

# Learning and action for gender-transformative climate-smart agriculture

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## **Abstract**

This paper reports on a networking meeting of the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) Gender and Social Inclusion (GSI) Flagship held at the university of Canberra, Australia on 1-2 April 2019. The meeting helped to identify opportunities for gender-transformative, climate-smart agriculture (CSA) through knowledge sharing and next steps for CCAFS Phase Two. Researchers involved in gender and social inclusion working across CCAFS reviewed the existing knowledge base, noted key gaps, and began the process of identifying future research questions and themes.

## **Keywords**

Phase Two; climate-smart agriculture; CSA; knowledge sharing; gender-transformative CSA; research priorities

## About the authors

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## Introduction

On 1 and 2 April 2019, the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) held the Gender and Social Inclusion (GSI) networking meeting, “Learning and Action for Gender-Transformative Climate-Smart Agriculture,” at the University of Canberra, Australia, in the context of the Annual Scientific Conference and Capacity Development Workshop of the CGIAR Collaborative Platform for Gender Research. The meeting was carried out through a CCAFS small-grant for networking. The meeting originated in recognition of the importance of refining GSI flagship priorities for CCAFS Phase Two. For this reason, it was deemed critical to engage in knowledge exchange with researchers involved in CCAFS gender and social inclusion projects across flagships and regions. These researchers were consulted in order to determine the existing knowledge base, identify key gaps and ways forward, and identify priority research questions and themes. Additionally, based on the experiences and knowledge of CCAFS researchers, the meeting was an opportunity to discuss the most valuable gender approaches and frameworks for promoting gender-equitable outcomes in the context of CSA.

To this end, the primary objective of the meeting was to assess opportunities and identify ways forward for gender-transformative, climate-smart agriculture (CSA) through knowledge sharing on gender outcomes in CCAFS research across regions and flagships. The day and a half event convened researchers contributing to GSI activities from across CGIAR centres and partners, including the International Center for Tropical Agriculture (CIAT), the International Crops Research Institute for the Sem-Arid Tropics (ICRISAT), the International Livestock Research Institute (ILRI), the World Agroforestry Centre (ICRAF), the International Maize and Wheat Improvement Center (CIMMYT), and the International Research Institute for Climate and Society (IRI) at Columbia University.

## Program and proceedings

On the first day, CCAFS Gender and Social Inclusion (GSI) Leader Sophia Huyer introduced the meeting objectives (<https://www.slideshare.net/cgiarclimate/learning-and-action-for-gender-transformative-csa>). This was followed by a round-table sharing of initial knowledge on CCAFS gender research from the regions, and presentations on key considerations for gender-transformative, climate-smart agriculture.

### Knowledge sharing on CCAFS gender research

- Presentation by Catherine Mungai of CCAFS East Africa, based at ILRI-Kenya, on “Gender and social inclusion activities in East Africa” - <https://www.slideshare.net/cgiarclimate/gender-and-social-inclusion-activities-in-east-africa>
- Presentation by Mathieu Ouedraogo of CCAFS West Africa, based at ICRISAT-Mali, on “Mainstreaming gender and social differentiation into CCAFS research activities in West Africa: Key achievements and lessons learned” - <https://www.slideshare.net/cgiarclimate/mainstreaming-gender-and-social-differentiation-into-ccafs-research-activities-in-west-africa-key-achievements-and-lessons-learned>
- Presentation by Elisabeth Simelton of ICRAF-Vietnam and CCAFS on “From sitting in the back rows to speaking from the front row” - <https://www.slideshare.net/cgiarclimate/from-sitting-in-the-back-rows-to-speaking-from-the-front-row-how-climate-services-changed-gender-relations>

Subsequently, meeting participants shared questions and comments raised by the three presentations, with major themes including:

- Experiences of regional community-based groups, such as savings and loan groups.
- Loan default policies and practices that regional groups have followed.
- The availability and uses of gender-disaggregated loan default data (Le et al. (in preparation))
- The development of gender CSA groups in West Africa to provide capacity-building specific to women farmers’ needs (Ouedraogo et al., 2018).
- Methods used for analysing gendered adoption of CSA practices.
- The importance of considering level of analysis (i.e., whether at the household or parcel level) and, *at each level*, understanding which household members are involved in decision-making surrounding adoption and who controls land and corresponding productive resources.

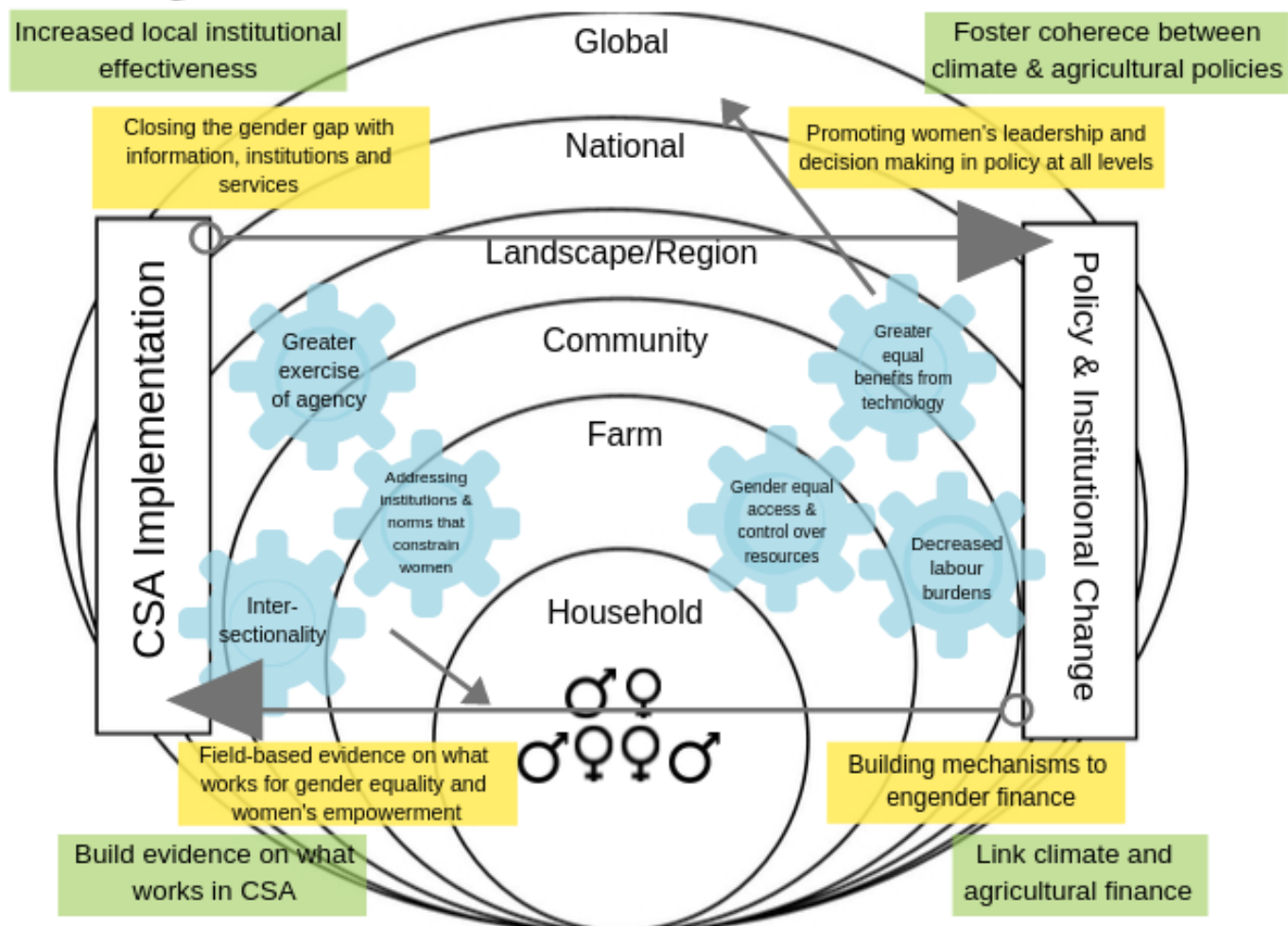


## CCAFS considerations for gender-transformative climate-smart agriculture (Day 1, Part 1)

The session was initiated by a presentation on “Gender transformation in climate-smart agriculture: A framework for action” (Annex 1) by Sophia Huyer. The proposed Framework for Action (Figure 1) conceptualizes the integration of gender equality into CSA and is a guide to the development of CCAFS research that incorporates gender and social inclusion objectives. It can also be used by other actors working in climate-resilient agriculture. This conceptual framework maps to the CSA approach outlined by Lipper et al., (2014) which identifies four areas of coordinated action for researchers, farmers, private sector, civil society and policymakers to integrate climate change into sustainable agriculture: (1) build evidence to support CSA; (2) increase local institutional effectiveness; (3) foster coherence between climate and agricultural policies; and (4) link climate and agricultural finance.

Figure 1: Gender empowerment and CSA

### Gender empowerment and CSA



Source: Huyer, Learning and action for gender-transformative CSA (2019)

The approach aims to: identify synergies and trade-offs among food security, adaptation, and mitigation; inform and influence local to global policy to sustainably increase agricultural productivity and increase incomes; achieve food and nutrition security; adapt and build resilience to climate change; and reduce emissions from agriculture.

By integrating gender equality goals into the four action areas, CCAFS can take the first steps towards defining gender-transformative CSA. In other words, it is important to assess and identify how CCAFS projects can:

1. Build “gender evidence” in CSA, such as what are the gender differences and trends in CSA adoption and how do women and men differentially benefit from CSA adoption?
2. Enhance the capacity of local institutions and services, including women’s organizations, to close the gender gap in capacity development and information and increase access to resources and opportunities to promote women and men smallholders’ greater climate resilience.
3. Ensure that gender equality and women’s empowerment are dealt with through coordinated climate and agricultural policy while promoting the participation and leadership of women in policy making at all levels, from local to global.
4. Build mechanisms to engender finance and investment.

Besides integrating gender considerations into Lipper’s four action areas, the guidelines also highlight important factors to consider for promoting women’s empowerment – and potentially gender transformation – via CSA. As noted in the CCAFS GSI Strategy (Huyer et al, 2016), gender equality refers to “equal rights, responsibilities and opportunities of women and men and girls and boys” and is a precondition to “improve the development process by putting social concerns at the centre (OSAGI 2001)”. Women’s empowerment challenges power relations as well as formal and informal rules and practices which regulate women’s lives and constrain their opportunities, such as their control over assets, resources, and knowledge. It focuses on the ability of individual women, through increased agency, to improve their bargaining power in both their public and personal lives (Sen, 1997; Batliwala 1994; Moser, 2017). Gender transformation takes place on a larger scale as a result of empowerment at the individual level and is about structural change in social and power relations. It is based on collective action, contestation, and negotiation for women’s full participation in economic and political life (Moser, 2017; Kabeer 2008; IFAD, 2018).

The main ingredients of empowerment (and subsequently transformation) are:

1. **Agency**, is “the capacity for purposive action, the ability to pursue goals, express voice and influence and make decisions free from violence and retribution (van Eerdewijk et al, 2017:14).” It includes the ability to make decisions in one’s life, exercise leadership, and engage in collective action. This includes the ability of women and girls to make choices that affect their lives and futures. This entails an expanding repertoire of options and opportunities to choose from and the ability to imagine new choices that were not previously thought possible (van Eerdewijk et al, 2017). Women develop new capacities that are realized by themselves and recognized by others, and that can open up livelihood options and increase their status in households and communities (see Galie et al, 2017; Hafkin and Huyer, 2006).

2. **Institutional structures and social norms** can define and influence women’s and girls’ agency, as well as women’s and girls’ control over resources (Badstue et al. 2014; Van Eerdewijk et al., 2017). In this way, agency exists in contestation with institutional structures or the social arrangements of formal and informal rules and practices.

3. **Resources** are “tangible and intangible capital and sources of power that women and girls have, own or use individually or collectively in the exercise of agency (van Eerdewijk et al, 2017)”. Resources consist of: land, women and girls’ critical thinking and skills, time, social capital, credit, agricultural inputs and services, and information (Galie et al, 2017; van Eerdewijk et al, 2017). Accessing and making decisions about resources may require contestation of power relations and social norms. Moser (2017) notes that access to and control over assets is an important avenue towards both women’s empowerment and structural transformation.

4. **Technology use and access** plays an important role in CSA and, as a result, it can be a critical factor in women’s ability to use and benefit from CSA. Depending on the circumstances, technology can have the potential to reduce women’s labour burdens, increase their agricultural production, and support their improved livelihoods (Carr and Hartl, 2010). In general, however, women access, use, and adopt technology in agriculture less than men (Huyer 2016; Ragasa, 2012).

## Discussion of considerations for gender-transformative climate-smart agriculture (Day 1, Part 2)

Using a large printed diagram of the framework for gender-transformative climate-smart agriculture presented on Day 1, meeting participants made comments to strengthen and clarify the framework. The results of the discussion are presented in Figure 1.

Highlights from the discussion:

- The social embeddedness of gender should be emphasized throughout the framework, from the household to global level. This means recognizing the normative structures and power relations that undergird gender dynamics and mediate who participates in and benefits from, CSA interventions and practices (see Tavenner & Crane 2018a for an in-depth framework to analyse feminist theories of power and social embeddedness). This is currently reflected in the gear on “Addressing institutions and norms that constrain women”.
- Incorporating and highlighting an understanding of the intersection of gender with other social categories, such as life-stage, seniority, wealth, class, and ethnicity at every level is important.
- Time poverty is an important factor affecting gender equality in agriculture (Simelton and Kawarazuka, 2019). While CCAFS has not developed a specific outcome on this, one of the CGIAR sub Intermediate Development Outcomes (sub-IDOs) relating to equity and inclusion states “technologies that reduce women’s labour and energy expenditure [are] developed and disseminated.” The CCAFS GSI Strategy focuses on two gender sub-IDOs, – women’s access to and control of productive assets and participation of women and youth in decision-making – while taking into account effects on women’s workloads (Huyer et al, 2016). For example, women often have multiple responsibilities pertaining to homecare and agricultural/livestock labour. CSA practices need to be “time-smart” and should be monitored in terms of time gains and/or time flexibility, to see how time is invested, saved, and redistributed. Results can also be measured in terms of technologies that reduce domestic work or support investments in income generating activities, child health, and education.
- Gender safeguards and trade-offs should be highlighted as key considerations for effective CSA implementation as “field-based evidence on how CSA can promote gender equality and women’s empowerment” should ensure CSA does not exacerbate gender inequalities (Duong et al. 2017; Simelton et al. 2018b). For example, a 2019 CCAFS study in East Africa found that CSA interventions that solely promote commercialization of crop and livestock products will likely

intensify men's control over benefits from production. Farm diversification, on the other hand, is more likely to have a positive impact on women's control (Tavener et al. 2019).

- Monitoring and evaluation (M&E) of gender and social inclusion outcomes at all levels of action should be emphasized with best practices documented.
- It is important to assess to what extent CCAFS projects can be gender-transformative, recognizing that not all projects will result in gender transformation. What is needed is to clearly delineate the differences between gender transformation, gender equity, and gender equality outcomes.

## Discussion of current knowledge base

A discussion of CCAFS' knowledge base on gender and social inclusion assessed the work achieved through selected CCAFS projects. Participants wrote project findings on note cards, which were grouped according to thematic similarities. As a result, four general categories of knowledge were identified, including: i) building evidence, ii) policy, iii) interventions and working with partners, and iv) rural transformation.

### Building evidence

- M&E of climate-smart villages in East and West Africa has provided important inputs and recommendations for gender-responsive CSA prioritization and implementation (Twyman et al., 2014; Ouedraogo et al., 2018).
- Information from CCAFS baseline surveys demonstrate that men's networks tend to be more formalized than women's and their networks connect more with formal institutions at local, national and global levels. Women's networks tend to be more local and informal (i.e. with family and friends), so they have less access to governmental and NGO organizations (Perez et al, 2015; Cramer et al, 2016).
- Information from CCAFS intra-household gender surveys from sites in Africa, Latin America, and Bangladesh show gender differences in climate change perceptions, adaptation strategies, access to resources, credit and information, perceptions and adoption of CSA practices, and participation in decision-making processes (Jost et al, 2016).
- A line of research focused on intra-household decision-making processes enables an enhanced understanding of women's and men's agency in the management of family farms or joint agricultural production systems. This ongoing research is important for project design and implementation (Acosta et al., 2019c; Godek and Garcia, 2018).
- Additional research suggests that women's empowerment contributes to greater household implementation of agroforestry-related CSA practices in Tuma la Dalia, Nicaragua (Gumucio et al., 2019a).
- CSA practices can also promote women's empowerment, as seen in the use of voice-enabled agro-information lines, which increased women's participation in decision making around household agricultural production (Mittal et al, 2016).
- CCAFS research in low-emissions livestock production highlights the importance of understanding local gender dynamics in order to ensure gender equal benefits from interventions. These include,

for example, understanding the quality of women's and men's participation in formal vs. informal markets (Tavenner, Saxena, & Crane 2018), women's and men's participation in and income control from farm (and off-farm) activities, and gendered household power dynamics concerning cash control (Tavenner & Crane 2018b).

- CCAFS research on livestock production in Colombia and East Africa highlights the importance of understanding local gender dynamics in order to recognize the effects of climate shocks on the gender division of labour and time-labour burdens and to assess the potential impacts of innovation (i.e., dairy intensification and CSA) on women and men (Tavenner et al. 2018c).
- Climate services research has identified gender-based challenges as well as pathways for women and men to access and use climate information (Gumucio et al., 2019b; Simelton et al. 2018a; Partey et al., 2018).
- M&E of the Agro-Climatic Information Services (ACIS) project in Southeast Asia demonstrates women and men farmers benefitted differently from knowledge about agro-advisories and forecasts. While both women and men reported increased joint spousal decision-making as a benefit from the gender awareness trainings and agro-advisories, men prioritized knowledge on forestry. Women in particular ranked social learning as a major benefit. (Simelton 2018b).

## **Policy**

Several FPI centre-led projects focus on agriculture, climate, and food security policy assessment to integrate gender concerns into national-level policies (i.e., Colombia, Peru, several East African countries, and Nepal). Specific findings include:

- Learning alliances/platforms enhance awareness of the significance of gender-sensitive policies and support integration of gender issues into agriculture and climate change policies.
- Gender-sensitive budgeting is often not carried out, creating a challenge for achieving gender equality outcomes (Ampaire et al, 2019).
- Research in Uganda demonstrates that international-level policy discourse, which promotes gender equality, becomes diluted and loses its original intent once domesticated at the national level (Acosta et al., 2019a).
- Agriculture and food security policy instruments in Latin America tend to consider gender concerns more than those on climate change (Gumucio et al., 2015). Cross-sectoral collaboration can be an important strategy for achieving gender integration in climate change policymaking.

- Gender inputs to specific policymaking processes on climate change include the Nigeria Gender Action Plan on Climate Change, ongoing support to the Government of Kenya to develop a gender-responsive NDC, support for the Africa Group of Negotiators (AGN) on gender policy and UNFCCC submissions (Masiko et al, 2019), and collaboration with the Guatemalan Ministry of Agriculture's Gender Unit and the Central American Regional Secretariats of Women to create a Gender and Climate Change Manual/Guide for extension agents (Acosta et al., 2019b).

### **Interventions and work with partners**

This line of work has focused on group-based and participatory approaches for institutional change.

- Interventions in Southeast Asia and West and East Africa focus on enhancing women's participation in group processes through work with women-specific and mixed-gender local groups, in some cases developing new groups in the process (Deering 2019; Chanana et al. 2018; Khatri-Chhetri and Chanana 2017). While these interventions are still in development, they may contribute to women's agency and empowerment.
- A project in Southeast Asia demonstrates that participatory agro-climatic information services can help women i) access information, ii) translate and use it according to their needs, iii) share and explain it to others, and iv) demand more information. The approach was recognised by the NGO Climate Change Working Group in Vietnam as enabling households to implement CSA interventions (Le et al. (in prep); Simelton et al. 2018c). During a review workshop on 29 May, 2019 in My Loi, group leaders and officers appreciated spousal participation in meetings and their joint household decision-making.
- Using both women and men facilitators for activities in CSVs can be helpful as the facilitators serve as role models for local women and men (Duong et al., 2017; Simelton et al. 2018b).

### **Rural transformation**

- Work in Southeast Asia finds that job migration alters farm labour distribution/availability and, consequently, farming systems. Out-migration can also affect gendered income distribution and access/control over resources. Remittances are not necessarily invested in agriculture. These developments are important to take into account for the development of technologies, CSA practices, and income-generating activities that equally benefit women and men (Simelton et al. 2018b).



## Conclusion: Knowledge gaps and opportunities

From discussion of the existing knowledge base, the meeting assessed and identified several knowledge gaps and opportunities. Similarly to the previous activity, participants noted gaps and opportunities on note cards, which were then organized according to the body of knowledge addressed.

- Gender indicators and appropriate datasets for robust M&E of gender equality outcomes for the different scales of CCAFS work are needed. For example, participatory evaluation could be modified to be more aligned with baseline and monitoring indicators (Simelton et al. 2018a,b). It is important that indicators and data collection instruments be country relevant. Here, there is opportunity for coordination between a CIAT-led study of gender indicators (household level) and a CCAFS FP1 initiative to identify policy-level gender indicators.
- Non-gender specialists need guidance to carry out sex-disaggregated data collection and gender analysis, such as determining the appropriate unit of analysis, when to use mixed-gender or women-specific groups, or how to incorporate analysis of other social categories (Doss and Kieran 2014).
- Concerning CCAFS policy work in general, policy impact assessments of development outcomes, including those for gender equality, are an important next step.
- CSA country profiles that include gender and social inclusion considerations are a key opportunity to provide inputs to governments and development partners. Here, it will be important to coordinate with international actors working on similar initiatives, such as UN Women.
- CCAFS should coordinate with initiatives to promote SDG5 and highlight the connection with the other SDGs.
- Approaches for integrating gender considerations and safeguards into climate services business models under development in West Africa (Senegal, Ghana) is important.
- A critical area for additional research and action is how institutional innovations, such as community-based organizations, village savings and loans, and women's and CSA groups, promote equitable CSA adoption and gender equality.
- To achieve gender outcomes, CCAFS should focus on using evidence on gender and social inclusion to inform partnership development and to scale out initiatives.
- Concerning rural transformation, there exist significant research gaps, specifically the effects of migration on gender relations and youth in a context of increasing climate variability and change.

Here, it may be helpful to build upon existing evidence from coastal countries, since sea level rise cause the slow loss of agricultural land, possibly influencing migration for new livelihood opportunities and management of food security risks. There may exist significant opportunity to conduct CCAFS cross-regional research on the theme. The CCAFS East Africa program in collaboration with the Gender and Social Inclusion flagship (GSI) and CIFOR Forests and Human Well-Being, is undertaking a review of the nexus between climate change, agriculture, and migration in East Africa from a youth perspective. It is anticipated that the findings from the review will inform the refinement of CCAFS' youth strategy.

- Other research opportunities relevant to rural transformation:
  - What opportunities exist for closing the digital gender gaps in agricultural services?
  - How can mobile finance contribute towards changes in women's empowerment?
- Work on gender-sensitive finance/investment may be lacking. CCAFS knowledge on how to develop technologies equally beneficial to women and men can be an important input for Green Climate Fund proposals. Work on gender-sensitive agricultural insurance is also needed to build on the initial work in this area (Clarke and Kumar, 2016).

## Appendix 1: Participant list

First name	Last name	Affiliation
Nitya	Chanana	CIMMYT
Laura	Cramer	CCAFS Flagship 1 - ILRI
Tatiana	Gumucio	IRI
Sophia	Huyer	CCAFS - WISAT
Catherine	Mungai	CCAFS East Africa - ILRI
Mathieu	Ouedraogo	CCAFS West Africa - ICRISAT
Elisabeth	Simelton	ICRAF
Katie	Tavener	CCAFS consultant
Jennifer	Twyman	CIAT

## Appendix 2: Agenda for the meeting “Learning and action for gender-transformative climate-smart agriculture”

Time	Activity	Lead
<b>DAY 1: Monday, April 1<sup>st</sup></b>		
8:30 - 9:00 am	Introduction to meeting and presentation of participants	Sophia Huyer, meeting participants
9:00 - 10:00 am	Activity of knowledge-sharing on CCAFS gender research	All
10:00 - 10:30 am	Presentation: A Framework for gender-transformative climate-smart agriculture (CSA)	Sophia Huyer
10:30 - 10:45 am	COFFEE/TEA BREAK	
10:45 - 11:45 am	Application of framework in our research	All (group work)
11:45 am - 12:00 pm	Conclusions and wrap-up from Day 1	Sophia Huyer, Tatiana Gumucio, meeting participants
12:00 - 1:00 pm	LUNCH	
<b>DAY 2: Tuesday, April 2<sup>nd</sup></b>		
9:00 - 9:15 am	Summary of Day 1	Tatiana Gumucio
9:15 - 10:30 am	Identification of CCAFS’ strengths and weaknesses in gender research	All
10:30 - 10:45 am	COFFEE/TEA BREAK	
10:45 am - 11:45 am	Prioritization of key research questions moving forward	All
11:45 am - 12:30 pm	Discussion: opportunities for collaboration	All
12:30 - 1:30 pm	LUNCH	
1:30 - 3:00 pm	Outlining our ideas for project proposals	All (group work)
3:00 - 3:45 pm	Plenary discussion of proposal outlines	All
3:45 - 4:00 pm	COFFEE/TEA BREAK	
4:00 - 5:00 pm	Wrap-up, conclusions and next steps (Including discussion of CG Book Proposal and CSA operational guide)	Sophia Huyer, Tatiana Gumucio, meeting participants

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