigation actions therefore should harness the experiences, expertise, and realities of women and men alike.

Gender-sensitive indicators of CSA performance

Gender-sensitive indicators of the performance of a particular, CSA-sensitive practice include counts of the numbers of women and men engaged in testing or applying practices; they also measure long-term change. These changes include increased control of productive assets, participation in decision-making, knowledge, changes in behaviour and attitude, awareness, empowerment, and improved economic status and food security and nutrition of women and men. Further, to be able to measure the gender dimensions of a CSA practice's performance, women need to be actively involved in defining indicators and in monitoring implementation and impacts (Huyer et al., 2015).

Examples of gender-sensitive indicators (adapted from Thematic Note 3 of World Bank, FAO and IFAD, 2015):

Indicator focusing on gender issue within a project:

- Number of gender-responsive technologies applicable under a CSA approach, developed by research activities.

Gender-responsive technologies are defined as:

- technologies based on needs and interest of both female and male farmers;
- technologies that reduce time and labour for women farmers, and
- technologies that are accessible and affordable to both men and women.

Indicators of project outcomes designed to capture information on men and women to analyse the gender-related impacts:

- Number of farmers who have access to and use (i) weather and climate information services; (ii) price information on a regular basis (disaggregated by sex).
- Percentage change in crop yield per hectare and year as result of the CSA intervention (disaggregated by male or female-headed households and household members).
- Number of farmers participating in functional associations as a result of the project (disaggregated by sex and by type of association, for example, market cooperative, producer association).
- Farmers who consider themselves better-off (for example, in terms of livelihood, income, nutrition, wellbeing, social status or empowerment) now than before the CSA intervention (disaggregated by sex). Note: Measurement of this indicator would require direct feedback from farmers via a survey.

Case studies: Projects that have applied a gender-responsive approach to introducing CSA-sensitive practices

The Conservation Agriculture Scaling Up (CASU) Project, carried out by FAO in Zambia, works with local small-scale farmers to adopt conservation agriculture practices to enhance agricultural productivity and output, while also strengthening the agricultural systems'

resilience, and thus their capacity to adapt to climate change. The project also focuses on addressing the barriers to rural women's socio-economic empowerment, such as their lack of access to labour-saving technologies and productive resources including credit.

The gender-responsive practices promoted by the project are developed on the basis of collection of sex-disaggregated data, followed by an in-depth gender analysis of men and women farmers' different activities and specific needs. The CASU project will increase knowledge of gender and conservation agriculture through its ongoing sentinel site studies, measuring the effects of conservation agriculture adoption on men and women's time-use.

CSA-sensitive practices that contribute to reducing greenhouse gas emissions can take place at different parts of the food chain, as a case from Côte d'Ivoire shows. There, food processing, such as fish smoking, is often done by women. Women fish processors used to experience occupational health and safety hazards due to the outdated smoking and drying techniques. Thanks to an improved FTT-Thiaroye fish processing technique, which is safer, reduces the amount of coal and firewood used, reduces the processing time, and improves the quality of the end product, these women have improved their health, livelihoods and capacity to enhance the food security of their families. (World Bank, FAO and IFAD, 2015.)

By reducing the amount of fuel needed, the new technology reduces deforestation and food waste – both contributing to climate change mitigation. At the same time, the FTT-Thiaroye system improves adaptive capacity of the processors, as they are able to use the equipment also during rainy and humid periods and can apply it to a larger variety of fish. (World Bank, FAO and IFAD, 2015.)

CCAFS works with a number of partners including national governments and research institutions to test a range of interventions in Climate-Smart Villages across West Africa, East Africa, South Asia, Latin America, and Southeast Asia. It also collaborates with local farmers, community based organizations, national meteorological institutions and agencies, and private sector stakeholders.

After selecting potential sites, a steering group of community representatives and researchers is set up to identify appropriate CSA options for that village. The community chooses its preferred options through a participatory and

inclusive process, encouraging women and more vulnerable groups to participate. In Kenya's Lower Nyando valley, farmers discovered the value of agroforestry, with alleys of maize, sorghum and other crops sandwiched between rows of multi-purpose trees that stabilize and enrich the soil.

Demand for trees has led to nurseries springing up to supply tree seedlings. These nurseries are becoming an important source of income, particularly for women, who own more than half of the 22 nurseries now thriving in Lower Nyando. Working with farmers to incorporate small livestock such as poultry, sheep and goats into their farms brings additional resilience, income and food security.³

Conclusion

Climate change demands new approaches to agriculture: farmers', fishers' and foresters' practices will need to change in order to adapt to and mitigate climate change. To make these efforts sustainable it is essential that food, feed and fibre producers see tangible advantages in terms of improved income, livelihoods and reduced costs.

In order to support women's and men's equal uptake of and benefit in site-specific CSA practices, gender analysis as well as equal participation and engagement of women and men are the key actions to be taken at the outset of any CSA intervention. In the longer term, broader changes are needed in order to reduce the constraints women and men may face in terms of accessing resources, services and information.

Beyond CSA practices themselves, the institutions involved in climate change adaptation and mitigation will need to partner with women's community-based organizations to go beyond a focus on agricultural productivity and support income generation, access to savings and loans, nutrition and health services. This could also be a means for tapping into women's potential as effective innovators capable of identifying and designing new technologies – and adapting existing ones – to meet their needs (Huyer et al., 2015; Waters-Bayers et al., 2015). Lastly, more knowledge is needed on how gender roles shape women's and men's lives in engaging with CSA.

³ <https://ccafs.cgiar.org/climate-smart-villages>

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PRACTICE BRIEFS ON CSA

The Practice Briefs intend to provide practical operational information on climate-smart agricultural practices.

Please visit www.fao.org/gacsa for more information.

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Cover photo: Koinadugu Women's Vegetable Cooperative harvests carrots in the community crops, Sierra Leone, 2016.

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