Bananas in Mindanao, Philippines
Potential for environmental mitigation using a landscape approach

CONTEXT

Banana production is extremely important to Mindanao and the Philippines as a whole, bringing in over $646 million in 2012 (second only to coconut oil in terms of export receipts from agriculture). With 75 percent of total production located on Mindanao, negative environmental effects of banana production are particularly important to the long-term sustainability of commodity agriculture in this region.

ENVIRONMENTAL RISKS AND IMPACTS

Risks from banana production are manifold, and are beginning to be noticed by national policymakers. Reduced water quantity due to abstraction by plantations has led to conflicts with downstream users. Water and air pollution from improper use of fertilizers and aerial spraying of pesticides pose a significant public health risk, and also lead to loss of terrestrial and aquatic biodiversity. Soil erosion and degradation from land clearing and poor management practices are a further issue in production.

INCENTIVES FOR MITIGATION

Public health has been a rallying cry for changes in production practices in the Philippines. Natural Capital Accounting was introduced in the 1990s to facilitate environmental risk identification and mitigation, and has gained some traction; however more collaboration between policymakers across regions and levels of government is needed for it to really take root. The WAVES partnership is working to lay the foundation for taking this accounting into policy planning. Payments for ecosystem services (PES) have been used by the World Agroforestry Centre for many years, along with Philippines sub-national programs. The government has also tested using water permits to promote better practices, and enforcing penalties for “environmental endangerment,” listed in the local Government Code of 1991.

POLICY ACTION

Only 2.1 percent of the Philippine banana market is currently organic or Rainforest Alliance certified. There have been calls from civil society and local government, and support to develop projects that seek to account for natural capital and smallholders’ access to land and marketing capacity. National and sub-national PES programs are also in place and policy in general is working towards improving practices in the industry, and there are some regulations in place that enable these interventions.

Funder of environmental practices and investments

In response to the threats posed by banana production, the Philippines governments, along with NGOs such as ICRAF and WWF and the WAVES partnership have piloted many different initiatives exploring landscape level natural resource management. Natural capital accounting and payments for ecosystem services (PES) have been a particular point of emphasis in the watersheds where banana is produced.

In the Manupali watershed the local environment and natural resource office, in response to the negative impacts of intensive banana production on water availability and quality, developed a reward system for farmers...
who adopted better management practices, and tried to engage the banana industry in the region.

**LESSONS LEARNED**

The challenges associated with increasing the sustainability of banana production through landscape approaches in the Philippines include a lack of clear metrics and technical information, a lack of strong commitment by local government, and low capacity, both financially and in knowledge and skills, with small scale farmers.

Nonetheless, stakeholders can build on existing efforts and open new opportunities, through several approaches:

- **Promote improved environmental management through practice codes and farmer associations, including farmer contract programs.**
- **Work within the emerging NCA and WAVES frameworks and major banana multinationals to incentivize improved practices throughout the value chain.**
- **Adapt Landcare models for farmer-led improvements in environmental management linked to improved local government action.**
- **Tie good environmental practices to access to government incentives for plantation licenses and access to credits and other farmer incentives.**
- **Support farmers to diversify incomes.**
- **Develop more opportunities for selling certified produce.**
- **Work with brand name companies and companies with a supportive investor base to implement more sustainable practices within the local banana industry.**
- **Better integrate landscape indicators into Philippine Good Agricultural Practices (GAP) certification.**
- **Develop sustainable “agri-food clusters,” linked to infrastructure access such as ripening rooms, cold storage, and ports.**
- **Facilitate multi-stakeholder partnerships to support small-scale farmers in a way that can also promote improved local environmental outcomes.**

**Figure 2. Banana storage. Photo credit: David Llorito/World Bank**

This note is based upon the case study “Banana Production in Mindanao, Philippines” prepared by Tanja Havemann and Naomi Rosenthal, which can be found in *Steps Toward Green: Policy responses to the environmental footprint of commodity agriculture in East and Southeast Asia*. This work was done as part of the Greening of Export Agriculture in East and Southeast Asia research program, coordinated by the World Bank. For inquiries, contact Steven Jaffee, sjaffee@worldbank.org. The findings, interpretations and conclusions expressed in this document do not necessarily reflect the views of the Executive Directors of the World Bank Group or the governments they represent. The World Bank Group does not guarantee the accuracy of the data included in this work.

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