



Payment for Ecosystem Services (PES) in Mid Marshyangdi

Introduction

Payment for Ecosystem Services (PES) is an innovative mechanism to promote sustainable financing for climate change adaptation and landscape management which considers integrated conservation and development and provides an appropriate incentive mechanism to service providers. The concept of PES has been emerging as an innovative and promising approach to natural resource management. PES recognizes the important role that the environment plays in our well-being and economic prosperity, as well as the potential for market-based approaches to promote conservation and address environmental threats, shocks and stresses. However, there are limited interventions relating to ecosystem services (particularly the non-use value of ecosystem services). There is also no proper national accounting system based on the contribution of provisioning services from ecosystems. In recent years, awareness of the sustainable management of ecosystems and their services has increased at local, national and international levels. With this background, the Hariyo Ban Program piloted PES schemes with the objective of establishing a potential sustainable financing mechanism for integrated watershed management that increases resilience of local communities and ecosystems.

Results

Through the implementation of PES in Marsyangdi, following key results have been achieved till date:

Year	Key Results
June-Dec 2013	Preliminary Assessment of Ecosystem Services in Mid Marsyangdi Watershed for piloting PES in Lamjung
Jan-June 2014	Sharing of findings from the assessment report, Partnership with RCDC, capacity building program
Jan-June 2015	Formation of DTMC, orientation at VDC and district level, exposure visits of district stakeholders, committee formation at VDCs, formation of MESMAN, briefing document on PES published
Jan-June 2015	Prepared implementation and monitoring plan for PES, DTMC team expanded, media mobilization, fund allocation from local government body i.e., 3% of the total budget of projects related to infrastructure development and road construction and 5% of the total revenue generated from hydropower.
July 2015 – May 2016	Interaction meeting with hydropower developers, national level PES workshop, establishment of demo-plot and soil conservation works, draft PES policy formulation support
July 2016- June 2017	MoU between MESMAN and MHPPN, DFID's 'Protshan Prize' - adaptation at scale prize of cash prize of 10,000 Pound on December 16, 2016.
July 2017- June 2018	Reformed DTMC in the chair of DCC chief including the mayor of Besishahar and chairperson of Marshyangdi, Dordi, Klowsothar Rural Municipalities; formed PES coordination committee in Besishahar Municipality and Marshyangdi Rural Municipality.
July 2018- June 2019	Established DTMC secretariat in DCC, reformed local level MESMAN, revised the PES basket fund mobilization guideline, prepared ISWMP of Khudi-Marsyangdi sub-watershed, prepared learning paper on contribution of small-scale farmers for environmental services management.
June 2019- Nov 2020	Reformed local level MESMAN, publication of Khudi-Marsyangdi ISWMP brief in Nepali, revised the PES basket fund mobilization guideline, prepared ISWMP of Khudi-Marsyangdi sub-watershed and prepared learning paper on contribution of small-scale farmers for environmental services management.

Methods and processes

The process involved in sequential order were as follows:

Feasibility assessment of ecosystem service is important from local and stakeholders' perspective

Carrying out capacity building of the community, local government, civil society organizations, media, and political parties through different meetings, trainings, workshops, exposure visits

Establishment of the institutional mechanisms such as MESMAN (Marsyangdi Ecosystem Services Management Networks - service provider), hydropower promoters' network (Marsyangdi Hydropower Promoters Network service receiver) and District Technical Management Committee (DTMC) (mediator/facilitator)

Establishment of sediment retention demonstration plot for evidence generation

Sharing of learning and experiences from the demo-plot at wider level to develop common understanding among the stakeholders, service receivers, service producers, policy makers

Formulation, publication and implementation of the PES guideline by the then District Development Committee

Signing Memorandum of Understanding (MoU) between the service receivers and service providers

Establishment of PES basket fund and conservation awards

Execution of PES schemes with proper monitoring

Process documentation and dissemination

Replication in other areas

Learning

- ➔ Design and implementation of PES requires considerable time and resources to develop common understanding among multi stakeholders on different issues in the upstream, midstream, and downstream of a watershed despite the added values of collaboration for greater impact. Thus, consideration of the size of a watershed and the issues plaguing the watershed area are critical factors that need to be evaluated for selection of an ecosystem service within that watershed for PES piloting. Lessons from PES implementation in Mid-Marsyangdi provides a guide for piloting in a micro-watershed or a small area within a watershed. This can then be gradually replicating and expanding to other areas of the watershed based on evidence generated from the pilot.
- ➔ Implementation of a PES scheme based on a single ecosystem service may be easy from the management standpoint. Inter-linkages existing between different ecosystem services often means that the communities contributing to sustain/improve production of ecosystem services are underpaid. These could result in lower incentives for activities to preserve/improve the ecosystem services and thereby, restrict effectiveness and sustainability of the PES scheme. It is possible to have one PES scheme involving multiple ecosystem services with unique buyers and sellers for each of the ecosystem services. Involving a wide array of ecosystem services, however, can make the PES program too complicated for efficient management and thus, it might be best to start a PES pilot with one ecosystem service and then scale-up to include additional ecosystem services.
- ➔ Establishment of multiple institutions inclusive of gender and socio-economic aspects (GESI) at different tiers such as at community, ward and district, can ease the process for targeting, planning, implementation, and resource leverage to pilot the PES scheme. However, regular engagement of these institutions and establishment of a benefit flow mechanism can be challenging. Establishment of only a minimum number of institutions, such as a sub-watershed management committee and a committee per micro-watershed, as in Mid-Marsyangdi PES, is a good idea. This can help maintain low transaction costs and quick sharing of information and equitable benefits. To ensure inclusion in the institutions GESI needs to be prioritized, ensuring effective participation of people from PVSE groups in PES planning and implementation, with equitable benefit sharing and engagement in decision making.
- ➔ It has been established that payment for ecosystem services is a potential source of sustainable financing for integrated watershed management for different objectives such as, climate change adaptation, disaster risk reduction, soil & water conservation and sediment reduction. A comprehensive national PES policy formulation based on learnings of the piloting will ensure scale-up and scale-out of the payment for ecosystem services in Nepal. The PES pilot could also become more effective if it is mainstreamed with the inclusion of PES related provisions in the annual plans and budgets of local government and local community groups such as Conservation Area Management Committees (CAMCs) and Community Forest User Groups (CFUGs).
- ➔ The Hariyo Ban Program tried to engage the service providers and service receivers from the initial stage of designing the PES scheme, but hydropower promoters seemed reluctant to pay into the basket fund due to the fact that there was no policy compliance. Specifically, service receivers (hydropower's promoters) need to contribute in order to create an enabling environment and pay into the basket fund. For this, legal measures need to be established at federal, provincial, and local government level to manage and lead the PES scheme. Nepal Electricity Authority is the lead authority for hydropower management, but the authority does not have policy compliance to pay for the PES mechanism. Thus, for any PES mechanism dealing with the hydropower sector that is under the control of Nepal Electricity Authority (NEA), the first effort should be in establishing legal measures. Private hydropower can then work directly with communities to initiate the PES scheme in consultation with multi-stakeholders.

Relevant stakeholders

District Technical Committee (DCC, Besishahar Municipality, Marsyangdi Rural Municipality), Service Providers/producers (MESMAN, Khudi-Marsyangdi Sub-Watershed Management Committee), Service Buyers/Receiver (Hydropower generating companies).

Scaling approach and Sustainability

- ➔ Formation of DTMC as a facilitation platform, dedicated PES basket fund mobilization operation guideline, formation, and endorsement of PES basket fund mobilization guideline by Marsyangdi Rural Municipality will be the major sustaining factors.
- ➔ The DTMC will facilitate in allocating fund from different organizations including service receivers. The basket fund mobilization, operation guideline will support in channelling the allocated fund through MESMAN and other committees.



Figure 1 Marsyangdi River in Upstream area in lamjung



Figure 2 Upper Marsyangdi A hydropower Plant with Reservoir in Lamjung.



Sedimentation and Water Flows at Majuwa Khola before and after sediment retention structure construction

Photo Credit : Niraj Babu Bhatta, GONESA/Hariyo Ban Program



For more information

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