



PHILIPPINES -Mt Makiling Forest Reserve (MFR)

Mt. Makiling Forest Reserve, Laguna Province- Watershed Protection and Conservation Fee

SUMMARY

In order to secure funding to carry out the initiatives of the MFR Management Plan, the University of Philippines, Los Banos (UPLB), has been trying to create a watershed protection and conservation fee in order to increase their efforts in halting land degradation and reduction in water quantity within the reserve. Although the studies and negotiations for this scheme have been ongoing for several years, lack of support from the decision makers has prevented progress.

MATURITY OF THE INITIATIVE

Old proposal, not yet ongoing: This case has not advanced because the new management of the university does not support the Payment for Environmental Services (PES) scheme, specifically in terms of whether the university ought to enter into such an agreement with the people. However, there is support from the other parties and the initiative is expected to gain new strength when the situation changes (Arocena-Francisco, 2005). As of 2008 there were no indicators of implementation.

DRIVER

Growing degradation in the MFR is believed to be the cause of worsening water quality and lower flows during dry season. ReserveCurrent sources of funding (transfers from the government, entrance fees, leases, grants and sales of plants) are not enough and the UPLB started looking to market-based instruments to provide the funds to implement a Conservation and Development Plan.

STAKEHOLDERS

Supply

Private landowners: 300 households living within the watershed, plus another 700 farmer-claimants who are residing outside of the watershed in adjoining communities.

Currently farmers occupy 45 per cent (or 1,924 hectares) of the reserve, although their occupation is illegal. The university has shifted from an eviction approach in the 1970s, to one of negotiation for better resource management in the 1990s. *"One travelling to the site can still easily spot new land clearings and additional houses being built along the forest boundary"* (Arocena-Francisco, 2003).

Demand

A range of watershed beneficiaries has been identified including: domestic users, farmers, commercial enterprises, research organisations, government power companies, such as the National Power Corporation (NPC), inland fisheries and aquaculture producers.

The main categories of watershed beneficiaries with potential Ability to Pay (ATP) include:

- Water districts – government-owned entities responsible for supplying domestic users with drinking water. Five of these water districts are supplied by the MFR through groundwater and springs. Together they are estimated to consume about 18.6 cubic metres per year, equivalent to 38 per cent of the total annual consumption in the area.



- Households not serviced by water districts - water districts are not all equally efficient in carrying out their mandates and manage to supply between 10 and 77 per cent of households in their areas.
- The remaining households access water in a range of ways, such as water cooperatives, artesian, shallow and dug wells, rivers and springs. This category is estimated to account for about 38 per cent of total annual consumption.
- Government offices and other institutions - among the largest single-entity consumers include government research institutes based in the reserve, including the university. These institutes extract most of their water from deep wells and account for about 22 per cent of total annual consumption.
- Resorts and private pools - significant tourism to the reserve takes advantage of the hot springs associated with the reserve, which accounts for about two per cent of total annual consumption.

Intermediary

The UPLB has been managing the reserve since 1989. Since the late 1990s, the university has been trying to increase funding for the management of the reserve by, among other measures, adding a watershed protection fee to the water use fees already being charged. After various public consultations and meetings, the consensus was to create a multi-sectoral group to manage a watershed protection fund into which the revenues from these watershed protection fees would be deposited.

Facilitator

The university has provided funding for feasibility studies.

MARKET DESIGN

Service

Water quality protection and higher of dry season flows.

Commodity

Improved management contracts for soil and water conservation (reforestation of denuded and critical areas: e.g. riverbanks, creeks and sloping land), planting hedgerows, contour ditches, planting cover crops in monoculture plantations, building drainage canals, rockwalls, etc.

Payment Mechanism

Current funding (government transfers, entrance fees, sales and leases, and grants) accounts for only 10 per cent of expenses of managing the reserve. The proposal for additional funds include:

Trust fund intermediary & user fee - The project proposes that a watershed protection and conservation fee be introduced as an addition to existing water charges. The revenue generated would be channelled through a new reserve trust fund that is to be overseen by a multi-stakeholder management board.

The board would include, amongst others, representatives from the government research institutes, other large leaseholders, people's organisations (POs), local government units (Laguna and batangas), Laguna Tourism Association, Laguna Chamber of Commerce and Industries, private industries and NGOs. The board would be responsible for formulating policies, guidelines and criteria for funding alternatives and ensuring their implementation.

The board would be supported by a technical secretariat and financial management would be contracted out to an independent body, the UPLB Foundation, Inc., which would be responsible for allocating funds to projects approved by the board and monitoring financial operations of the projects. The remaining hurdle is to appoint the body legally accountable for collecting the fees



(Arocena-Francisco 2003).

In terms of how funds might be allocated to farmers for soil and water conservation activities, this is not yet clear. Compensation would offer an incentive and would offset a proposed charging system aimed at forcing farmers to pay for the valuable land resources from which they benefit. Costs of soil and watershed projects have been estimated based on labour and material inputs by POs, but whether these POs can apply for funds from the trust fund is unclear.

Terms of Payment

Probably both *in-kind* (tenure accreditation, training for agroforestry farm development) and *cash* payments to support the implementation of the activities agreed in the best management practice contracts.

Funds Involved

The total implementation cost of the Conservation and Development Plan is approximately US\$2.591 million over five years. Three per cent of this is assigned to people-oriented forestry involving activities such as tenure accreditation, agroforestry farm development and livelihood development.

Investment on watershed-protecting farm activities range from US\$43.24 per hectare to \$270.27 per hectare, while estimates for community activities by POs range from \$920 per year to \$2736 per year.

ANALYSIS OF COSTS AND BENEFITS

Economic

Willingness to Pay (WTP): Estimates of different users' WTP for watershed management (see Cruz et al., 1997) suggest that about 68 per cent of water users are willing to pay between US\$0.03 per cubic metre and \$0.04 per cubic metre water used, resort owners being the ones willing to pay more and farmers less. This is significantly above estimated costs of provision of \$0.01 per cubic metre (assuming all users pay and that water beneficiaries cover all the costs of watershed protection).

Local government units have pledged to help collect fees from big industrial water users, water districts have expressed a willingness to pay for watershed management, tourism entities have offered to contribute and geothermal and electric power generators have pledged seedlings for reforestation.

Environmental

Upland farmers have already been collaborating with the university in (Arocena-Francisco, 2003):

- Boundary delineation with trees and putting up signs for protected areas;
- Protecting water sources in exchange for a donated pump;
- Adoption of agroforestry systems by the majority of the upland farmers.

Social

The university has signed agreements with 5 of the 11 existing POs in the area, and is currently negotiating with the rest. *Poorer and marginalized groups might be left out: "One big problem*



with working with recognized POs is that membership oftentimes represents only a small segment of upland population, in which case, a few families, often the more vocal and influential members of the community, largely appropriate the "rewards" of participation in watershed protection endeavors" (Arocena-Francisco, 2003).

Improved education about watershed benefits: Training on sustainable land uses and practices and on livelihood development. Through the relationship with the university, upland farmers receive other benefits:

- scholarship supports to high school students;
- medical discounts for the use of the university infirmary;
- skills training for those who can be employed in the tourism resorts as a commitment by resort operators as their form of in-kind contribution or 'payment' for watershed protection services of the upland communities.

LEGISLATION

Legal/political context

The importance of proper pricing of natural resources was emphasised in the Philippine Strategy for Sustainable Development in the late 1980s and the government has recently set up a Philippine Economic and Environmental Natural Resource Accounting System to incorporate natural resource values into decision making processes and promote the operationalisation of proper resource pricing.

In 1998 the government formulated a Watershed Management Programme that includes explicit mention of the need to introduce market-based instruments as a mechanism for resource management. Currently there is a bill awaiting senate approval for the creation of a Water Resources Authority of the Philippines that emphasises the need for water charges to incorporate a payment for watershed management. This project being undertaken in the reserve is seen as a pilot for exploring alternative Management Buy-In (MBI) services.

MONITORING

The university is in close contact with the POs in the reserve and the upland farmers have committed themselves to preventing others from entering the reserve and to prevent further expansion by members into the remaining forest zones.

MAIN CONSTRAINTS

According to Arocena-Francisco, 2003:

- This case has not advanced because new management of the university does not support the PES scheme, specifically in terms of whether the university ought to enter into such an agreement with the people (Arocena-Francisco, personal communication 2005). However, there is support from the other parties and the initiative is expected to gain new strength when the situation changes.
- Conflicts between the university and some POs within the reserve. Usually the opposing groups are more vocal and organised.
- Institutional barriers for the collection of a watershed protection and conservation fee. The legal basis for the collection is unclear, although the university has claimed they have the authority to do it. This is considered the major bottleneck of the proposal.
- A proposal is that the local government unit imposes and collects the fee. However, the university is worried about bringing the local government into the management of the reserve. Already conflicts have emerged as the local government wants to have a share of the resources generated by the reserve. Some of their constituents are also residents of the



reserve, and therefore it will give them political mileage to have the controlling interest over the resource.

MAIN POLICY LESSONS

- Long process of consultation with stakeholders is key for stimulating demand through recognition of watershed services, and for laying the foundation for implementing a solution.

The consultation began in May 1998 with a meeting of 40 water users from the government, private sector and civil society (water cooperatives). A subsequent forum was held on water use policies to clarify policies and guidelines concerning water extraction and mechanisms for management. At this gathering a consensus was reached that revenue generated from a fee should be managed by an independent financial organisation and overseen by a multi-stakeholder board. A third meeting was held in 1999 to agree on a final institutional structure for fee collection. The university was charged with drawing up a Memorandum of Understanding (MOU) on the proposed fee collection scheme.

- Work on the potential for a watershed protection and conservation fee has provided a powerful basis for introducing a new financing mechanism. In addition, proposals for the introduction of charges for farmers benefiting from fertile soils in the reserve are being explored. The aim of both is for beneficiaries to pay, but there is also an element of pay-to-pollute with the latter since it is suggested that farmers' fees are based on costs they impose in terms of erosion and sedimentation downstream. Also, the farmers are requesting that those who invest in soil and water conservation activities receive credits to offset these charges.

OTHER INFORMATION

Landscape beauty already paying off: studies have concluded that the optimal market-based instruments for capturing beneficiaries' WTP for environmental services are entrance fees and estimated WTP was above existing fees in 1998; entrance fees were then doubled (Calderon et al., 2000, in Arocena-Francisco, 2000).

CONTACT

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LINKS

No information available.