Payments for Environmental Services - PES

Concept

Payments for environmental services (PES) aim to bring about sustainable land use through direct incentives. This approach works towards the goal of promoting improved and more cost-efficient sustainable use of resources.

Environmental services are those functions of the ecosystem that are of benefit to mankind. Four categories of environmental services are currently relevant to PES:

- Watershed protection,
- Biodiversity protection,
- Landscape beauty protection and
- Carbon dioxide storage.

The core concept of PES is that those who provide environmental services should be compensated for doing so and that those who benefit from the services should pay for their provision.

The following questions are important when developing PES systems:

- What exactly does the service consist of and how can it be measured?
- What different land-use options actually exist and how are they directly linked to the environmental service?
- Are payments actually dependent on the service that has been provided?
- Are stakeholders willing and able to provide payment?
- Is there political will to introduce PES and/or how can it be fostered?

The concept of payments for environmental services is based on the fact that decisions about the form of land use will affect other stakeholders – through positive or negative external effects (e.g. strong sedimentation in reservoirs due to deforestation in the area might be a negative external effect). These decisions are based on factors including the cash value and opportunity costs of each type of land management. Such decisions can be influenced and the landowner and/or user be persuaded to generate more positive effects (e.g. reducing sedimentation) or to avoid negative ones by offering payments to landowners and/or users.

The *environmental services markets* are at different stages of development and the majority of systems are publicly financed, at least in part. At present, the only areas that are really developed are the regulated and voluntary carbon markets. Hydrological environmental services are gaining significance at all levels (local, regional and national), while the private sector's involvement in biodiversity protection still falls short of expectations.

Requirements and challenges

The *willingness to pay for environmental services and institutional weaknesses* are the key factors limiting the implementation of PES systems, together with the difficulty to design effective incentives in terms of the desired environmental effects. The negotiation process, contract design and confidence building are just as important as socio-cultural issues and consequential resource use. Payments for environmental services can represent an alternative source of income for poorer agro-forestry and forestry producers, thereby helping to fight poverty as well. The design of the PES system will determine whether the poor population actually has access to the payment system.

Role of Development Cooperation

The combination of financial support and technical assistance when creating implementation capacities in the partner country is viewed as an especially promising approach. German Development Cooperation played a significant role in supporting the design, implementation, monitoring and evaluation of PES systems in recent years. Core aspects include fostering the necessary institutional conditions, strengthening organisations, clarifying or safeguarding property rights, economic valuations, environmental communication, as well as market analyses. One of the key tasks of German Development Cooperation is to pro-

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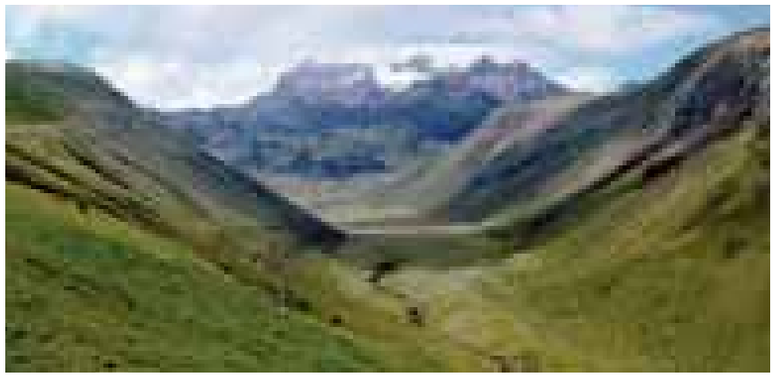

mote the creation of markets, which mainly refers to developing the demand side. Development Cooperation can make a valuable contribution by providing advice relating to the coordination process between the various actors. A training course to support the application of PES has been developed together with internationally recognised PES experts from various countries and in cooperation with the GTZ Environmental Finance project. This training course is highly user-oriented and comprises the following modules: water, carbon and biodiversity.

Project examples

Ecuador

A project in Ecuador is promoting an indigenous nature conservation area in Chocó – an area of outstanding biodiversity (hotspot). Problems include destruction of the forest as a result of large-scale illegal timber use and logging, the loss of biodiversity, and rising poverty amongst the indigenous population that is barely able to derive any benefit from the destruction of its resources. Technical consulting services from GTZ and the NGO Conservation International, as well as private industry, have helped to finance compensation for the indigenous population in production areas. In return, the indigenous community will voluntarily make areas of its territory available for nature conservation and follow agreed sustainable management rules.

Dominican Republic

The upper basin area of the Río Yaque del Norte is suffering from the effects of advanced erosion and a damaged water cycle. The consequences are a reduction in the level of flowing water, and rising silt deposits in the reservoirs fed by the Río Yaque. This situation affects maintenance costs and capacities of hydroelectric power plants, irrigation capacities and drinking water quality. The planned introduction of a system of payments for the environmental service of providing water in quality and quantity aims to reduce degradation. Producers should receive financial remuneration from sources including the state power corporation and the regional authority for drinking water supply and treatment for the sustainable management and protection of natural resources.

Bolivia

The Noel Kempff Climate Action Project is currently the world's largest forestry project with the objective of achieving measurable carbon storage. In an effort to counteract the strong forest degradation in the Noel Kempff Mercado National Park, key activities have been developed to avoid deforestation, to prevent the park's conversion into agricultural land and to reduce logging. Three US energy suppliers are working together with the Bolivian government, the NGO The Nature Conservancy, and the local foundation Amigos de la Naturaleza to finance the maintenance and sustainable management of the Noel Kempff Mercado National Park through carbon offsets.

Peru

GTZ is working with its partners to support the management of the Alto Mayo water basin whose biodiversity is jeopardised by migration and deforestation. Compensation payments included in water tariffs assist municipal conservation areas and thus provide funding for headwaters. The integrated approach of combining protection and use in the region includes the provision of consulting services in the areas of sustainable land use, rehabilitation of eroded areas, environmental awareness, decentralisation, and public investments in environmental protection and conservation of natural resources.

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