

Farmers and the future of agro-biodiversity



ONE NATURE • ONE WORLD • OUR FUTURE
COP 9 MOP 4 Bonn Germany 2008



Agro-ecosystems and agro-biodiversity contribute to sustainable livelihood securities at the local, national and global levels. They provide a range of goods and services including food, fodder, climate change mitigation, biodiversity conservation and water quality options. Farmers and farming communities have a significant role to play in the preservation and conservation of these resources and ecosystems. The role of agriculture in the provision of ecosystem services depends, however, on the incentives available to it.¹ At present incentives are designed to pay for the goods rather than the services provided by agricultural ecosystems. Payments for ecosystem services interventions often do not reflect correctly the social, environmental, economic and cultural aspects of the environmental services that farmers and farming communities deliver.

Arguments in favour of payments for ecosystem services in agro-ecosystems should be based not only on the current provisioning and regulatory services offered but also on anticipated future services. With growing reliance on increasing productivity systems in agricultural landscapes, food production and allied services agroecosystems offer the best option for provisioning services.

Some of the key issues for consideration by policy makers to ensure the continued engagement of farmers in conservation and the use of agro-biodiversity include the following:

1. In spite of concerns relating to the depletion of agro-biodiversity, awareness of their potential uses is increasing. With growing pressure on land, demand for crops for activities such as biofuel production and bio-fortified food will increase the demand for agro-biodiversity. This pressure will affect the way in which farming will be carried out in the future. It is crucial that farmers are encouraged to continue farming rather than moving to non-farming activities as the mainstay of their livelihoods. This requires some form of incentive system for farmers.

The importance of the services provided by agro-ecosystems including increasing the diversity of pollinator biodiversity and soil biodiversity, maintaining the natural enemy populations, providing of water and climate mitigation and adaptation options means that the conservation of agro-biodiversity is a necessary investment for countries and governments to make. Farmers and farming communities can benefit from the design of payment for ecosystem services mechanisms to encourage them to continue farming.

In either case, the key challenge is to ensure farming remains attractive option. Failing crops owing climate variations, decreasing State support to fix fair prices for crops, disconnected markets influenced by middlemen and a lack of incentives mainstreamed into national procurement and export policies in agriculture all result in farmers being wary of continuing to work in the agricultural sector.² Suitable policy

and support packages are required to remove these negative forces that threaten farmers and farming communities.

2. Payment for ecosystem services in agricultural systems requires a careful assessment of the characteristics of services provided and the social and economic context within which such payment for ecosystem service schemes are discussed and designed. What should be paid for? Who should it be paid for? *How should be paid?* These are all the key questions that require consideration by those people who are designing payment for ecosystem services interventions in agro-ecosystems.

3. Policy and regulatory aspects related to access to genetic resources, farmers' rights provisions and the safe use of genetically modified organisms are all relevant to farming practices. Farmers should be made aware of the debates on these issues and educated so that they can make informed decisions.

4. Payment for ecosystem services schemes are designed to encourage farmers to continue providing their service and should not be seen as a poverty reduction tool. This understanding is critical to delivering an appropriately-designed payment for ecosystem services mechanism for agro-biodiversity conservation. While agrobiodiversity is seen as a critical provisioning service, regulatory services such as the provision of water for irrigation and consumption through watershed management should also be considered in the design of payment for ecosystem services.³

5. Direct drivers of agricultural production systems and their services include demand for food consumption, availability of crop diversity and their management, land use patterns, climate variability and change, energy provisions and availability of labour. Careful assessment of the links between these drivers and their individual and combined impact on agricultural production systems are critical to ensuring the development of suitable national agricultural and economic packages.

6. Access to credit, capital and assets often pose the greatest challenge to farmers who are engaged in subsistence farming. Most agro-biodiversity occurs in areas where subsistence farming is practiced owing to difficult growing conditions and the importance of farming as a low-risk option. Policy and development packages should consider appropriate interventions to deliver access to credit, capital and assets. Inappropriate credit structure, untimely capital support and unclear asset regimes are bound to create more problems rather than removing obstacles to enable farmers to continue farming in fragile environments and on small land holdings.

³ <http://www.wri.org/publication/developing-corporate-ecosystem-services#>

¹ The State of Food and Agriculture 2007, FAO, Rome.

² <http://www.fao.org/newsroom/en/news/2007/100073/index.html>