

# CHAPTER 4

## CONCLUDING REMARKS AND RECOMMENDATIONS FOR IMPLEMENTATION OF THE LUSIP

Implementation of the KDDP and the introduction of commercial sugar-cane plantations have transformed the farming activities and the livelihoods in the three study areas.

Overall, there has been a significant reduction in agrobiodiversity in these areas. A high degree of agrobiodiversity can make farming systems more stable, robust and sustainable, so ensuring the resilience of rural livelihoods to both exogenous and endogenous biophysical and socio-economic shocks, such as pathogen infestation, uncertain rainfall, fluctuations in the price of cash crops and external inputs, and socio-political disruption. As Lambrou and Laub (2006) state: “the reliance of rural women and men on a variety of genetic sources allows them to adapt their agricultural systems to varying environmental, economic and social conditions”, providing them, at the same time, with additional income-generating possibilities from a wide range of natural resources. Subsistence farmers are particularly reliant on maintaining a wide range of plant and animal varieties adapted to the local environment. These varieties provide the farmers with a continuous and varied food supply, allowing them, at the same time, to protect themselves against crop failure and animal losses (FAO, 1999, 2004a).

The reduction in agrobiodiversity that has occurred in the three study areas has reduced the adaptability of local agro-ecological systems and their resilience, posing a serious threat to rural livelihoods and food security. The reliance on a single crop (sugar cane) and the strong dependence of such systems on external inputs have increased their vulnerability to shocks, such as the severe droughts experienced by Swaziland in recent years, the drop in the price of sugar, and the increase in the price of agricultural inputs and food.

The potential negative impacts of a shift from subsistence to commercial, monoculture-based farming discussed above should be considered in the implementation of the LUSIP. In particular, the negative implications of such a shift on agrobiodiversity should be minimized. At the same time, the potential socio-economic benefits (particularly in

terms of food security) of the water irrigation project that is currently being developed should be maximized. The availability of irrigation water represents a potential benefit for the livelihoods of rural households, reducing their vulnerability to droughts and enhancing their food security. However, in order for these benefits to materialize, the introduction of commercial crops should be integrated with, rather than replace, the existing agro-ecological systems, preserving their diversity and complexity. An adequate amount of land should be kept available for existing farming and livestock activities, and irrigation water should be made available for other crops besides sugar cane. Maintaining a high degree of diversity within the local agro-ecological systems is crucial to the conservation of the extensive knowledge and the traditional set of skills of local farmers in the management of local crops and livestock. This would contribute to the resilience of local agro-ecosystems to socio-economic and climate shocks, so enhancing the long-term food security of local communities.

The establishment of sugar-cane plantations at Mangweni, Vukasidwashini and Entamakuphila has also been accompanied by a reduction in the population of several wild edible plant species. In addition to the food security implications, the reduced availability of such species may increase the vulnerability of rural livelihoods to exogenous shocks by reducing the number of coping mechanisms available. The consumption of wild edible plants is particularly important in areas prone to food shortages. In some cases, it can represent a key survival strategy. For example, in parts of southern Ethiopia, rural households are able to cope with several consecutive years of severe droughts without facing severe food shortages by increasing the consumption of wild food plants. A reduction in the availability of wild edible plants might also threaten the knowledge and skills associated with the collection and the utilization of such species, particularly among women. More broadly speaking, agrobiodiversity shapes and is shaped by local knowledge and culture. For this reason, where agrobiodiversity is reduced, the accompanying local knowledge, culture and skills may also be under threat (FAO, 2004b). Women generally have the primary responsibility of providing their families with food, water, fuel, medicines, fibres, fodder and other products. Due also to such responsibilities, rural women are the most knowledgeable about the patterns and uses of local biodiversity. In particular, women are often responsible for the collection, preparation and consumption of wild edible plants and, thus, have a more highly specialized knowledge than men of the wild plants that can be used for food, fodder and medicine (FAO, 1999, 2004a; Howard, 2003; Guinand and Lemessa, 2000).

The importance of wild edible plants for the food security of rural households, especially poor households and those in areas prone to droughts (as is the LUSIP area), should be considered in the implementation of the LUSIP. The negative impacts of the LUSIP and of any following land-use changes should be considered carefully and minimized in order to avoid the reduction in the population of wild edible plant species that has occurred in the areas under the KDDP. In addition to the positive food security implications, this would also help conserve, particularly among women, the knowledge associated with the collection, preparation and consumption of wild plants for food, fodder and medicinal purposes.

The transformations in the agriculture sector that have accompanied implementation of the KDDP in the three study areas have also had important gender-related implications. At Mangweni, Vukasidwashini and Entamakuphila, most marginal lands and home gardens (where women traditionally used to grow crops for household consumption, rituals and medicinal uses) have been converted to sugar-cane plantations. These plantations, as most commercial crops, are managed mainly by men. This tendency has been documented in several studies that have shown that, when local crops intended

for production-for-use are replaced by introduced crops for commercial purposes, often “men take over from women”, with negative repercussions on the ability of women to meet household obligations, including traditional food provision and food security. The strong dependence on external inputs that characterizes commercial agriculture systems tends to exclude women, who generally lack access to and control over productive resources. The reasons for this are many, including women’s limited access to credit and information, as well as the lack of training opportunities for them (FAO, 2004a, 2004c; Wooten, 2003; World Bank, 2003).

One of the factors that have contributed most to the economic marginalization of women in the three study areas under the KDDP has been the low number of women among the members of the farmers’ associations managing the sugar-cane plantations, and the resulting lack of women’s involvement in the decision-making process of such organizations. The gender-related implications of a shift from subsistence to commercial farming should be assessed carefully and taken into account in the implementation phase of the LUSIP. Maintaining a high level of agrobiodiversity and conserving wild edible plant species, as discussed above, would be key to maintaining an active participation of female farmers in farming activities. Furthermore, in order to ensure that women are not excluded in the shift from subsistence to commercial farming, it is fundamental to ensure their equal access to farmers associations, and their inclusion and active participation in the decision-making process of such organizations.

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