



## **Improving Agriculture: Environmental and Social Considerations of Sectoral Reform**

Throughout the developing world, agricultural growth and rural prosperity are grounded on the ability of farmers, suppliers, traders, and other rural service providers to use local and imported resources to improve living conditions while protecting the local natural resource base. Agriculture occupies a central place in USAID's approach for broad-based economic growth, a fact supported by the publication of the new "USAID Agricultural Strategy – Linking Producers to Markets" (July 2004). USAID also recognizes that agricultural practices have multiple and enduring impacts on the environment, and vice versa. The linkages between the natural environment and agriculture are complex. A country's natural resource base largely determines the potential of that country's agricultural sector, and conversely, the state of a country's natural resources is affected by its agricultural practices. The nexus between agriculture and environment has been a part of USAID deliberations on agriculture for over two decades. Simply stated, sustainability for agriculture depends on good environmental management, first at the level of individual producers and enterprises, and second, within the overall sector. Agricultural sustainability also depends on soundly implemented environmental policies given that both good and poor environmental management can have spillover effects for players and neighbors alike. It is in everyone's interest to adopt best policies and practices.

### **A vibrant economy and a healthy environment can reinforce each other.**

To most observers the debate over environmental management and agricultural growth has ended. The two are emphatically not mutually exclusive. Rather, they are mutually supportive – if policies allow. Good economic, agricultural, and environmental policies are essential for agricultural and rural growth without sacrificing scarce natural resources such as soils, watersheds, and forests.

USAID/Honduras recently began implementing a large and integrated watershed resources management project that aims to create a more secure and stable national economy by applying sustainable agricultural practices and cleaner production processes and certifications. The project is focusing on realigning Honduran public policy on specific vital issues, including (a) protected area management; (b) clean production; (c) environmental certifications for agricultural products; (d) ecotourism; and (e) environmental education. It is expected that this project will lead to sustained increases in agriculture production. This same approach could be applied in almost every developing country.

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**This land is your land.**

When an individual owns a resource, and in the future can expect to keep and profit from it, that individual has an incentive to invest in the resource in the form of protective measures, restrained use, and careful management. Private ownership of property provides incentives for good care that don't exist under government or even community control. USAID's Land Tenure Reform project in Kazakhstan, Uzbekistan, and Tajikistan (September 2003-October 2005) successfully provided assistance to the governments of those countries to develop land laws, policies, and implementing procedures to strengthen property rights. It also assisted farmers in Kazakhstan to acquire secure access to land. The project led to greater investment in agriculture production, increased income, and significant improvement of sustainable resource use.

**Green tourism is good for agriculture.**

Forest and marine habitats are being destroyed, and much of the wildlife they contain is becoming extinct under pressures of agriculture. Even in areas that have been officially reserved for nature conservation, many governments lack funds to manage and protect them. Whether called nature tourism, sustainable tourism, or ecotourism, tourism based on nature has proven to be an effective means for advancing economic growth and environmental objectives in developing countries. Most nature-based tourist sites are located in rural areas, and offer alternatives to agriculture for local income generation, employment, and rural economic growth. USAID has promoted this type of tourism since the 1980's precisely because it offers opportunities for small-enterprise investment and employment. It also increases the national interest in protecting its resources.

Making this type of tourism a positive economic and environmental tool requires policies that foster responsible nature tourism development, broad-based and active local participation in its benefits, and conservation of natural resources. USAID supports nature-based tourism activities as part of its biodiversity conservation programs in many countries worldwide. The Agency's ecotourism activities include support for developing national park systems; equipping new national parks; recruiting and training park staff; and promoting policy reforms that encourage investments in private lodging, guide services, and other tourism businesses. In Costa Rica, Jamaica, and Sri Lanka, for example, USAID support led to creating new wildlife parks that have generated the growth of other tourism facilities around them. Tourist demand for food, lodging, souvenirs, educational materials, and guide and transportation services stimulates local investment, employment, and incomes by and for farm families, as well as for other segments of the rural population.

### **Good agricultural practices and clean production technology.**

The concepts of Good Agricultural Practices (GAP) and Clean (cleaner) Production (CP) have evolved in recent years as a result of concerns and commitments about food production and security, food safety and quality, and the environmental sustainability of agriculture. The implementation of GAP improves the sustainability of agriculture on a number of fronts including promoting improved seed varieties and fertility management; seedbed terracing and contouring to reduce soil erosion and conserve moisture; integrated pest management to minimize pesticide use and improve productivity; drip irrigation to use water more efficiently and effectively; and farm chemical safety programs to protect both workers and the environment. CP initiatives include conserving raw materials and energy; eliminating toxic raw materials; and reducing the quantity and toxicity of all emissions and wastes before they leave a process.

Quality standards have long been used to protect plant and animal agriculture from invasive pests and diseases, and to protect humans from food-borne illness. But their more positive role in facilitating trade has emerged more recently. Over the last decade changes in the structure and conduct of the food industry, such as consolidation and technological innovation and the so-called “supermarket phenomenon,” have quietly spawned yet another category of standards. The new “standards of service” in agricultural marketing and trade cover competitive business practices such as compliance with private codes of practice, third-party certification, and traceability systems. Other kinds of standards have become more prominent as well. They mostly concern the processes used to grow, pack, store, handle, transform, and distribute food and agricultural goods. Social and environmental standards embodied in Fair Trade designation and Eco-Label Certification are gaining momentum in the marketplace for select products, especially coffee, wood products, and bananas. Several USAID Missions have begun to investigate the impact of these new standards on trade, and also on sustainability.

### **USAID agriculture and environment.**

The complexity of the relationship between agriculture and the environment highlighted in the foregoing – both the harmful and beneficial and the diversity of local conditions and production systems – has conditioned the approach to environmental integration in the context of USAID programs and strategies. While not often now a “stand alone” USAID activity or project, environmental concerns and the resulting policy implications are almost always a part of a larger USAID activity. This is true whether the activity’s ultimate objective is economic growth, competitiveness, agri-business, trade, enterprise development, or even health sector reform.

### **Yes, environmental polices do matter.**

It is very clear that environmental policies do indeed matter, and that their linkages to agricultural production offer opportunities for achieving higher levels of sustainable agricultural production and better natural resource management. The challenge is to seize these opportunities through sound policies and policy-making practices, and through the strategies, programs, and institutions meant to implement them.

Against the background of the linkages between agriculture and environment, environmental policies that most extensively and directly impact agriculture can be classified in two broad groups: (a) policies that reduce the harmful environmental impacts of agricultural growth and (b) policies targeted at rural producers with the aim of conserving environmental resources.

## **A. Policies that reduce the harmful environmental impacts of growth in agriculture**

Policies that work to reduce the negative impact of agriculture on the environment are generally sectoral in nature. For example, USAID/Guatemala is currently assisting the government to prepare a Rural Development Strategy that will incorporate sustainable development plans and policies to minimize the adverse environmental impact of economic growth by promoting conservation measures, reducing pollution, and using clean production technologies. The objective is to ensure that economic growth and development take place with minimal damage to the environment. Such “sustainable development strategies” usually involve policy sectors such as:

- *Water laws*, which in most developing countries are vague at best and delegate the management of a nation’s water resources to a multitude of government organizations, thereby leaving no one organization responsible. Water laws must be clear and precise. They can stress the need for water pricing policies to reflect all the different types of cost associated with the provision and use of water. They can ensure that water pricing policies provide adequate incentives for users to use water resources efficiently and that the various economic sectors contribute to the recovery of the costs of water services, including those relating to the environment and resources.
- *Forestry laws*, which are generally equally vague and ineffective. Forestland is often used to increase available agricultural land, and trees are also cut to satisfy the large demand for firewood. As with water, sound forestry laws are required. Some countries have, with USAID assistance, produced Forestry Action Plans that set the stage for appropriate forestry legislation.
- *Social forestry*, which is a very effective means for poverty reduction and environmental upgrading. Many countries have adopted social forestry policies to improve the environment and simultaneously provide livelihoods for the rural poor.
- *Land tenure policies* can contribute to agricultural resource conservation and improvement, as mentioned earlier. Property rights to resources (land, water, trees) are important. In many countries, rural poor do not have formal ownership of property and rely on informal user rights, which often leads to exploitation and under-investment.
- *Narrowly targeted policies* can also be effective. Some policy instruments can be applied to a range of targets to reduce harmful environmental impacts, such as:
  - Policies targeted at input use (fertilizer, pesticides, insecticides, energy sources)
  - Policies targeted at outputs, products or by-products (animal manure)
  - Policies targeted at production practices (shade tree production, contour curves)
  - Policies targeted at pollution abatement (water recycle systems, clean energy)
- *Food safety standard policies* are also important. The increasing globalization of trade in agricultural products requires that food safety standards of major markets, standards such as HACCP and EUREPGAP, be met in order to compete in the world marketplace. There is increasing pressure on USAID-assisted countries to make the necessary changes to comply with these standards or risk losing access to export markets, and face further economic decline. Generally these standards are also beneficial to the environment.

## **B. Policies targeted at rural producers to conserve environmental resources**

The rural poor generally live in areas that are ecologically more vulnerable and must earn their livelihoods from low-productivity and fragile natural resources. Specific policies that improve production practices of rural producers include:

- *Policies that force agricultural producers to adhere to environmental norms and good practices.* Related policy instruments include licenses and quotas to control tree cutting, policies that reduce and regulate emissions and disposable wastes, GAP-based policies that regulate chemical use in agricultural production, and the like.
- *Market-based policies that encourage efficient use of resources by agricultural producers.* Related incentive-disincentive instruments include environmental taxes and user charges like levies on the use of water or other natural resources, and subsidies or tax credits for using wood substitutes or fuel-efficient equipment.

Producers who agree to adopt environmentally-friendly farming techniques may receive in return payments that compensate for additional costs and loss of income that arise as a result of altered farming practices. Examples of commitments covered by such agreements might include:

- Environmentally favorable intensification of farming
- Management of low-intensity pasture systems
- Integrated farm management
- Organic or low-input production
- Integrated pest management

## **C. Related policy instruments address production and farming systems**

- *Agricultural research* has made great strides in developing improved agricultural technologies for crop and livestock production that are environmentally friendly. Governments could make more public funding available for national research programs.
- *Precision agriculture* is a relatively new term for improving agricultural production using geographic information systems (GIS) based on global positioning systems (GPS) to match crops to the best soil and climatic growing conditions. This new production technology, which matches resources and production needs, can have a very positive impact on the resource base. Countries with the wherewithal to implement policies encouraging this production technology should do so – incentives can be created to offset related costs.
- Additional policy measures for considerations in USAID programming include regulations and taxes to contain or prevent environmental harm; information and training programs to promote environmentally-friendly farming practices; and payments that reward and remunerate farmers for employing environmentally sustainable production practices.