



Integrating Gender Roles, Social Equity and Post Harvest Management Policies to Improve Rural Household's Food Security

Summary

This policy brief describes the current status of policies and programs in Benin and Mozambique, with the aim of identifying potential gender and social sensitive post-harvest initiatives, thereby supporting their transition to a more sustainable and inclusive food security economy. Based on the analysis of the post-harvest policy status of the two countries, the report identifies a variety of reform opportunities, including the restructuring of post-harvest, gender and social equity policies; and provision of incentives across key sectors to support the development of food security system.

Introduction

Agriculture is a major source of livelihoods for the rural populations of Sub Saharan Africa. It accounts for over 20 % of the continent's gross domestic product (GDP) (AfDB, 2014). About 70 % of the population live in rural areas and rely on subsistence agriculture (World Bank, 2012). Approximately 47 % of agricultural workers in Sub Saharan Africa are women (AfDB, 2014, FAO, 2011a).

This brief focuses on two countries – Benin and Mozambique where both countries are experiencing low productivity in the agriculture sector. Major drawbacks are poor mechanisation, lack of infrastructure and post-harvest losses.

In Benin, 95 % of the agricultural economy is assured by small farmers using subsistence techniques. Seventy per cent of the female population live in rural areas, where they carry out 60-80% of the agricultural work (FAO, 2011b). The sector account for 31.6 % of the GDP and 80 % of export income (World Bank, 2012). On average, a rural household in South Benin cultivates 0.5 ha while in Northern Benin households cultivate 2.0 ha (FAO, 2015). Maize is the most consumed cereal grain in Benin ahead of rice and sorghum. Post-harvest losses of cereals especially maize and pulses are estimated between 15% and 30 %, owing to innovation deficiencies, poor harvesting methods, inadequate processing equipment and precarious storage technologies (Honfoga et al., 2014), leading to rotting, pest attacks, and high rates of grain cracks.



Despite impressive economic growth rates and the encouraging development progress made by the government in recent years, poverty continues to be severe and widespread in Mozambique. More than 70 % of households live in rural areas (USGHSI, 2015). Farming is their main source of food and income. The agricultural sector in Mozambique accounts for approximately 28.7 % GDP and 80 % employment (USAID, 2016). Agriculture employs 90 % of Mozambique's female labour force (USGHSI, 2015).

Agriculture is mainly based on small, hand-cultivated units. About 97 % of production comes from 3.2 million subsistence farms averaging 1.2 hectares per household. Maize is grown in all regions of the country by about 79 % of rural households and occupies about 35 % of total planted area (FAO, 2015). Post-harvest losses are estimated at 30 % and occur mainly because of rats attacks, weevils, heavy rainfall, humidity, theft, lack of storage facilities, and spillages (Zvomuya, 2014).

Women and children in Benin and Mozambique play vital roles in agriculture. Apart from farm activities, women also heavily engage in post-harvest activities and preservation of food to ensure its availability and stability in and out of season. However, these women are systematically excluded from accessing productive resources, markets and services than men (FAO, 2016).

This "gender gap" hinders their productivity and reduces their contributions to the agriculture sector and to the achievement of broader economic and social development goals. Closing the gender gap in agriculture and post-harvest

management, would produce significant gains for society by increasing agricultural productivity, reducing poverty hunger and promoting economic growth.

Studies done in Benin and Mozambique to assess gender roles, relationships, and social equity in grain post-harvest management at rural community level revealed that post-harvest activities are pre-dominantly the domain of women. Men only come in for commercial purposes. The gender gap identified through the pilot studies is associated with selectivity in administering extension services, (thereby discriminating women), labour shortages, (as women do most of the post-harvest tasks on their own), lack of education (women literacy), lack of financial services (to support women led post-harvest projects), and lack of post-harvest technology (relevant to women).

Rural agriculture and post-harvest management is of critical importance to the national economies. Therefore, governments should be committed to this sector for economic development and food security. Policy makers should focus on improving women subsistence agriculture and post-harvest management, considering the role women play in the sector.

The sections in this policy brief highlight gaps existing in Benin and Mozambique, based on gender and social equity; post-harvest management policies; and post-harvest management innovations. The brief focuses on post-harvest management of staple grains at rural community level.

Gender Roles, Relationship, Social Equity and Post-harvest Management in Benin

Post-harvest management is poorly practiced by rural households in Benin. Maize cobs are mainly stored in traditional granaries built with straw, bamboo, branches or reeds, metallic or artisanal cribs jute bags, while corn kernels are stored in jars, metallic drums and plastic containers (Bossa, 2011). Rice storage and preservation is done in polyethylene bags. These bags are usually stored in the houses due to lack of appropriate stores.

Post-harvest activities of maize and rice are mainly reserved for women. When men participate to help women with activities that require physical strength, men ask to be paid for the services. Men own equipment that aid in post-harvest activities, for example shellers and means of transport for grain (trucks, bicycles, motorcycles and scotch carts). When men participate in post-harvest, their activities are mechanically aided while women's activities are manual. For example, threshing and grinding using threshers and

powered grinders are entrusted to men while threshing with a stick (beating) and kernel removal by hand is reserved for women. Though transportation and handling duties are performed by both, most of the time men charge for helping women with transport.

Both women and men store their grains in granaries, but, granaries for women are smaller than those owned by men. Household decision making is reserved for men. For example, women cannot decide how to use their grain, it has to be consumed in the family at the discretion of their husband. Women have decision-making power in the women led co-operatives or when the woman is the household head. Concerning preservation, modern techniques are popular among men, while women use traditional and less effective methods because they lack knowledge, purchasing power and access to extension services.

With regards to social equity, no significant differences were noted in post-harvest management among the ethnic groups. Young people, mostly the female, help in the storage,

destocking and transport of corn. When a woman is de facto head of household, she carries out all the functions and roles, but pays men for transport services.

Gender Roles, Relationship, Social Equity and Post-harvest Management in Mozambique

In Mozambique, post-harvest management involves mainly women, youth, and children. At most, women work in agriculture and play a crucial role in growing food crops, harvesting, post-harvest storage and generating income for their families. Apart from farm and post-harvest activities, women also have the primary responsibility for nutrition in most households. However, they have little access to, or control over, productive resources, farms and extension services.

In central and northern Mozambique, men and women participate in the transportation of harvests, but men transport by bicycles, trucks, and scotch carts, whereas women carry on their heads. Women carry produce on their heads because they are unable to pay for transport costs.

Women are excluded in decision-making regarding the use of profits from produce sales and asset ownership, except in low income crops (cowpeas, groundnuts, sorghum). Decision making power is evidenced in women in

polygamous marriages, where they have autonomy over their own grain stores.

The number of women who head households is rising rapidly owing to male migration either to major cities or South Africa, a trend particularly noticeable among the Tsonga and Sena ethnic groups. Due to high male migration rates, women are in relatively better decision-making position during the period when their husband is away. Female-headed households (widowed or single parent) make decisions independently, whether young or old.

Men largely control income from bulk sales at the beginning of the storage season and women partially control that of mid-season sales. Overseeing the final stages of the farm produce, including storage management, stock taking and control over revenues from sales is men's responsibility. Within rural communities in Mozambique, women are particularly disadvantaged. They have considerably less access to education than men and, therefore, fewer farming and post-harvest skills.



BOX 1: RECOMMENDATIONS FOR ENHANCING GENDER ROLES IN PHM

- Women, children and other marginalised social groups should be given an opportunity to access extension services, programs and training, the same way men access these.
- Extension services should not be disseminated focusing on household heads only, other criteria, which takes into consideration other groups should be used.
- Farmer schools can be introduced which teach men and women farming business skills, post-harvest handling and food safety. Male and female farmers can also be trained on the advantages of collaboration and sharing post-harvest tasks.
- Women, youth and marginalised social groups should be given priority in agricultural training programs. Particularly for women, this is necessary because they participate in most of the agricultural activities and post-harvest handling.
- It is important to recognize the role that rural women play and the contribution that they make in networks and cooperatives, giving them greater political and financial support and involving them in the training and conducting of development programs that enhance women's role in post-harvest management.

BOX 2: RECOMMENDATIONS FOR IMPROVING GENDER RELATIONS

- Extension programs focusing particularly on women, youth or other marginalised social groups should be introduced. Other specific programs include women-led micro-credit schemes to finance income generating activities that can help women acquire assets.
- Women should be assisted to market their products either by facilitating transport to market places or arranging for buyers of the products. This should be coupled by provision of infrastructure for women entrepreneurship.
- Gender analysis targeted at improving post-harvest management ensures that women and men participate in the development of strategies and that proposed programs target their resources most effectively, taking into account the different roles, needs, and perceptions of women and men.
- In order to contribute to an increase in the levels of production and productivity, it is necessary to provide support to women's organizations and farmers who promote new conceptual and development programs and who contribute to the implementation of new ideas by women with a view to diversifying income-generating activities and the provision of other services in rural areas.

Gender, Social Equity and Post-harvest Management Policies and Programs in Benin

In Benin, there is no specific document, policy, or strategy on post-harvest management (PHM). Moreover, there is no specific chapter on PHM in existing gender related documents. Popular policies relating to agriculture and to gender and social equity are the National Policy of Gender Promotion (PNPG) and the Strategic Plan for Agricultural Sector Revival (PSRSA).

The overall objective of PNPG is achieving equality and equity between men and women for sustainable human development by 2025, while the PSRSA emphasises on strategic directions and key actions to stimulate sustainable economic growth in the agricultural and rural sector. The policies are not clear on their relationship with post-harvest management of staple grains.

Most of the on-going and completed projects and research programs address grain storage techniques, equipment, and food processing methods. The programs do not address post-harvest management of grains, gender and social equity.

BOX 3: RECOMMENDATIONS FOR IMPROVING POLICIES

- Existing national agricultural policies need to incorporate sections on post-harvest management issues. The sections should be clearly defined to represent post-harvest management as a whole and post-harvest management of grains and pulses. This is because grains and pulses form the basic diet of households in sub Saharan Africa, therefore an improvement in availability and stability of these staple grains automatically improves food security.
- The policies addressing post-harvest management at rural household level. This is because methods and mechanisations used and applicable in commercial farming are different from the ones used in rural subsistence farming and vice-versa.
- There is need to mainstream existing national gender and social equity policies to post-harvest policies. Despite that there are gender and social equity programs being implemented in the pilot countries in other sectors, the same should be adequately addressed in the agriculture sector. Specific focus should be on addressing existing gender imbalances in post-harvest management, extension programs and rural agricultural development programs.
- Policies established for the benefit of rural women should be tested and reassessed by the beneficiaries, using them as a social learning tool and not as individuals on whom political authority is exercised.

Gender, Social Equity and Post-harvest Management Policies and Programs in Mozambique

Mozambique advocates for the promotion of research and innovation, food security, equal rights and opportunities by all social groups, but its legislative documents do not mention the importance of conducting targeted actions to reduce crops post-harvest losses with the intent of promoting food security, gender equality, and social equity.

The key strategic development options for the country's 2025 agenda only address promotion of food storage throughout the year and promotion of agro-processing industries. The Action Plan for Poverty Reduction 2011-2014, emphasised on building of local storage facilities as a key objective linked to increased agricultural output and productivity. Post-harvest, gender equality and social equity are not articulated in these legislative documents.

The Mozambican government is running a 5-year program (Imprensa Nacional de Moçambique, 2015) to promote gender equality and social equity, including social assistance to the poor and vulnerable. The program focuses on the promotion of general agricultural technologies with no specific indicator to measure progress towards post-harvest of grains. Furthermore, it does not take into consideration gender and social equity concerns at large.

Mozambique has a number of research programs in progress, though they do not fully address shortfalls surrounding post-harvest management of grains. The Catholic University has a food engineering degree, which focuses on training women groups on correct grains

conservation and processing practices for improved household food security and income generation.

The Faculty of Agronomy and Forestry Engineering and Faculty of Engineering /Eduardo Mondlane University (FAEF and FAENG/UEM) is undertaking research to determine effectiveness of the triple bag technology in grains storage in Maputo, Manica and Gaza provinces.

The National Institute for Disasters Management (INGC) is disseminating Gorongosa type mud brick improved silos in some districts of Gaza and Inhambane provinces as one of its drought mitigation and post-harvest loss control activities. However other regions are still not catered for.

To facilitate collaboration of couples at household level, FAO implemented the Farmers Field School Methodology, to strengthen decision-making capacity for women involved in maize production to supply a demand for high standard produce for World Food Programme (WFP) Local Purchases Programme.

The Agricultural Research Institute of Mozambique (IIAM) is emphasising on use of traditional preservation methods in rural post-harvest management, based on the findings of the research done using wood ash, an ancient practice used by the communities for grains storage.

The Agricultural Research Institute of Mozambique trains agricultural scientists to develop technologies with due consideration to gender, equity and nutrition.



Post-harvest Management Innovations that can be Scaled Up



Most grain losses occur at storage stage of post-harvest management. At storage, grains are exposed to physical and biological damage due to poor drying methods and inadequate storage infrastructure.

In Benin, there is equipment to improve post-harvest management of maize and rice for tasks performed by men and women and for tasks performed only by women. However, some of this equipment continues to increase gender inequalities because women cannot access and utilize them.

The uptake of post-harvest management innovations among women has been slow in Mozambique. Reports showed that adoption of the mud-brick silos has been constrained due to poor access to financial resources by rural farmers, especially female farmers. FAO has also been promoting construction of metal silos unsuccessfully due to poor skills, lack of capital among local artisans; and scarcity of appropriate metal sheets on the local market.

Of interest are post-harvest innovations that ease activities normally undertaken by women and the youth using bare hand methods. For example, innovations that improve shelling, threshing, drying, grinding, and winnowing are relevant.

BOX 4: RECOMMENDATIONS FOR IMPROVING POST-HARVEST MANAGEMENT TOOLS

- Post-harvest management innovations should be adaptable, acceptable, affordable and relevant to farming practices of the communities. Preferably post-harvest innovations that do not require use of fuel would be relevant to rural communities due to less cost.
- When designing innovations, the needs of socially disadvantaged groups, youth, children and women should be considered. The innovations should benefit the whole community regardless of their social status.
- The training of rural women is very important, especially with the adoption of modern agricultural and post-harvest techniques that are tailored to local conditions and that use natural resources in a sustainable manner, with a view to achieving economic development without degrading the environment.

Conclusion

Gender and Social Equity are the key factors in sustainable development in rural communities. Promotion of gender equity and fair distribution of roles in rural agriculture and post-harvest management will improve food security. Rural women play a key role in supporting their households and communities in achieving food and nutrition security, income generation, and improving rural livelihoods and overall well-being through agriculture. When women are empowered (by addressing their practical and strategic needs) and when they can claim their rights and access to land, leadership, opportunities and choices, economies grow, food security is enhanced and prospects are improved for current and future generations. All in all, the two countries must develop, implement and monitor sound gender sensitive post-harvest management policies.



References

AfDB 2014. Transforming Africa's Agriculture to Improve Competitiveness: Agriculture Sector Strategy 2010–2014. *Transforming Africa's Agriculture to Improve Competitiveness*. Tunis: African Development Bank.

FAO. 2011a. The role of women in agriculture Available: www.fao.org/economic/esa.

FAO. 2011b. The state of food and Agriculture. Available: <http://www.fao.org/docrep/013/i2050e/i2050e.pdf>.

FAO. 2015. Food and Agricultural Organisation country profiles. *Benin* [Online]. Available: <http://www.fao.org/countryprofiles/index/en/?iso3=BEN&subject=4> [Accessed 10 October 2015].

FAO. 2016. *Women, agriculture and rural development: a synthesis report of the Africa* [Online]. Economic and Social Development Department Available: <http://www.fao.org/docrep/x0250e/x0250e03.htm> [Accessed 11 August 2016].

HONFOGA, B. G., AKISSOE, N. H., GUEDENON, A. & SOSSA, N. C. 2014. Post-Harvest Management Policies, Programmes and Strategies in Benin and Sub-Saharan Africa. Benin: Food, Agriculture and Natural Resources Policy Analysis Network.

WORLD BANK 2012. Agriculture and rural development. Washington, DC USA: World Bank Group.

ZVOMUYA, F. 2014. *Weak post-harvest policies in Mozambique major cause of food insecurity* [Online]. Available: <http://africagreenmedia.co.za/weak-post-harvest-policies-in-mozambique-major-cause-of-food-insecurity/> [Accessed 11 January 2016].

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