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Supporting women farmers in a changing climate: five policy lessons

Sophia Huyer, Jennifer Twyman, Manon Koningstein, Jacqueline Ashby, and Sonja Vermeulen.
With contributions from: Molly Green, Jorge Sellare, Claudia Ringler, Martina Ulrichs, Surabhi Mittal, Pham Thu Thuy, Cecilia Turin, Wiebke Foerch, Alexa Jay, Una Murray, Zewdy Gebremedhin, Rachel Friedman and Prakash Tiwari.
Edited by Sophie Higman

Recent research presented at a seminar in Paris co-organized by the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), the International Social Science Council (ISSC) and Future Earth produced five key policy recommendations for supporting women farmers in a changing climate:

Key recommendations

- New technologies and practices for climate change will be adopted more successfully when they are appropriate to women's interests, resources and demands;
- Extension and climate information services need to serve women and men;
- Institutions need to take into account women's priorities and support their adaptive capacity;
- Women's capacity as farmers and innovators needs to be recognized and supported; and
- Climate policy processes should go beyond numerical representation of women to create active mechanisms to express opinions, take initiatives, and influence decisions.

Women's unique knowledge and expertise concerning environmental management can contribute to innovative solutions that tackle the problems caused by climate change. Photo: A. Paul-Bossuet (ICRISAT).

Gender-responsive climate policies and programmes include:

- A gender component as a qualifying criterion to access international funding.
- Design that is informed by needs assessments that distinguish women's and men's needs and priorities.
- Monitoring and assessment indicators of real change in gender and social inclusion.

Introduction

Climate change demands new approaches to agriculture: farmers' practices will need to change in order to adapt to and mitigate changing conditions. Gender is central to this change. Agriculture is a fundamental part of women's livelihoods globally, most markedly in least developed countries, where four-fifths of economically active women report agriculture as their primary economic activity (Doss 2011). More women are moving into agriculture as men move out to seasonal or paid labour elsewhere. At the same time women farmers have less access to productive inputs and resources to improve returns from their farming activities and to meet the challenges of climate change (FAO 2011).

Policies, institutions and services to help farmers develop new approaches to deal with climate change will need to produce results for women farmers as well as men. This brief provides five policy lessons to support this process, based on evidence from research in low- and middle-income countries and offers guidelines for crafting gender-responsive climate policies at global and national levels. This research was presented in March 2015 at a seminar in Paris on 'Closing the gender gap in farming under climate change', co-organized by the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), the International Social Science Council (ISSC) and Future Earth.

1. New technologies must be appropriate to women's resources and demands

New technologies and agricultural practices can help farmers meet the challenges of climate change. However, women and men do not always have equal access to assets, time and resources – such as secure access to land, water, information, or finances – that enable them to take advantage of new technologies or practices. They may also have different priorities in adopting new technologies.

Women and men have different on-farm tasks and responsibilities. For example, in many countries, women manage household kitchen gardens and small livestock, while men take responsibility for commercial crops and large livestock. Farms run by female-headed households tend to have less labour available for farm work, as these households are typically smaller, and because women have unpaid household duties that take them away from income-generating productive activities (Ashby et al. 2012). Women, especially those from poor households, are more likely than men to face time constraints that affect their ability to participate in community-based climate adaptation initiatives or other practices that increase their labour burden (Behrman et al. 2014). Climate-smart agricultural practices that require higher labour inputs in the first year may thus pose a barrier to implementation by women farmers, regardless of the benefits that accumulate over time. Further research is needed on the benefits and disadvantages to women of climate smart agriculture. The impacts on women of men's out-migration for work in terms of shifts in power and decision-making as well as agricultural production also need to be investigated.

- **Recommendation:** Women and men have different resources available to them and different constraints on their time. They also may have different priorities. Agricultural interventions to help farmers adapt to climate change must be appropriate to these resources and demands.

Gender-differentiated impact of climate variability on production possibilities: Evidence from cereal production in Mali

(Dillon and Gill 2014)

In Mali, the introduction of irrigation allowed men to increase the value of their total production and marketed surplus and to partially offset the negative impacts of climatic shocks. Women, however, had much lower access to the irrigation technology and therefore did not benefit from its offsetting effects. Similarly, certain farm assets such as motorized tillers have positive effects on men's agricultural production, but limited access to these assets locks women out of this adaptation strategy. Other assets, such as ploughs, are more equally shared and their effect on production is similar across both men's and women's farm plots. There is a need to understand access to productive assets and how this affects the adoption and impacts of new technologies.

Implications of land use change of soils rich in carbon stocks on women's livelihood opportunities in the High Andes of Peru

Maria Montenegro, Cecilia Turin, Brent Swallow, Sandeep Mohapatra, Victor Mares and Roberto Quiroz

In the High Andes of Peru, women traditionally keep livestock on communal and private lands, a practice that is an important ingredient of their livelihoods and economic autonomy. With changing markets and support from the government, the cultivation of maca, an Andean root crop with a high export value, has expanded in the region and displaced grazing from both communal and private lands. The maca encroachment not only has significant social but also environmental implications. While it creates more employment for young people, the conversion of carbon rich soils to cropland for maca cultivation displaces women's livestock and contributes to greenhouse gas emissions. Maca also depletes soil nutrients, rendering the soil infertile for up to a decade.

2. Extension and climate information services need to serve women and men

Agricultural extension and climate information services are crucial for agricultural development and food security in a changing climate (Tall et al. 2014a,b). Weather forecasts over different timeframes coupled with a choice of new options for farm management can support farmers to adapt to climate change and to make efficient use of inputs.

Women tend to have much lower access to formal agricultural extension services (Swanson et al. 1990; Ragasa 2012). In part this is because extension services do not always consider women to be farmers, and fewer women attend community meetings organized by extension services, or visit demonstration plots (World Bank and IFPRI 2010). Women also tend to have lower access to radio, mobile phones and other media and access information in different ways than men.

Multiple channels may reach women more effectively. This can involve improving women's access to radio, extension events, SMS and voice messages, as well as community groups, health clinics and schools (Tall et al. 2014a,b). Women may also value and take responsibility for different aspects of agriculture from men, and therefore need different information.

- **Recommendation:** Both the channels of communication and the content of messages need to be adapted for different audiences. In some cases ministries other than agriculture may have a greater reach (for example, through campaigns that focus on health through nutrition). Thus cooperation among different ministries, such as agriculture, health and environment, will help to get messages across. Partnerships with civil society, universities and community based organizations (CBOs) will also expand the reach and accessibility of information.

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Who is listening? How Climate Information Systems close the gender gap

Sarah McKune, Sandra Russo and Arame Tall (based upon workshop report by Tall et al. 2014a)

Research in Kenya and Senegal showed that climate information services, which provide weather forecasts linked to advice on climate-smart agricultural practices, were less likely to target or involve women than men. Women in turn were less likely to receive and use the advice than men. Messages that are tailored to different audiences, as well as multiple channels of communication (such as radio, mobile phone messaging, community groups) are needed to reach different socioeconomic groups.

Mobile phone enabled agro-advisory services

Surabhi Mittal, ML Jat and Clare Stirling

A study in India found that agro-advisory information delivered via mobile phone messages contributed to reducing the information asymmetry between women and men in farming families. The same mobile phone messages were sent to women and men. The listening rate (i.e. the proportion of the messages listened to) was equivalent between women and men. Participating women reported that the messaging had increased their knowledge of climate-smart technologies, helped them make more efficient use of inputs and strengthened their participation in decision-making at the household level, because they were better informed and recognized as such by their male partners. In some circumstances simply making information available to women increases their ability to take part in household decision-making.

3. Institutions must address women's priorities

Institutions involved in climate change adaptation and mitigation in rural areas need to address women's concerns as well as men's. These may include a range of activities related to achieving food security under climate change that go beyond a focus on agricultural productivity, for example income generation, savings and loans, and other support services that improve women's access to food. National and international organizations working in agricultural development and food security tend to focus on increasing agricultural production and improving natural resource management. There is less emphasis on strengthening communities' broader adaptive capacity to meet the challenges of climate change.

Women's CBOs are effective providers of information and services to women. They can fill the gap between the services that formal organizations provide and the issues that women prioritize. While women's CBOs can help build the adaptive capacity of communities to deal with climate change, care should be taken that the demands on women's time are not increased and the original missions of the CBOs not completely usurped.

- **Recommendation:** Institutions supporting farmers to improve their food security under climate change need to address broader priorities beyond agriculture that are relevant to women's and men's concerns. A key function of these institutions is to build women's adaptive capacity.

Connecting women, connecting men: institutions and communities

Laura Cramer, Wiebke Foerch and Philip Thornton

A study across West Africa, East Africa and South Asia found that men were more connected to external, formal institutions (such as national extension agencies), which largely focus on agricultural production. Women tended to focus more on food access activities and utilization. They also tended to be more connected to local institutions and CBOs, which provide an important support and safety net function.

Smallholder women's empowerment through farmer-participatory design and user-led innovation of labour-saving agricultural tools in Malawi

Zewdy Gebremedhin, Una Murray, Decolius Kalumo, Ashenafi Tariku, Wellam Kamthunzi, Tony Murray, Rowland Chirwa, Rodah Zulu, Paul Wagstaff and Charles Spillane

In Malawi, participatory sessions with 16 innovator groups of women farmers were used to design, develop and test improved, labour-saving agricultural tools. The tools were prioritized, conceptualized and designed by the women farmers. Through the 3D4AgDev programme, prototype tools were then tested against existing tools in on-farm trials, resulting in new and improved prototypes. The sessions revealed the significant capacity of the women to identify, prioritize, propose and design improved labour-saving tools and agri-processing technologies.

4. Women's innovation processes need to be recognized and supported

Climate change presents challenges to farmers that demand innovative responses. Given space and opportunity, women can be effective innovators capable of identifying and designing new technologies – and adapting existing ones – to meet their needs. But capacity to innovate alone is not enough: an enabling environment must support women's innovation processes, providing access to facilities, services and incentives.

As the effects of climate change intensify, rural markets will expand for products and services that support climate resilience (the ability to resist, absorb, and recover from the effects of climate changes and shocks). It will be important to understand and recognize women's participation in value chains and ensure that the private sector integrates gender concerns into market access and climate change insurance initiatives.

- **Recommendation:** Women farmers need to be recognized as effective innovators with specific priorities and interests, and should be partners in identifying and designing appropriate and labour-saving tools. Providing mechanisms that support and legitimize women's innovations in response to climate change is likely to improve outcomes for sustainable livelihoods.

Women's adaptive innovations in land and water management under climate change in Himalaya: an illustration of reducing the gender gap in a subsistence agricultural economy in a marginalized environment.

Prakash Tiwari and Bhagwati Joshi

In the marginalized mountain environment of the Kumaon Himalaya, subsistence agriculture is the main form of livelihood, driving a large proportion of the male population to out-migrate in search of employment. As climate change has put agricultural systems under stress, women have increasingly taken responsibility for making decisions about land and water management, and have developed their own abilities to innovate and adapt. Women have reintroduced traditional water conservation practices and developed their own indigenous rainwater harvesting system. As women's innovative adaptation measures build their resilience to climate change, men increasingly recognize them as legitimate land managers.

Gender and women's participation in REDD+ national decision-making in Vietnam

Pham Thu Thuy, Mai Hoang Yen, Maria Brockhaus, Moira Moeliono, and Esther Mwangi

Gender is important in REDD+ processes. In the case of Vietnam, the need to ensure gender equity is noted in the National REDD+ Strategy and the Forest Protection and Development Law. However, the lack of clear detailed guidelines on how to implement this at national and sub-national levels has hampered compliance, with the result that benefit-sharing mechanisms and processes for free, prior and informed consent (FPIC), which were developed under the National REDD+ Programme, do not integrate gender.

According to interviews in Vietnam with 52 local and national government and international organizations that are important in decision-making in REDD+ processes at all levels, women have been invited to and consulted on REDD+ processes. However, the National REDD+ Steering Committee itself, which provides strategic guidance on REDD+ implementation, included only one woman in its 15 members in 2014. Policy-making processes have yet to provide the space for and encourage active participation by women to express opinions, take initiative, and influence decisions.

5. Policy-making processes must include women's voices

Women are active land managers and are affected by climate change policies related to agriculture and forestry such as policies on Reducing Emissions from Deforestation and Forest Degradation (REDD+) and land management. They own land, manage their husband's land, and participate in family and community decisions about land management.

And yet, women's voices are not always evident in decision-making and policy processes in agriculture, and when women are present they tend to form a minority both within leadership and in consultative processes. National policies and laws do not always translate well to the local level. Reasons for this include sociocultural norms, low visibility of women's work, discriminatory laws, limits on education and income, and caregiving responsibilities (UN Women 2015). Increasing women's voices at all levels of policy is likely to lead to more equitable distribution of the benefits and costs of climate change policies and programmes, while improving their efficiency, efficacy, and sustainability.

- **Recommendation:** Agricultural policy, law and decision-making processes at all levels – from community groups to international processes – will be more effective and relevant if they include both women and men in leadership roles, include their voices and implement processes to translate laws and policy into practice.

Crafting gender-responsive climate policy

What is gender-responsive climate policy?

Gender-responsive climate policy aims to ensure that women benefit from climate policy implementation as much as men. It addresses women's aspirations and priorities specifically. It is created through processes that listen to women's voices and incorporate women's contributions along with men's.

Improving the development and implementation of gender-responsive climate policy

Gender should be integrated into climate change policy and programmes at all levels. The United Nations Framework Convention on Climate Change (UNFCCC) and its subsidiary processes and working groups can and should lead by example to ensure that women are represented and heard at the very top of the international climate policy process. Systems need to go beyond ensuring adequate numerical representation by women towards mechanisms for raising the voice and credibility of women in policy processes. For example, the UNFCCC should also institutionalize 'he for she' mechanisms, to encourage men to actively promote women's voices.

In turn, the international community can and should work with national governments to incorporate gender equality into policies and programmes. This can include exerting pressure via climate change funding conditions and incentives. Research on scaling up gender-sensitive approaches is needed to inform translation of policy into programmes.

Gender considerations should be incorporated into at least three key areas of climate change policies and programmes:

1. Inclusion of gender dimensions as part of the **qualifying criteria** for accessing international funding channels, such as REDD+, Green Climate Fund, Clean Development Mechanism, Adaptation Fund and Nationally Appropriate Mitigation Actions (NAMAs). Organizations and countries applying for such funds should be asked to identify how programmes and interventions will affect women, and how they will ensure that interventions will benefit women as well as men.
2. **Needs assessments** that explicitly distinguish between women's and men's priorities and opportunities should inform policy and programme design. This should be a prerequisite for any national policy and programme that is carried out under the auspices of UNFCCC-mediated processes.
3. Incorporation of gender indicators into **monitoring and assessment** of programme implementation and impacts. These need to be indicators of real change – increased control of productive assets, participation in decision making, knowledge, awareness, empowerment, and improved economic status for women and men. Gender indicators need to go beyond measuring the representation of women in climate change processes – women need to be actively involved in defining and monitoring implementation and impacts (Schubert 2014).

Gender policy and action plan of the Green Climate Fund

Sonja Vermeulen

The Green Climate Fund drew on wide consultations to put forward a gender policy and action plan in March 2015. The Fund's gender policy argues that a gender-sensitive approach will achieve more effective and more equitable outcomes, mitigate project risks, and reduce the gender gap in outcomes from climate change. Accredited entities to the Fund are obliged to undertake a socio-economic and gender assessment to determine how a proposed project (adaptation or mitigation) can respond to the needs of women and men, identify key drivers of change in gender dynamics, design and budget for gender-specific activities, identify gender-relevant outcomes, and monitor progress including institutional arrangements. Gender-sensitive capacity building and knowledge generation on gender and climate change are also key components of the Fund's gender policy.

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Contact information
CCAFS Coordinating Unit – Faculty of Science, Department of Plant and Environmental Sciences, University of Copenhagen, Rolighedsvej 21, DK-1958 Frederiksberg C, Denmark.
Tel: +45 35331046; Email: ccafs@cgiar.org

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