

Special Feature

Gender in Agroforestry: Implications for Action-Research

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Summary

Women in sub-Saharan Africa are major contributors to the agricultural economy, but their lower access than men to productive resources and opportunities, limits them from achieving optimal production. This paper gives a snapshot of issues surrounding women's participation in and benefits from agroforestry, challenges that women face and examples of opportunities to enhance their involvement. First and foremost, we acknowledge that women's decision making and management power related to production systems is complex and highly context-specific. Despite their active involvement in diverse agroforestry practices (e.g. management of nitrogen-fixing and fodder trees, domestication of indigenous fruit trees), their level of participation and benefits are often constrained by cultural norms and limited resources. Agroforestry value chains are particularly important for women's income, but again low access to capital, technology and information, constrains women from developing their enterprises further. Moreover, women's roles in value chains are often poorly supported by policymakers (in the design as well as in the implementation of policies) and service providers. Interventions to help smallholders improve the marketing of tree and agricultural products have not always had positive effects on

women, because when the business becomes more profitable, men often tend to take over. One of the major challenges for agricultural development, however, remains women's low access to extension services. Profound reforms in African extension systems from a centrally-controlled, top-down approach to a more participatory and pluralistic system, are expected to improve women's access to agricultural information and services. The paper ends with some recommendations in the field of technology, policy and institutions, to enhance women's participation in and benefits from agroforestry, and agriculture in general.

Why does gender matter?

Internationally, it is now recognised that addressing gender imbalances holds the potential to decrease poverty and food insecurity in Africa, while delivering environmental services and mitigating climate change. In the book "Challenging Chains to Change" (KIT *et al.* 2012), the important gender dimension of poverty is acknowledged for two basic reasons. The first is that it is a matter of human rights. Although women and men both contribute to and benefit from rural development, women still lack legal and property rights, as well as access to land, finance and modern business practices. Second, it is a matter of improving agricultural business. Gender inequality produces inefficiencies; when half of society is under-mobilized or excluded, this represents a lost opportunity for development and for business.

Women in sub-Saharan Africa are major contributors to the agricultural economy, but face various constraints that limit them from achieving optimal production and agricultural development. Research has shown that in many contexts, women have less access than men to productive resources and opportunities such as land, labour, education, extension, financial services and technology (Doss 2001; Mehra and Rojas 2008). In addition, women have low decision making power when it comes to issues of household income allocation, livestock and cash crop production and marketing, and water management, and this is often rooted in cultural and social norms (Akeredolu *et al.* 2007).

This paper gives a snapshot of issues surrounding women's participation in and benefits from agroforestry. Major challenges that women face in agroforestry are highlighted, but there are also

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examples of opportunities to enhance their involvement. Finally, some recommendations for technology, policy and institutional interventions are formulated.

Gender and household decision-making

The complexity of decision making and management powers of women related to natural resources management and crop-tree-livestock production systems was illustrated in a study on the role played by and place reserved for women in natural resources management in the drylands of Mali, Nigeria, Niger and Ghana (Sissoko *et al.*, 2014). The authors showed that, overall, women have very little control over marketing decisions, except in Niger where women were found to control cash crop marketing (*i.e.* millet, cowpea and sorghum). Likewise, in Ghana, staple food crop marketing was under the control of women. However, being in charge of marketing does not necessarily mean that women have equal control over the income generated from the sales. The study highlighted that women in Ghana choose the markets for selling, bargain the prices with the buyers, but then return generated income to the male household head after transactions. Nevertheless, as far as distribution of decision making power between men and women in the household is concerned, Sissoko *et al.* (2014) demonstrated high variability according to the type of decisions, and important differences between countries and ethnic groups, suggesting that there is need to for a context-specific understanding of women's decision making powers.

Gender and agroforestry practices

Agroforestry systems are not gender-neutral. Both female and male farmers are an integral part of agroforestry systems — As a matter of fact, women are habitually responsible for managing trees, especially at the early stages of establishment. Women often have highly specialized knowledge of trees and forests in terms of species' diversity, management and uses for various purposes, and conservation practices. However, compared with men, women's needs and priorities are not always

adequately addressed, for a range of interrelated cultural, socio-economic and institutional reasons. One of the major obstacles to the adoption of agroforestry by women is limited access to land. In a survey carried out in 16 African countries, women are as likely to own land as males in only six countries and only 2% have land titles (Croppenstedt *et al.* 2013). Also, female headed households have generally less land than male headed households. As regards tree tenure, men and women have separate rights to different parts of the tree; however, women's rights are mostly confined to secondary products of no significant economic importance, such as branches, fodder and often indigenous fruits. Whenever such 'by-products' become valuable, they are usually taken over by men.

Kiptot *et al.* (2013), in their review on the contribution of gender and agroforestry to food security in Africa and the imbalances that exist, concluded that women are as actively involved in agroforestry as men. However, the level of participation and benefits of women are constrained by cultural norms and lack of resources.

One of the agroforestry practices that Kiptot *et al.* (2013) examined was the use of nitrogen-fixing trees for soil fertility improvement. A review of 10 studies undertaken in Kenya, Zambia, Uganda and Malawi on the adoption of such trees showed that women farmers were as actively involved as their male counterparts, suggesting that the use of these trees for replenishing soil fertility is gender neutral. However, women in Zambia had smaller plots of nitrogen-fixing trees than men, possibly because of the heavy workload that women bear, land constraints or risk aversion.

Estimates on the use of fodder shrubs, an agroforestry practice promoted in East Africa for increased milk production, showed that 47 % of planters were women (Kiptot *et al.* 2013).



Nevertheless, in Tanzania and Uganda, only 39.8 % of the income from milk was managed and controlled by women. Furthermore, increasing formalisation of the milk markets is likely to further erode the traditional female control of milk and its by-products, thereby decreasing their power to allocate money autonomously within the household. Other benefits from fodder shrubs, however, directly benefit women, such as improved nutrition of the family, and the production of fuelwood, high quality manure and stakes for vegetable production. Growing fodder shrubs on-farm also often reduces the amount of fodder that has to be collected off the farm. This agroforestry practice thus frees up time for women, who are usually responsible for fodder collection; time which they can now dedicate to food preparation, child care and productive activities such as vegetable growing, small livestock husbandry, food processing, etc.

Lastly, the fact that women's participation in indigenous fruit enterprises in sub-Saharan Africa is much greater than for exotic fruits, holds great prospects for the domestication of indigenous fruit trees as a way to addressing gender imbalances and achieving household food and income security. Traditionally, women have been the primary domesticators of forest-based food and medicinal plants that are now found in home gardens around the world (Kumar and Nair 2004). While men may be the nominal owners of trees, women are often responsible for the marketing of fruits and, importantly, are often able to decide how the resulting income is used (FAO 2013). Nevertheless, women's participation in tree domestication has been hindered by limited access to and control over land and trees, insufficient information on the requirements and advantages of tree domestication, and substantial periods of production inactivity due to the childbearing and childrearing roles of women and their heavy workloads in the household

(Degrande *et al.* 2007). Compared with single women and widows, married women are generally more knowledgeable about and involved in tree domestication because they tend to have easier access to information, land and labour via their husbands (*op. cit.*).

Gender and agroforestry value chains

Gender categories have differentiated tasks and responsibilities in tree and crop management, harvesting, processing and marketing. Women therefore tend to play specific roles in agroforestry value chains. These are important in income generation, and in turn for the well-being and food security of households. However, women's roles in value chains are generally poorly supported by policymakers and service providers. Women face particularly constraints in marketing, such as: lack of capital, poor market infrastructure, high cost of transportation due to poor road conditions and theft of their products and money at the markets (Yisehak 2008). Other constraints include lack of appropriate technology and limited access to processing technologies, marketing strategies and market information (Degrande *et al.* 2014). Also, when agricultural products are marketed through organized groups, such as cooperatives and associations, women tend to lose out because membership is predominantly male (Kergna *et al.* 2010). Moreover, most of the women's associations in rural areas are traditionally led or dominated by "invisible men's hands", either husbands or village chiefs.

Ingram *et al.* (2014) argued that enhancing women's benefits requires, firstly, recognising the informal and often policy-invisible nature of forestry and agroforestry value chains and people working in them, the gendered nature of forestry and agroforestry products and activities in value chains, and the sources of gender differences, such as customary governance arrangements concerning

access to species and markets. Many research and development organisations have used various approaches to help rural dwellers, and particularly women, improve commercialisation of tree and agricultural products. These include capacity building in business skills and assessing market trends, promoting product specialization, and improving processing. Other strategies comprise of making available improved storage methods, encouraging farmers to organize themselves in producer groups and embark on common group sales to traders, and facilitating village-level stabilization funds by which producers receive advance payment for part of their produce. This allows them to keep the product for off-season sales, because they are no longer obliged to sell immediately after harvest to meet urgent cash needs.

There is an increase in contract farming and outgrower schemes to ensure availability of high-value crop and tree products, through which farmers seek to ensure a steady supply of quality produce and income. Evidence (FAO 2012) shows that female producers are largely excluded from contract-farming arrangements because they lack secure control over land, family labour and other resources required to guarantee delivery of a reliable flow of produce.

Gender and agroforestry extension

According to FAO (2011), women are able to access only 5% of the agricultural extension services that men access. Sulaiman and Kristin (2012) reported that the percentage of women working in agricultural advisory services was 15 % worldwide and only 11 % in Africa. Extension systems have, however, undergone profound change during the last 20 years in many countries, from a centrally-controlled, top-down approach to one that encourages many different organizations to interact with farmers as equal partners. This is expected to positively affect women's access to agricultural information and services. For example, small, locally based organizations have an advantage in recruiting female field staff members for a number of reasons. The terms of employment for women in such organizations, as relates to pay, support and ability to work near their residential communities, can be more attractive than when working with governmental services, which may require that women relocate to remote rural areas far from their homes and families. Furthermore, involving farmers directly in some extension activities might possibly make extension more accessible and relevant to different categories

of farmers, and more gender-sensitive as well. One of such approaches is the farmer-to-farmer extension (F2F) where farmer trainers or "lead farmers" share their knowledge and experience with other farmers, and often conduct agricultural experiments on their personal farms as well. A study on the performance of F2F extension in Cameroon (Tsafack *et al.* 2014) showed that F2F programmes were able to achieve a higher proportion of women's involvement as farmer trainers (37%) than that found among extension staff (28%). While the number of farmers trained was not significantly different between female and male lead farmers, female "lead farmers" trained more women proportionally than their male fellows (74%, against 41% of trainees being women).

Another alternative to publicly-run agricultural advisory services under development in Cameroon is the rural resource centre concept. Rural resource centres (RRCs) are venues located in rural areas and run by community-based organizations, where farmers come for information, training and demonstration of new agricultural practices in general, but particularly on agroforestry. Experience has shown that rural resource centres can reach large numbers of women and young people who may be overlooked in traditional extension systems. In fact, 38 % of people associated with RRCs in Cameroon were women and 30 % were younger than 35 years. Of the 1927 farmers trained by RRCs between 2010 and 2011, 41 % were women and 43 % were younger than 35 years (FAO 2013). Eboutou (2013) found that women had different perceptions on the role rural resource centres should play in their communities than men. Women placed more emphasis on technical backstopping on a regular basis, while men thought that sensitisation, training and production of planting material should be the main activities of RRCs.

Conclusion and recommendations for way forward

Agroforestry, like other agricultural production systems and natural resource management practices, are not gender-neutral. The examples described in this paper clearly show that, across Africa, women participate as actively as men in diverse agroforestry practices. Moreover, women tend to play a dominant role in some specific domains such as indigenous fruit enterprises and often derive an important share of their income from agroforestry value chains. Yet, in most instances, they have less access than men to productive resources, technology and services, which

limits them from developing their activities and enterprises further.

From the above and in accordance with Manfre *et al.* (2013), we conclude that enhancing women's participation in and benefits from agriculture in general and agroforestry in particular, must necessarily involve technology, policy and institutional interventions. They include, among others:

- Enhancing the understanding of intra-household decision making and women's choice and management powers, especially related to household income allocations, in different social, political and economic settings (Sisokko *et al.* 2014).
- Targeting particularly enterprises which are managed and controlled by women, e.g. domestication of local agroforestry species (FAO 2013).
- Using various approaches to help women improve their participation in agroforestry value chains, such as: capacity building in business skills and assessing market trends, promoting product specialization, improving processing technologies and storage methods, organizing producers in producer groups for collective sales, and facilitating village-level stabilization funds to allow for off-season sales (Degrande *et al.* 2014).
- Training and recruiting more women extension officers, and promotion of complementary community-based approaches to bring rural advisory services closer to male and female farmers (Kiptot *et al.* 2013; Tsafack *et al.* 2014).
- Ensuring that extension activities address a range of different interest groups. For example, women are more interested in products such as fruits, fuelwood, and vegetables, while men are more inclined towards managing trees for the production of timber and poles (Kiptot *et al.* 2013).

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