

El Salvador-ECOSERVICIOS

El Salvador Environmental Services Project- WB/GEF (WB P064910/ GEF P070352)

SUMMARY

This is a comprehensive World Bank (WB) / Global Environment Facility (GEF) -funded project that aims to create a national system of Payments for Environmental Services (PES) as a sustainable funding mechanism for conservation by i) establishing an environmental services fund - FONASA (National Environmental Services Fund) and ii) supporting the establishment of local payments for environmental services schemes.

Acronyms:

MARN- Ministry of the Environment and Natural Resources of El Salvador; *FUSADES*- Salvadoran Foundation for Economical and Social Development; *CONACYT*- National Council for Science and Technology; *CEL*- Executive Hydroelectric Commission of the Lempa River; *ANDA*- National Water and Sewage Utility; *FONASA*- National Environmental Services Fund.

MATURITY OF THE INITIATIVE

The project was approved in June 2005 (the preparation process began in March 2002). The payments scheme will become effective in December 2006 and last until January 2012, from which point, FONASA should be self-reliant and financially sustainable.

As of 2007, this scheme was not implemented as a result of inadequate funding. In 2005, the initial funding sourced from the WB loan was negotiated, but the December 2006 deadline to utilize this funding was unable to be met by those implementing and participating in the programme.

DRIVER

Loss of biodiversity and critical ecosystems, land and forest degradation, poor water resource management (increased vulnerability to flooding and landslides, dry season water scarcity, declining water quality, sedimentation and pressure on downstream ecosystems).

STAKEHOLDERS

Supply

Private landowners (particularly on hillsides) for activities such as agroforestry, forest management and conservation, reforestation, afforestation and sustainable agricultural production.

The project identifies five priority watersheds: La Montanona, Cinquera, Gualobo River, Coatepeque Lake and Los Volcanes. In the first stage (five years) the aim of the project is to create two local markets for environmental services: in **A**) Lake Coatepeque-Los Volcanes (see case study in this review) and **B**) Jaltepeque-Jiquilisco.

By placing private land under PES in these areas, the project aims to either create "privately owned" buffer zones around the many protected areas and/or connect these protected areas through ecological corridors - hence the high potential service value.

Demand

In general, demand is expected to come from domestic water supply.

- Local government (ANDA-National Water and Sewage Utility).
- Water user associations (irrigation).
- Corporate business (-HEP producers like CEL- Executive Hydroelectric Commission of the Lempa River.
- Water bottling companies such as La Constancia (the local brewery who has already signed the first agreement) or Coca Cola).
- Local NGOs.
- Private individuals (fishermen, recreational water users).
- International NGOs and Donors (connected with global biodiversity and carbon benefits).

The project will work with these service users to (i) identify their needs; (ii) determine whether a PES approach would be appropriate; (iii) determine what kind of upstream land use changes would be required to address their needs; and (iv) develop appropriate financing mechanisms to capture the service users' willingness to pay.

According to current information in MARN's website, the negotiations to engage with important private sector companies (i.e. Coca Cola) and with ANDA and CEL are still underway. We have not been able to ascertain either the current status of the negotiations or the kind of agreements and contributions they are working on.

Intermediary

National Environmental Services Fund (FONASA).

Facilitator

Promotion of the scheme, identification of participant landowners, eligibility criteria and technical assistance will be hired out.

MARN with collaboration from FUSADES and CONACYT.

Technical assistance from the United Nations Development Programme (UNDP) and the UN Food and Agriculture Association (FAO), Programa Salvadoreño de Investigación Sobre Desarrollo y Medio Ambiente (PRISMA), National Association of Private Enterprises (ANEP).

The World Bank and GEF are providing the initial resources to establish the system.

MARKET DESIGN

Service

In general, the project aims to:

- improving water quality (by reducing contamination and/or improving natural filtration), reducing sediment loads, regulating groundwater and surface flows (increasing dry season water flows and/or reducing the risk of flash flooding);
- maintaining or enhancing biodiversity,
- and increasing carbon sequestration.

Commodity

- *Rehabilitation of degraded ecosystems for protection* through reducing land degradation.
- *Conservation and protection of existing ecosystems* through conservation of forested areas.

Improved management practices through a range of measures to revert degraded agricultural areas to forest and encouraging more sustainable agriculture. These are likely to include restoring tree cover through reforestation or natural regeneration, agroforestry and soil and water conservation techniques (mulching, low tillage, live barriers).

Payment mechanism

Users fees, pooled transaction and trust fund. The National Environmental Services Fund (FONASA) will pool contributions from users and invest into a trust fund, from where participants of the local PES initiatives will receive their payments, once FONASAs facilitators have verified compliance.

In order to ensure sustainability of the fund, FONASA will only begin supporting the local PES initiatives once local demand has been established. Users must commit to cover at least 50 per cent of the total amount of payments in the first year. By the fifth year of the contract, users must be able to cover the full costs of the scheme, including FONASA administrative costs, which will represent up to five per cent of the value of each contract processed.

Terms of payment

Cash payments to participating landowners, made on an annual basis. Payments will be differentiated across and within sites: higher when the expected services are greater (which depends on both specific practice and location). See example of Lake Coatepeque, in this review.

Funds involved

Financial costs of design and implementation of the project: total US\$14.5 million (nine million for design and implementation and 5.5 million for institutional strengthening, project management and monitoring and evaluation). Funds for this stage originate in US\$5 million loan to the WB and US\$5 million grant GEF, complemented by US\$2.3 million from the Salvadoran Government (Project Proposal, World Bank, 2005).

ANALYSIS OF COSTS AND BENEFITS

Economic

OPPORTUNITY COSTS: According to the project proposal (World Bank, 2005), preliminary examples of the levels of payments necessary to induce farmers to adopt particular land uses were estimated at:

- Protection of existing forest: US\$35-80 per hectare per year. Demand has been estimated at 4,800 hectares or 40 per cent of total contracts.
- Reforestation by natural regeneration: US\$40-80 per hectare per year over a five-year period, followed by a lower payment to maintain the reforested areas in subsequent years. Demand has been estimated at 2,400 hectares or 20 per cent of total contracts.
- Agroforestry (400 trees per hectare or 3,000 trees per farm): US\$40-100 per hectare per year (or US\$0.10-0.50 per tree per year). Demand has been estimated at 2,400 hectares or 20 per cent of total contracts.
- Reforestation: US\$240-260 per hectare per year (trees suitable for firewood production) or US\$160-200 (trees suitable for timber production) over a five-year period, followed by a lower payment to maintain reforested areas in subsequent years.

Estimated costs of operation - US\$90,000 (considering payments only, as transaction costs cannot be accessed before knowing the number of contracts to be processed). Analysis of potential payment sources at the Lake Coatepeque pilot site showed that reasonable user fees would be more than sufficient to cover these costs(see case profile in this review).

Environmental

Expected benefits include:

- i) local improvement of water resources management and reduced land degradation by promoting biodiversity-friendly land use;
- ii) regional support to the Mesoamerican Biological Corridor by improving habitat conservation on private lands that form critical protected area buffer zones and biological corridors;
- iii) global contribution to biodiversity conservation and climate change mitigation.

Social

Current situation. 90 per cent of the key agrarian stakeholders are small farmers (the majority of these own less than 2.1 hectares and there are also many landless producers who rent small parcels of land). The project has identified three disadvantaged producer groups: landless producers, female farmers and smallholders lacking registered land deeds.

The design of pilot environmental services markets is to take this into account and so it will: i) document the extent to which the poor are likely to be affected and ii) identify the various potential mechanisms through which the poor might be affected, either positively or negatively and develop guidelines to maximize positive impacts on the poor and avert potential negative impacts.

LEGISLATION ISSUES

No information available.

MONITORING

The project assigned over US\$ 2.2 million to set up a monitoring system, which will include (Project Proposal, World Bank, 2005):

- (i) Management Information System to track results and financial indicators and provide feedback for decision-making;
- (ii) environmental services contract compliance;
- (iii) biannual beneficiary assessments to report target groups' perceptions;
- (iv) site-specific monitoring and global biodiversity and hydrology evaluation studies to quantify land use changes/impacts and environmental services produced, with baseline assessments for each site and each contract and both midterm and final project studies;
- (v) data collection to better understand causal links between land use changes and environmental services; and
- (vi) standard auditing and supervision missions at least twice a year to review the technical and fiduciary aspects.

MAIN CONSTRAINTS

No information available.

MAIN POLICY LESSONS

No information available.

OTHER INFORMATION

No information available.



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REFERENCES

MARN (2004) Economía Ambiental- Proyecto MARN/BM/GEF
http://www.marn.gob.sv/economia_ambiental/MARN_BM_GEF.htm.

Rosa, H., Kandel, S., and Dimas L. 2003. Compensation for environmental services and rural communities. San Salvador: PRISMA. World Bank (2005) El Salvador Environmental Services. Project Document.

World Bank (2005) El Salvador Environmental Services Project. Project document. World Bank http://www.gefweb.org/Documents/Project_Proposals_for_Endorsement/El_Salvador_-_Environmental_Svcs_Proj.pdf.

LINKS

Ministry of Environment Project Information:
http://www.marn.gob.sv/economia_ambiental/MARN_BM_GEF.htm

World Bank online Project Information:
<http://web.worldbank.org/external/projects/main?pagePK=64283627&piPK=73230&theSitePK=40941&menuPK=228424&Projectid=P064910>