



"[Climate-smart agriculture] is smarter when it is able to help meet food security, adapt to and mitigate climate change, and promote equality between men and women in a changing climate."

- Dr. Lamia El-Fattal, WOCAN¹

A groundnut farmer in Malawi practicing conservation agriculture. T. Samson, © CIMMYT, Flickr.

9 'Climate-Smart' Agriculture and Beyond

Climate change has become a major concern in African agriculture, with farmers in many places struggling to cope with changing temperatures and rainfall patterns and increased flood and drought risks. For subsistence farmers, especially, these changes pose a serious threat to food security. At the same time, efforts to both adapt to and mitigate climate change can bring substantial development benefits for African farmers. This chapter focuses on ways to integrate gender in these approaches – which are often called “climate-smart” agriculture (CSA), though some of the activities we discuss here go beyond farming.¹

The concept of climate-smart agriculture emerged in recognition of the urgent need to reduce both greenhouse gas emissions, and the vulnerability of agriculture – and thus, of food supplies – to the impacts of climate change. CSA aims to sustainably improve agricultural productivity, increase farmers’ resilience, reduce and/or remove GHG emissions, and support the achievement of food-security and development goals.² This is an ambitious goal, and many CSA interventions involve trade-offs amongst these objectives. Reducing vulnerability for women and other disadvantaged groups, and ensuring that the benefits of CSA are equitably shared, adds yet another challenge.

Research shows that women in many places are more vulnerable to climate impacts than men, for many reasons, including their greater dependence on natural resources for



Irrigated fields in Nigeria © Arne Hoel / World Bank

- 1 Chapter 9 title page quotation: El-Fattal, L. (2012). *Climate-Smart Agriculture Is ‘Smarter’ When Informed by a Gender Perspective*. WOCAN Policy Brief. Women Organizing for Change in Agriculture & Natural Resource Management, Bangkok, Thailand. http://wocan.org/sites/drupal.wocan.org/files/FINAL%20120919_WOC_Policy_Brief_3_vol1.pdf.
- 2 For a succinct introduction to climate-smart agriculture, visit <http://www.climatesmartagriculture.org>, a website maintained by a global partnership on CSA that includes the UN Food and Agriculture Organization, the World Bank, the United Nations Environment Programme and the World Food Programme, among others.

livelihoods; responsibility for securing food, water and fuel for their households; more limited assets, and social, cultural and political barriers that restrict their decision-making power, access to information, and even mobility.³ In addition, the same factors that make women's farm plots less productive – such as poor soil quality, lack of organic or chemical fertilizers, and lack of adequate farming tools, as discussed in Chapter 1 – can make them more vulnerable to climate change and land degradation as well.⁴

Gender inequality can also hinder adaptation to adapt to climate change, including the adoption of climate-smart strategies. For example, the Terrafrica partnership found that insecure land tenure, lack of capital and limited farm inputs – all common problems for women farmers – were all major barriers to the adoption of conservation agriculture in sub-Saharan Africa.⁵ A study of two ethnic groups in a village in northern Burkina Faso, meanwhile, found that one was successfully adapting to climate change whilst the other was falling deep into poverty, and the reason was that the first group's top strategies for livelihoods diversification, which included engaging women in economic activities, were culturally unacceptable to the other group.⁶ At the same time, as food producers and stewards of natural resources in their households and communities, women are well positioned to be effective agents of change for both mitigation and adaptation, if they are given the opportunity to do so.⁷ Thus, there are multiple compelling reasons to incorporate gender equality in climate-smart agriculture initiatives – and the UN Food and Agriculture Organization's *Climate-Smart Agriculture Sourcebook*, for example, reminds readers many times of the need to address gender issues in their efforts.⁸

Yet that is not a simple task. There are many challenges, especially if the goal is not just to be gender-sensitive or equitable in climate-smart agriculture interventions, but to actually work to transform gender relations as part of the process. Although there is a growing

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- 3 For a good overview of gender and climate change issues, see UN WomenWatch (2009). *Women, Gender Equality and Climate Change*. Fact sheet. United Nations, New York. http://www.un.org/womenwatch/feature/climate_change/.
 - 4 See, for example, Romero, A., Belemvire, A. and Saulière, S. (2011). *Climate Change and Women Farmers in Burkina Faso: Impact and Adaptation Policies and Practices*. Oxfam International. <http://www.oxfam.org/en/grow/policy/climate-change-women-farmers-burkina-faso>.
 - 5 Terrafrica (2011). *Sustainable Land Management in Practice: Guidelines and Best Practices for Sub-Saharan Africa. Field Application*. Prepared by WOCAT; coordinated by the Food and Agriculture Organization of the UN, Rome, Italy. http://terrafrica.zaloni.net/sites/default/files/media/SLM_in_Practice_E_Final_low.pdf. At pp.76–81.
 - 6 See also El-Fattal, L. (2012). *Climate-Smart Agriculture Is 'Smarter' When Informed by a Gender Perspective*. WOCAN Policy Brief. Women Organizing for Change in Agriculture & Natural Resource Management, Bangkok, Thailand. http://wocan.org/sites/drupal.wocan.org/files/FINAL%20120919_WOC_Policy_Brief_3_vol1.pdf.
 - 6 Nielsen, J. Ø. and Reenberg, A. (2010). Cultural barriers to climate change adaptation: A case study from Northern Burkina Faso. *Global Environmental Change*, 20(1). 142–52. DOI:10.1016/j.gloenvcha.2009.10.002.
 - 7 UN Commission on the Status of Women (2008). *Gender Perspectives on Climate Change*. Issues paper for interactive expert panel: Emerging issues, trends and new approaches to issues affecting the situation of women or equality between women and men. 52nd session of the Commission on the Status of Women, United Nations, New York. <http://www.un.org/womenwatch/daw/csw/csw52/issuespapers/Gender%20and%20climate%20change%20paper%20final.pdf>.
 - 8 FAO (2013). *Climate-Smart Agriculture Sourcebook*. Food and Agriculture Organization of the UN, Rome, Italy. <http://www.climatesmartagriculture.org/72611/en/>.



Anna Baafi, of the Tanzanian national extension service, spreads knowledge of drought-tolerant maize. © CIMMYT, Flickr

body of research on climate-smart agriculture, much remains to be learnt about what form interventions or agricultural practices may take in different environments – and which interventions are most effective at generating equitable benefits. And even when good approaches are found that meet both these needs in a particular setting, scaling them up may not be easy, as the combinations of technical needs and gender issues will vary. Some technical lessons may translate well into similar environments, but the gender dynamics may differ – or vice-versa.⁹

Still, this is important work, and it is happening across Africa, with tangible results. One case study in this chapter, from Ghana, describes the work of a coalition called Gender Action on Climate Change for Equality and Sustainability (GACCES), hosted by the NGO ABANTU for Development, to sensitize policy-makers about gender issues related to climate change, build local capacity and awareness, and promote women's active participation in decision-making processes on climate change at all levels.¹⁰ The programme has been able to make good use of women's knowledge and expertise, including traditional practices, in climate change mitigation, adaptation and disaster reduction.

9 Even within a single country, differences in factors such as the distribution of labour between men and women can make the same intervention benefit women in one place, but make their lives harder in another. For an example from India, see: Jost, C., Bhatta, G. and Verchot, M. (2013). Are there gender impacts from 'climate-smart' agriculture? CGIAR Climate Change, Agriculture and Food Security (CCAFS) blog, 2 July. <http://www.ccafs.cgiar.org/are-there-gender-impacts-climate-smart-agriculture#.UiEElj8mmvM>.

10 See Baafi, A.A.A. and Suleman, M. (2010). Ghana: Local Women to Engage in Climate Change Decision Making. *Boilingspot*, 15 April. <http://boilingspot.blogspot.com/2010/04/ghana-local-women-to-engage-in-climate.html>. Also: Government of Ghana (2010). Gender Sensitisation Forum On Climate Change. News archive, 27 July. <http://www.ghana.gov.gh/index.php/news/general-news/2823-sensitisation-forum-on-the-gender-implications-of-climate-change>.

A second case study describes an initiative to identify participatory tools useful for addressing gender and climate change research questions, which field-tested tools in Bangladesh, Ghana and Uganda and produced a training guide. Next, we look at the Sustainable Agriculture in a Changing Climate (SACC) initiative in the Nyando River Basin in western Kenya, a project designed to generate carbon credits through agroforestry that included specific measures to maximize the participation of resource-poor women. Then we discuss PROMARA, an initiative sponsored by USAID in Kenya's Mau Forest Complex that focused on developing the skills and capacity of women and youth groups to change their attitudes and behaviour towards the exploitation of forest resources and thus to better adapt to climate change. Finally, we discuss the Africa Biogas Partnership Programme, an ambitious initiative launched in 2009 in six African countries – Senegal, Kenya, Tanzania, Uganda, Burkina Faso and Ethiopia – that aims to improve rural households' living conditions by introducing more than 70,000 domestic biogas digesters by the end of 2013.

Making climate-smart agriculture 'gender-smart' as well

A crucial first step in ensuring that women fully benefit from climate-smart agriculture is to ensure that we understand gender issues – from overall cultural norms, to the division of labour in farming households – in the specific setting for the CSA intervention. Thus, the women-focused agricultural expert network WOCAN recommends that a gender analysis be conducted within all CSA projects, programmes and policies to assess their implications and benefits for men and women.¹¹ WOCAN also recommends four other measures, all under the umbrella of ensuring that both men and women targeted by CSA programmes can operate in a “supportive political, economic and cultural environment”:

- Identify women's groups and provide them with training and support for leadership, negotiation and communication skills, as well as business skills.



A farmer in Lower Nyando Kenya, tends to vegetables in her farm. K. Trautmann, © CGIAR Climate, Flickr

11 WOCAN is Women Organizing for Change in Agriculture & Natural Resource Management; see <http://www.wocan.org>. The recommendations cited here are from El-Fattal (2012), op.cit.

- Support women's participation in decision-making related to climate change, particularly at the local level.
- Provide training to both men and women on CSA technologies and practices, and gender awareness.
- Facilitate women's access to land and credit through transforming laws and local practices.

These recommendations highlight a key aspect of successful CSA implementation: the critical role of local institutions for the success of innovative practices. These institutions can be central to leading collective action and enforcing property rights. It is essential to enrol them in CSA interventions to help ensure that farming communities can adopt sustainable agricultural technologies and improved natural resource management practices.

However, as other chapters in this book show, many local-level institutions – and indeed the laws of the land – may be clearly biased against women. A recent examination of the U.S. Agency for International Development (USAID) Kenya programming in natural resource management showed that, despite some excellent projects in the water sector, climate change-responsive agro-forestry projects have often had difficulties in identifying and challenging local gender roles and responsibilities.¹² For instance, whilst group membership provides a means of validation for tree ownership where beneficiaries lack land title, there are challenges to ensuring that women benefit from carbon credit payments due to intra-household dynamics. In rangeland and community conservancies, outreach and gender approaches are rarely used consistently. This limits engagement with women in general, younger women and men, and people with disabilities. These findings are not unique to USAID, of course; they are typical of many such programmes.

There is a growing understanding of what it takes to make climate-smart agriculture work for everyone in a community, including women and the poor. A recent workshop on “Institutions for Inclusive Climate-Smart Agriculture” identified five key requirements:

- Inclusiveness at the global as well as local level, to ensure that the poor benefit;
- Information about changing climatic conditions as well as possible responses;
- Innovation to develop and disseminate new practices and technologies;
- Investment in physical infrastructure and/or in learning new agricultural and/or marketing practices;
- Insurance to cope with risks due to climate shocks and risks of adopting new practices.¹³

Several climate-smart agriculture initiatives are now trying to incorporate these and other elements, which also form a good starting point from which to develop gender-responsive practices.

12 Farnworth, C. R., Nzioki, A., Muigai, S., Kimani, E. N., Olungah, C. and Monyoncho, K. (2012). *Gender Analysis and Action Plan*. Report for the U.S. Agency for International Development (USAID), Kenya. Development and Training Services Inc.

13 Meinzen-Dick, R., Bernier, Q., Haglund, E., Markelova, H. and Moore, K. (2012). *Identifying the Institutions for Climate-Smart Agriculture*. Presented at the International Research Workshop on Institutions for Inclusive Climate-Smart Agriculture, Nairobi, Kenya, 10–13 September. Collective Action, Property Rights and Institutions (CAPRI) and Climate Change, Agriculture and Food Security Programs of the CGIAR. http://www.capri.cgiar.org/wks_0912.asp.

CASE STUDY

Improving capacity in gender and climate change research

A recent initiative brought together the highly collaborative CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) and the UN Food and Agriculture Organization (FAO). It explored, tested and refined a range of participatory research tools found to be useful for addressing several gender and climate change research questions, developed web-based resources, and produced a training guide.¹⁴ Experienced research teams also field-tested three major groups of tools from the manual in pilot sites in Bangladesh, Ghana and Uganda to examine:

- The ways in which women are able to participate in, and benefit from, farmer-to-farmer exchanges with farmers in other regions who are currently coping with environments similar to those predicted for their own areas in the next two or three decades. This method is called “**climate analogues**”;
- How **weather-related information** is accessed and used differently by men and women; and
- What **climate-smart practices** are being adopted by women and men, and to what degree they are different for women versus men with respect to access and benefits.¹⁵



Farmers spread manure on a field in Ghana. © C. Peterson, CIAT/CCAFS, via CGIAR Climate, Flickr

- 14 The website is <http://www.ccafs.cgiar.org/gender>. The guide is Nelson, S. and Chaudhury, M. (2011). *Training Guide for Gender and Climate Change Research in Agriculture and Food Security for Rural Development*. Food and Agricultural Organization of the United Nations and CGIAR Research Program on Climate Change, Agriculture and Food Security, Rome, Italy. <http://www.fao.org/climatechange/micca/75949/en/>.
- 15 See Chaudhury, M., Kristjanson, P., Kyagazze, F., Naab, J. B. and Neelormi, S. (2012). *Participatory Gender-sensitive Approaches for Addressing Key Climate Change- Related Research Issues: Evidence from Bangladesh, Ghana, and Uganda*. CCAFS Working Paper 19. CGIAR Research Program on Climate Change, Agriculture and Food Security. <http://cgspace.cgiar.org/handle/10568/24448>.

The findings suggest that farmer-to-farmer visits to “climate analogue” sites will be more challenging and problematic for women than men. This is because women travel less frequently and to closer locations than do men, due to their household (child care, gathering wood and water) and farming obligations. More innovative means of sharing information from the climate analogue sites are now being explored. These include the use of mobile phones, films and presentations at central locations already regularly visited by women and men.

Findings on access to, and use of, weather-related information showed that although there were differences in how people from various sites – men, women and young people – accessed weather information, there were many commonalities. Many people rely on indigenous knowledge. Fewer people access longer-run seasonal weather forecasts. Very few people trust, or indeed understand, daily weather forecasts. These findings indicate that as projects seek to improve the ways in which weather-related information is provided and accessed, it will be particularly important to be sensitive to issues of access, technology and language that differ for men and women.

With regard to the adoption of climate-smart agricultural practices, the findings highlight the importance of understanding the gender division of labour in each location. The labour demands of the various practices/options must be taken into consideration to ensure that women as well as men benefit from them. With respect to communication, non-governmental organizations and government extension agents clearly play a key role in providing agricultural information and advice to both men and women. Efforts to strengthen their capacities and knowledge base will assist them to better play their key role in enhancing adoption of CSA practices by both men and women.



A CAAPS workshop with farmers in Borana, Ethiopia. ©Anton Etzinger, CIAT, via CGIAR Climate, Flickr

CASE STUDY

Sustainable Agriculture in a Changing Climate

Sustainable Agriculture in a Changing Climate (SACC) is a partnership of CARE International, the World Agroforestry Centre (ICRAF) and CCAFS, with funding from the Rockefeller Foundation.¹⁶ SACC works in the mid and lower sections of Nyando River Basin in western Kenya, a mixed crop farming and livestock area with high levels of poverty and significant environmental degradation. Launched in September 2010, it was originally framed as a project designed to deliver payments to smallholders from carbon markets for carbon stored through the adoption of agroforestry practices. Whilst seedlings were provided free of charge, planting trees on farms involves other costs such as labour for digging holes, time fetching water, shifting some land from crops to trees, etc.

Training farmers on climate-smart agriculture in Nyando, Kenya.
© V. Aluko, CCAFS, via CGIAR Climate, Flickr



In order to overcome the resource constraints of participants, and in particular to maximize the participation of resource-poor women, the project introduced interventions designed to provide immediate short-term income and food benefits, allowing farmers to plant the trees that would generate carbon payments in the longer run. These included the introduction of early-maturing, drought-resistant and higher-value crops, an emphasis on sustainable agricultural practices, and linkages with a complementary Village Savings and Loans Associations project, which works with community-based informal financial groups. As a result of lessons learned in the first phase of this project, SACC has shifted its emphasis away from carbon finance and towards a “climate-smart smallholder agriculture” approach, with a focus on research and actions aimed at improved agricultural productivity and farm-level adaptation. This change is expected to be of particular benefit to women.

SACC’s work to date shows that gender and social differences are dynamic and nuanced within communities. Men’s and women’s participation and benefits from these projects are heavily influenced by social norms and intra-household decision-making patterns. A greater understanding of these differences is critical for climate-smart smallholder agriculture programming. Interventions that provide new spaces for men and women to come together and make decisions together can foster collaboration, and both sides seem to value the resulting improvements in communication and changes in women’s household roles. An iterative approach that adapts to new lessons learnt is seen as the most effective way to produce gains in gender equity and improve outcomes.

¹⁶ For a brief overview of SACC, see <http://www.careclimatechange.org/carbon-finance-initiatives/sacc>. For a synthesis of lessons on gender and CSA derived from the project – a key source of information for this section – see Bernier, Q., Kristjanson, P., Neufeldt, H., Otzelberger, A. and Foster, K. (2013). *Addressing Gender in Climate-Smart Smallholder Agriculture*. Sustainable Agriculture in a Changing Climate (SACC) policy brief. CARE International, World Agroforestry Centre (ICRAF), and CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). <http://www.worldagroforestrycentre.org/newsroom/highlights/gender-connection-climate-smart-agriculture>.

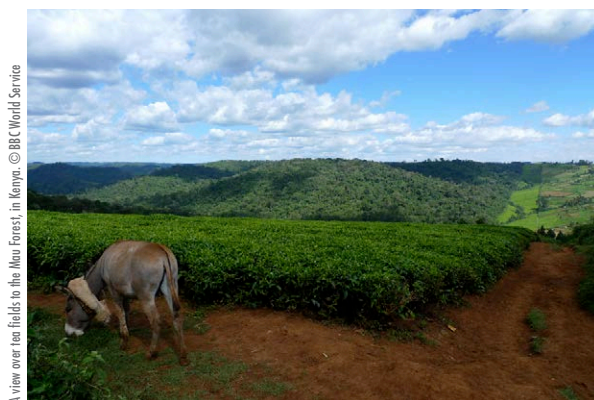
CASE STUDY

Reforming gender-biased institutional arrangements: PROMARA, Kenya

Reforming gender-biased institutional arrangements is vital to enhancing women's access to information, mobilizing resources, strengthening capacity, and building linkages between policy-makers and other institutions. PROMARA, an initiative sponsored by USAID in the Mau Forest Complex, Kenya's largest surviving forest, is an example of how this can be done.¹⁷ It focused on developing the skills and capacity of women and youth groups to change their attitudes and behaviour towards the exploitation of forest resources and thus to improve their capacity to adapt to climate change. PROMARA established woodlots and tree nurseries, and planted fruit trees in homesteads and schools with the assistance of women and self-help groups who are now benefiting economically from these activities. Bee-keeping and small farm enterprises were established or strengthened. A cooperative was founded to develop technical expertise and market outlets. This cooperative has provided training to community members in river bank protection, soil conservation, and reforestation.

An evaluation of PROMARA showed that women had been strongly empowered. This can be traced to the fact that an assessment of women's and youth's needs had been done at the very beginning to inform the gender and overall implementation strategy. Gender and youth-sensitive approaches were supported by budget allocations. Gender and conflict mitigation were cross-cutting elements with specific inputs for each programme component. The programme management plan included gender indicators to assess outputs and impact.

Ensuring that gender-responsive programming started on day one helped to create a conducive climate for wider reforms, some of which were highly novel to the community. These included strengthening the statutory and customary land rights of women and youth through a combination of legal literacy, assistance and formalization. Regarding customary land rights, for example, the programme worked with elders and local leaders to secure customary land use rights based on constitutional provisions, legislation and policies. Regarding statutory land rights, technical support was provided for drafting land legislation which incorporates and implements constitutional requirements related to devolution, the role of the National Land Commission, community lands and gender equity. A wider programme to encourage men to involve women in decision-making and to share household work was instigated alongside work to create forums for women and youth to speak.



A view over tea fields to the Mau Forest, in Kenya. © BBC World Service

17 For a quick introduction to PROMARA, see <http://kenya.usaid.gov/programs/environment/395>. The gender-specific discussion here is based on Farnworth et al. (2012), op.cit.

CASE STUDY

Biogas: A sustainable source of energy and manure¹⁸

Biogas digesters convert animal dung and human waste to combustible gas and bio-slurry.¹⁹ Domestic biogas is a clean source of energy which is mainly used for cooking and lightning in rural households. Bio-slurry is cleaner, odourless, and has a much higher nutrient value than cow manure. Biogas digesters can help to curb deforestation and reduce charcoal production, thus contributing to reduced human impact on the environment and mitigation of climate change.

The Africa Biogas Partnership Programme (ABPP) is a public-private partnership between the Humanist Institute for Cooperation with Developing Countries, the Netherlands Development Organisation (SNV) and the European Union's Directorate-General for International Cooperation (DGIS).²⁰ It started in 2009 in six African countries – Senegal, Kenya, Tanzania, Uganda, Burkina Faso and Ethiopia – with the aim of improving the living conditions of rural households containing half a million people through the introduction of more than 70,000 domestic biogas digesters by the end of 2013. The ABPP addresses basic development needs at the household and community levels. These include the need for affordable, clean energy and the promotion of good health and sanitation, as well in improving agricultural productivity.

Experience shows that women rarely decide upon whether to purchase a biogas digester. Biogas purchasing households are typically male-headed, and ownership is vested in male heads because the purchase of energy and other key resources is traditionally seen as a male task. Biogas digesters remain fairly expensive (250–500 euros) and are out of reach for poorer households. A ready supply of biomass is critical, in this case animal manure, in order to make purchase feasible.

In all ABPP countries, the percentage of women attending users' application training sessions has moved towards the target of 50%. Every actor sees the relevance and need for targeting the main users of biogas digesters in training sessions on their use and



A couple in Kenya feeds slurry into a biogas digester. © Africa Biogas Partnership Programme

¹⁸ This section draws on a report co-authored by one of the contributors to this chapter: ENERGIA (2010). *A Guide on Gender Mainstreaming in Africa Biogas Partnership Programme (ABPP)*. Prepared by ENERGIA: the International Network on Gender and Sustainable Energy. Nairobi, Kenya. <http://africabiogas.org/blog/abpp-knowledge/guide-for-gender-mainstreaming-in-abpp/>.

¹⁹ This said, in the current African situation human waste is hardly ever used – only in Ethiopia are significant numbers of latrines attached to biogas plants.

²⁰ For more information, see <http://africabiogas.org>.



A woman cooks with a stove powered by biogas. ©Africa Biogas Partnership Programme

maintenance. However, women's attendance in bio-slurry training has been lower, and this may have to do with a general underestimation by planners of women's role in market-orientated agriculture. Biogas digesters typically utilize cow manure and thus can be integrated into livestock and horticultural production. Women in ABPP countries rarely own large livestock, although they are often heavily involved in milking, feeding, removing manure and the general care of dairy cows. It is important to find ways to improve women's benefits in the dairy chain. The same applies to the use of bio-slurry for horticultural production for the market, and the use of crops for promoting household level food security and nutrition.

A clear benefit to women is in the considerable amount of time saved each day. A baseline study conducted for the Uganda ABPP programme showed that women who do not use biogas typically spend six hours daily on cooking, more than one and a half hours on firewood collection, and a further hour collecting

water. A users' survey conducted a year after introduction indicated that the majority of the respondents strongly agree that the digester had greatly reduced their workload. Both women and men now have more time for community development activities, supporting children with homework, making handicrafts, and – as women specifically noted –for home-based income generation activities such as selling vegetables from kitchen gardens and poultry-keeping.

The ABPP has learnt that the best results have occurred in countries where project teams have developed a gender mainstreaming strategy, clear goals and a budget for gender mainstreaming from the very beginning. It has also learnt that although women benefit strongly from the project in terms of having a reduced workload, this does not automatically mean that they are active agents in the project, nor that the project is currently capable of addressing their strategic gender interests. The danger is that although women may gain in some dimensions, they may lose out, or at least fail to benefit, from other aspects of the programme. This is particularly true of value chain development opportunities. Furthermore, although women spend much less time on cooking and associated activities, very few men have started taking on domestic tasks, even though the cookstoves are clean, modern and simple to use. Much more research needs to be done on the gender needs of women as biogas purchasers, users and as masons. ABPP's country experience is very varied, yet the reasons for this require further investigation.

A woman in Sampa, Ghana, sells yams at the market. © Terrie Schweizer, Flickr



Ways forward

Climate-smart agricultural initiatives are much more likely to achieve their desired outcomes if they emphasize the agency of women to take ownership and implement changes at the farm level, ensure that women have the resources to do so by reforming institutional arrangements (structure), and work with men to ensure that they value the contributions and ideas of women in regards to this role (relations).

The case studies show that involving different members of the community – men, women and youth – is critical to ensuring effective joint learning on locally relevant climate-smart practices. Co-learning strategies help both to create new spaces and to provide the additional support that may be needed to encourage dialogue at household and community levels about the roles of women and others in supporting agricultural innovation. Such strategies can be employed to help reduce structural inequalities around resource access and to encourage male support for change. Analogue visits and participation in multi-stakeholder dialogues will be key to adaptation and mitigation due to the rapid pace of change and the global nature of the challenge. Figure 9.1 summarizes the discussion in this chapter.

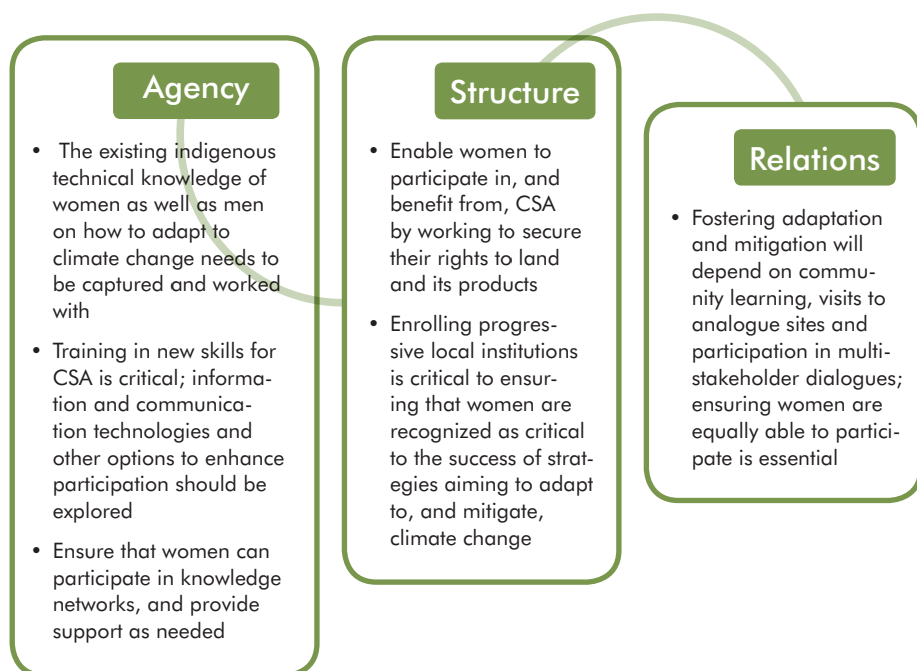


FIGURE 9.1 Gender-responsive strategies for CSA

Several steps can be taken to translate findings into practice, and in particular to ensure that poor and vulnerable households are reached. They include:

- A manual for practitioners which pulls together available technical knowledge and methodologies for designing and implementing gender-responsive technologies in climate smart agriculture.
- Policy-makers and development partners must better recognize the relevance of gender relations to create positive impact in their interventions. One way of doing so is to understand gender as a factor for success in meeting the challenge of climate change. Mainstreaming gender-responsive tools in all climate change programming and policy making is vital, such as needs and vulnerability assessments, knowledge mapping, and gender-disaggregated M&E. Sufficient funds for gender mainstreaming must be earmarked.
- Examples of best practices can be highlighted through learning events and web portals to help replication of successful methodologies; promote an understanding of approaches which have failed, and why; and to encourage communication between experts active across programme scales.

Although this is not discussed in this paper, it will be important to assist modellers working at the basin and national levels to add gender as a variable in their work. They need assistance on how to include gender at various scales, and why it adds value – for example, by running scenarios to help make gender trade-offs explicit (likely impact on male/female workloads in relation to adoption of particular practices, etc.). We also need to ensure that basin-level recommendations are locally informed.