Payment for Ecosystem Services in Sri Lanka

a framework for implementation

World Agroforestry (ICRAF)

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CIFOR-ICRAF

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Hulu Ganga sub-watershed in Knuckles; A piloting site for PES

Photograph: Chamika Gallage, ICRAF

Chapter 1.

Introduction

1.1 Definition and principles of Payment for Ecosystem Services (PES)

A financial mechanism where beneficiaries of ecosystem services remunerate those who maintain or enhance these services.

Payment for Ecosystem Services (PES) is an innovative conservation and financing mechanism designed to create positive incentives for the sustainable management of natural ecosystems. Under the PES concept, beneficiaries of ecosystem services such as clean water, climate regulation, biodiversity conservation, or scenic landscapes provide compensation to those who manage and protect the ecosystems that supply these services (Figure 01). This approach links economic value directly to environmental stewardship, fostering a system where conservation becomes both an ecological necessity and an economic importance. By aligning the interests of communities, private sector actors, and policymakers, PES promotes sustainable resource use, enhances ecosystem resilience, and supports national development goals such as climate adaptation, biodiversity protection, and sustainable livelihoods.

Payment mechanisms for PES schemes

- **Performance-based payments**

  Payments made on the basis of the actual provision of the ecosystem service.

  Eg: Payments are made for a certain amount of improvement in water quality

- **Input-based payments**

  Payments made on the basis of certain land or resource management practices being implemented.

  Eg: The creation of buffer strips along streamside

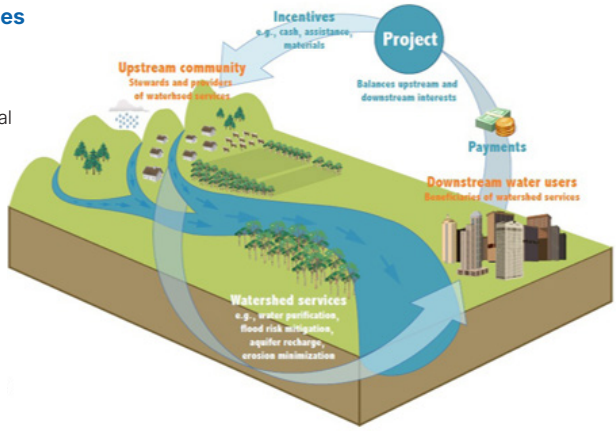


Figure 01: *Conceptual framework of Payment for Ecosystem Services*

1.2 | Typology of ecosystem services

Ecosystem services provide a critical link between the natural environment and human wellbeing, integrating ecological processes, socio-cultural values, and governance systems into a single framework. Healthy ecosystems, supported by biodiversity, perform essential functions through their biophysical structures and processes, which in turn give rise to services that benefit people in multiple ways. These benefits ranging from tangible resources like food and water to intangible values such as cultural identity and recreation contribute to human wellbeing and can be assessed in both economic and non-economic terms. Institutions and human decisions play a pivotal role in determining how these services are accessed, managed, and restored, shaping the sustainability of both the ecosystems and the benefits they provide. Importantly, the way people perceive and value these services feeds back into decisions and management practices, influencing the long-term capacity of ecosystems to support life. The following figure (Figure 02) illustrates these interconnected components and feedback loops within the social-ecological system.

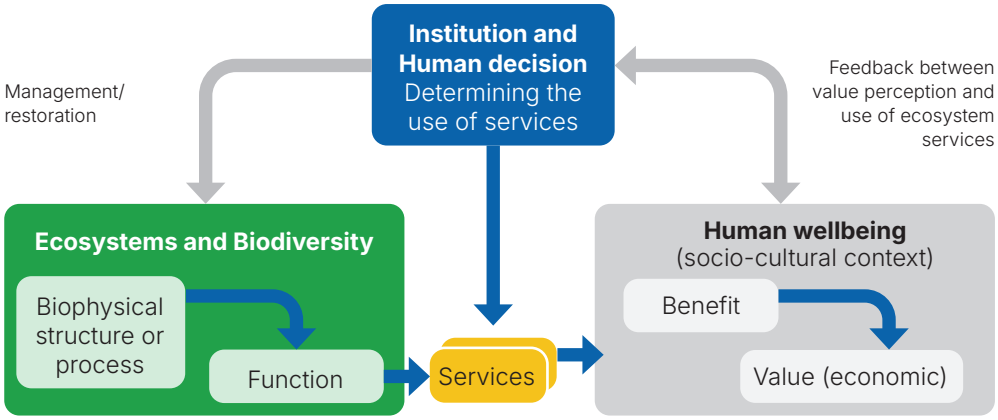


Figure 02: *Cascade model of services: structure, services and human wellbeing*

1.3 | Importance of ecosystem services in the region

A wide range of ecosystem services provided by Sri Lanka's diverse ecosystems play a vital role in ensuring environmental sustainability, supporting socio-economic development, and enhancing climate resilience. Its watershed functions secure water for drinking, irrigation, hydropower, and industrial use, while also reducing risks from floods, droughts, and erosion. A Payment for Ecosystem Services (PES) scheme offers a promising approach to safeguard these benefits by providing financial incentives for conservation while fostering local livelihoods and climate resilience. Hydropower

producers, bottled water companies, and eco-tourism operators stand to gain directly from ecosystem protection and could contribute to PES mechanisms, ensuring the sustained delivery of these critical services. The following table (Table 01) outlines the human-benefit typology, ecosystem function-based categories, and related direct benefits for people.

Table 1: *Ecosystem service potentials in Sri Lanka*

Ecosystem Service Category	Watershed Functions	Biodiversity & Landscape Beauty	Climate Regulation	Other Direct Human Benefits
Provisioning Services	• Drinking water • Hydropower • Irrigation agriculture • Small-scale fisheries	• Forest products (timber and non-timber) • Wild food and plant resources • Pollination of agricultural crops	• Carbon sequestration and storage • Reduction of greenhouse gas emissions	• Food, fiber, and medicinal resources • Sustainable raw material supply
Regulating Services	• Flood and drought regulation • Erosion and sediment control • Groundwater recharge	• Pest and disease regulation • Maintenance of ecological balance	• Carbon stock protection • Soil organic matter enhancement	• Improved agricultural productivity • Stabilized local microclimates
Cultural Services	• Recreational and aesthetic value of rivers and waterfalls • Nature-based tourism	• Spiritual and cultural significance of forests and wildlife • Existence value of biodiversity	• Collaborative climate stewardship • Community environmental awareness	• Ecotourism opportunities • Environmental education
Supporting Services	• Maintenance of hydrological cycle • Soil-water storage and infiltration	• Species and genetic diversity conservation • Habitat connectivity	• Carbon and nitrogen cycling • Ecosystem resilience to climate impacts	• Soil fertility restoration

Siltation at weir matters in hydropower generation

Photograph: Chamika Gallage, ICRAF

Chapter 2.

Operational Structure for a PES Scheme

The operational structure of the proposed PES scheme defines the institutional arrangements, linkages, and mechanisms required for its effective implementation. It outlines how key stakeholders including service providers, beneficiaries, intermediary institutions, and governing bodies interact through financial and information flows to ensure transparency, equity, and accountability.

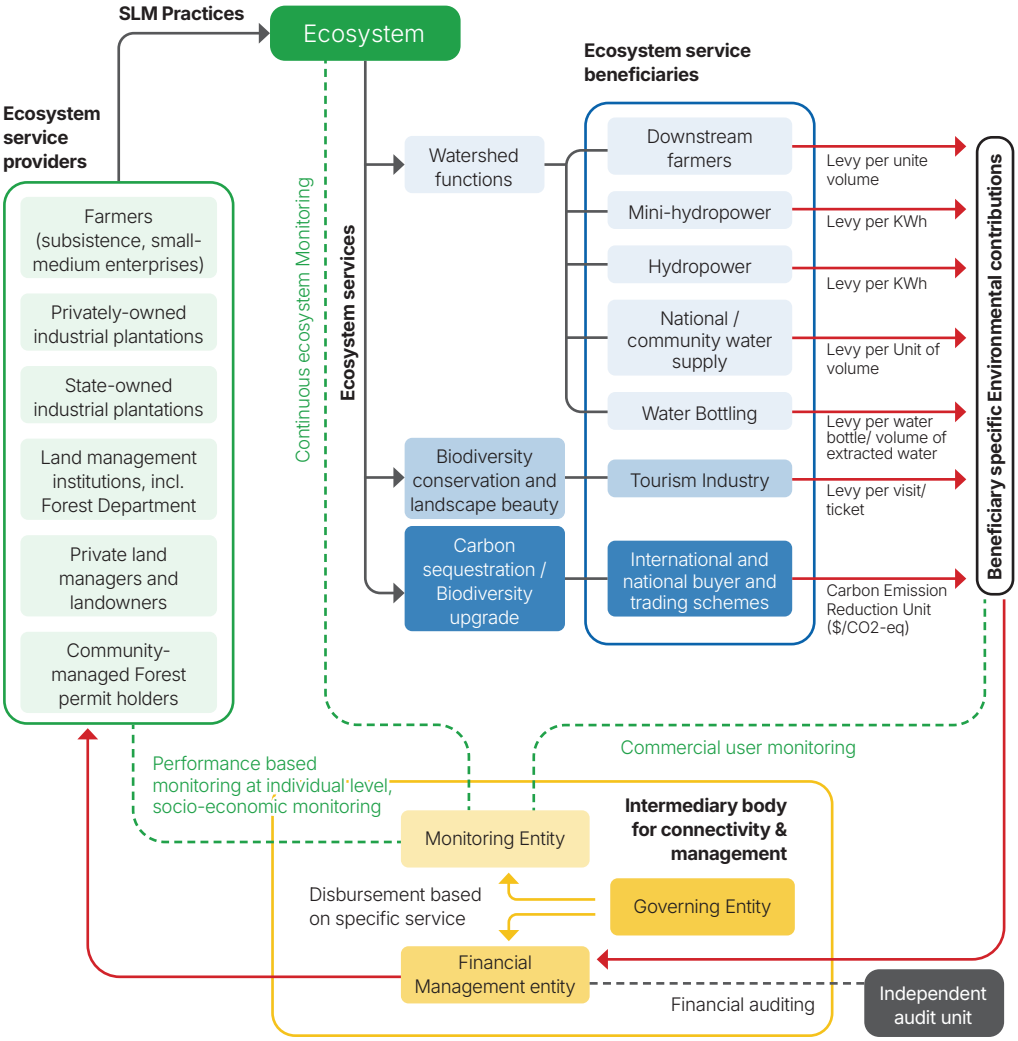


Figure 03: *Schematic diagram to illustrate the operational structure for PES*

The diagram (Figure 03) represents the operational structure of a Payment for Ecosystem Services (PES) scheme, highlighting the institutional linkages, fund flow, and governance mechanisms that ensure transparent and equitable benefit-sharing between ecosystem service beneficiaries and providers.

Key Components:

- **Ecosystem Services Covered:**

  1. Watershed functions
  2. Biodiversity conservation and landscape beauty
  3. Carbon sequestration

- **Ecosystem Service Beneficiaries for each service:**

  - *Watershed functions:* Hydropower companies, national/community water suppliers, water bottling companies, downstream farmers
  - *Biodiversity conservation & landscape beauty:* Tourism industry
  - *Carbon sequestration:* International and national carbon buyers and trading schemes

  Each beneficiary contributes financially based on the specific services they benefit from.

- **Ecosystem Service Providers:**

  - Farmers (subsistence and small-medium enterprises)
  - Privately and state-owned industrial plantations
  - Land management institutions (e.g., Forest Department, Wildlife Department, DAD)
  - Private landowners and community-managed forest permit holders

  Providers implement sustainable land management (SLM) practices to maintain ecosystem services.

- **Intermediary Body (Operational Core):**

  - Governing Entity: Provides oversight, coordination, and policy direction.
  - Monitoring Entity:
    - Conducts performance-based monitoring at individual and socio-economic levels.
    - Undertakes commercial user monitoring to ensure compliance by beneficiaries.
  - Financial Management Entity: Manages fund collection, allocation, and disbursement based on verified service delivery.

- **Independent Audit Unit:**
  - Ensures transparency through regular financial audits and reporting.

Operational Flow:

- ES providers implement SLM practices to enhance and sustain ecosystem services.
- ES beneficiaries make financial contributions for enhanced ecosystem services received.
- The Financial Management Entity collects and allocates funds.
- The Monitoring Entity verifies performance and service delivery.
- The Governing Entity oversees operations and ensures policy alignment.
- Verified payments are disbursed to service providers.
- The Independent Audit Unit ensures accountability and transparency.

This system creates a sustainable cycle where beneficiaries compensate service providers for maintaining ecosystem functions, supported by strong governance, monitoring, and financial transparency.

Co-designing PES framework with stakeholder organizations

Photograph: Chamika Gallage, ICRAF

Chapter 3.

Development of a PES implementation framework for Sri Lanka

A well-structured PES framework for Sri Lanka is essential to establish a transparent, equitable, and sustainable mechanism that incentivizes ecosystem conservation while supporting national environmental and socio-economic goals. To address this, PES framework document was initially drafted (1st version) and then national consultations were conducted inviting key stakeholders, including government institutions, private sector representatives, researchers, and local communities, to identify challenges, opportunities, and gaps related to PES implementation. Based on these consultations, a set of strategies was formulated to guide the development of this version of the national PES framework (2nd version).

Accordingly, the following broad strategies are proposed for implementing a national PES framework in Sri Lanka:

1. Strengthen the policy, legal, and institutional foundations while raising awareness among political bodies regarding PES concepts.
2. Strengthen governance structures by establishing a PES intermediary or coordination body to facilitate operational fund management.
3. Identify and prioritize key ecosystem service beneficiaries and their respective ES providers through spatial mapping and analysis of Environmentally Sensitive Areas.
4. Develop technical and operational capacity, utilizing advanced technologies for accurate valuation of natural capital.
5. Build sustainable financial mechanisms by mobilizing international climate finance and private sector ESG investments for voluntary based PES schemes.
6. Establish comprehensive PES monitoring systems by developing a national PES monitoring framework aligns with global and national sustainability commitments.

Photograph: Chamika Gallage, ICRAF

3.1 Strategy 01: Strengthen the Policy, Legal, and Institutional Foundations while Raising Awareness among Political Bodies regarding PES Concepts

This strategy focuses on establishing an enabling environment for the implementation of a compliance-based Payment for Ecosystem Services (PES) scheme in Sri Lanka through comprehensive policy, legal, and institutional strengthening. It involves conducting detailed reviews of existing environmental and land-use legislation, clarifying land and resource tenure rights, and assessing previous PES or PES-like initiatives to identify barriers, gaps, and lessons learned.

Two key studies provide the evidence base for this strategy. The first study highlighted that most PES initiatives in Sri Lanka remain at the conceptual or pilot stage, constrained by unclear land rights, lack of formal legal frameworks, and limited awareness among stakeholders. However, it also emphasized strong potential for PES adoption, particularly in the Knuckles region, and underscored the important roles of community-based organizations and private-sector actors as potential intermediaries and buyers of ecosystem services.[1]

The second study provided an in-depth analysis of eight key environmental and land management legislations, revealing that while none explicitly enable PES, several contain provisions that can indirectly support its integration. Using a Legal Potential Assessment Matrix (LPAM), the study identified the National Environmental Act as having the highest potential for PES incorporation, with the Central Environmental Authority (CEA) positioned as a suitable national implementing body. It recommended a phased legal pathway—initially operationalizing PES through strengthened environmental licensing systems under existing laws, while progressively developing a dedicated PES Act for long-term institutionalization.[2]

Overall, this strategy aims to create a clear, transparent, and enforceable legal framework, ensure institutional coordination, and build political and stakeholder awareness to enable equitable and sustainable PES implementation across Sri Lanka.

3.2 Strategy 02: Strengthen governance structures by establishing a PES intermediary or coordination body to facilitate operational fund management.

This strategy focuses on establishing a dedicated PES intermediary or coordination body responsible for overseeing transparent fund management, ensuring accountability, and maintaining trust among all stakeholders involved in the PES process. The intermediary will act as a bridge between ecosystem service buyers and sellers, facilitating negotiations, monitoring fund flows, and supporting compliance with agreed-upon conservation actions. Additionally, the strategy emphasizes multi-stakeholder

1 Udugama M., Gunawardena P. 2024.

2 Rodrigo I. 2024.

collaboration bringing together government agencies, private sector partners, non-governmental organizations (NGOs), and community-based organizations (CBOs) to enhance collective ownership, policy coherence, and local empowerment.

a) Structure of the Intermediary Body

Details and lessons learnt from PJLH institutions (the PES intermediary body functioning in Indonesia) were used for this proposal. According to them, the Intermediary Body may function as a district-level/sub-district level for PES. It may be established as:

- A new institution (foundation or trust fund) legally recognized under Sri Lankan statutory provisions; or
- An appointed existing institution (e.g., a registered NGO, university-linked entity, or development foundation) that meets governance and accountability requirements (Similar inter-provincial and inter-district bodies already exist for water-related and agriculture-related decision-making and fund management, which provides a useful precedent).

Institutional Scheme Options:

- Integrated model: A single institution handling both technical management and fund management.
- Dual model: Two separate but coordinated institutions, one for technical oversight and one for fund management.

Core Units within Intermediary Body:

- Fund Management Unit (FMU): responsible for collection, management, disbursement, and reporting of PES funds.
- Monitoring, Evaluation & Technical Support Unit (METU): responsible for technical guidance, capacity building, performance monitoring, and conflict resolution.
- Governing Council: district-level governing body including representatives from government, community-based organizations, universities, private sector, and environmental NGOs.

Duties and Functions:

Fund Management Functions

- Collecting, managing, and disbursing PES funds transparently and accountably.
- Designing fund allocation mechanisms balancing conservation, community welfare, and risk management.
- Preparing financial management reports and ensuring public disclosure.
- Conducting financial audits and compliance monitoring.

Technical and Institutional Management Functions

- Preparing technical guidelines for PES implementation.
- Facilitating the valuation and determination of PES payments.
- Building capacity among Environmental Service Providers (e.g., forest-dependent communities) and Users (e.g., water utilities, tourism operators, hydropower).
- Monitoring compliance of service providers and performance of conservation commitments.
- Providing facilitation for conflict resolution between stakeholders.
- Developing integration of PES within broader environmental management instruments (e.g., forest management plans, biodiversity strategies, climate adaptation measures).
- Preparing and publishing annual implementation and performance reports.

Networking and Coordination Functions

- Establishing cooperation agreements with service providers and users.
- Coordinating with district, provincial, and national government agencies.
- Developing communication and partnerships with universities, research institutions, and international partners.
- Ensuring transparent public reporting of PES implementation and fund use.

Competencies, Skills, and Capacities Required

Governing Council Members:

- Competence in environmental policy and governance (government representatives).
- Community engagement and local knowledge (CBO/CSO representatives).
- Technical expertise in forestry, hydrology, biodiversity, or agriculture (university and research partners).
- Private sector and financing experience (private businesses, tourism, water companies).
- Conflict resolution and mediation skills (civil society/NGO members).

Fund Management Unit (FMU):

- Financial managers & accountants with expertise in fund management, risk assessment, and transparent disbursement.
- Legal officer to ensure compliance with Sri Lankan statutory provisions and contractual agreements.
- Monitoring and reporting officers with experience in audit, compliance, and public accountability.

Monitoring, Evaluation & Technical Support Unit (METU):

- Environmental specialists (forestry, hydrology, ecology, climate change) to provide technical validation.
- M&E experts skilled in impact assessment, data analysis, and reporting frameworks.
- Community development officers to support capacity building and social safeguards.
- GIS & remote sensing experts for monitoring ecosystem services and land use changes.
- Conflict resolution specialists for mediating disputes between service providers and users.

Facilitators (cross-cutting role):

- Individuals with knowledge and experience in natural resource governance.
- Skills in stakeholder facilitation, participatory planning, negotiation, and training.
- Ability to bridge between government, community, and private sector interests.

b) Information gathered from GCF Knuckles project; Network analysis on institutional roles and linkages in designing PES – an outcome from national level

The Net-Map participatory mapping (Figure 04) method employed to visualize and analyze the actor network involved in PES design and implementation at the stakeholder consultation of the national workshop on PES organized by ICRAF, provided an insight into what institution/entity should involve in the intermediary task.

Key Findings

- The majority of governance tasks as facilitators were assigned to NGO's, CBO's, Provincial Departments, Regional Plantation Corporative and other different government bodies (eg: Forest dept. Wildlife dept.).
- NGO's/CBO's, Forest Department and the Ministry of Environment were most connected (degree centrality).
- NGO's/CBO's and the Ministry of Environment further often laid on the shortest path between actors, functioning as bridges between others (betweenness centrality).
- The Forest Department and Wildlife Department were well connected to other influential actors, highlighting their role in the scheme (eigenvector centrality).

Accordingly, the intermediary body for watershed PES schemes may comprise NGOs, CBOs, Provincials Departments and Regional Plantation Corporative governed by Ministry of Environment.

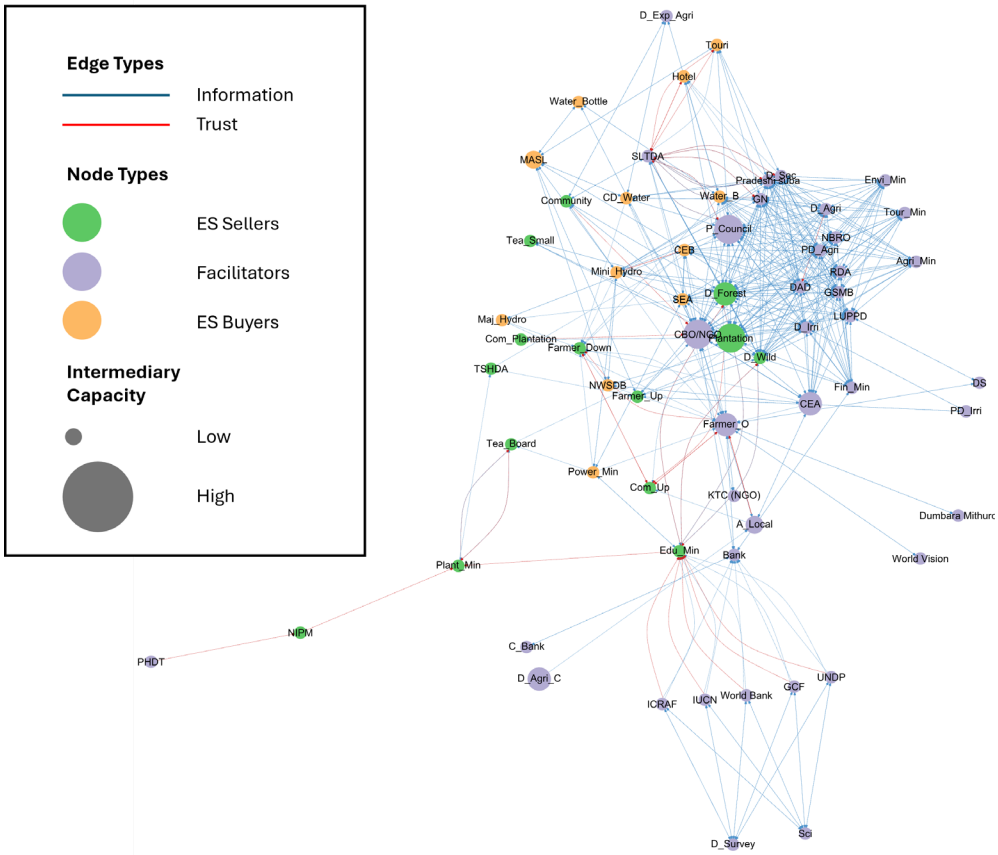


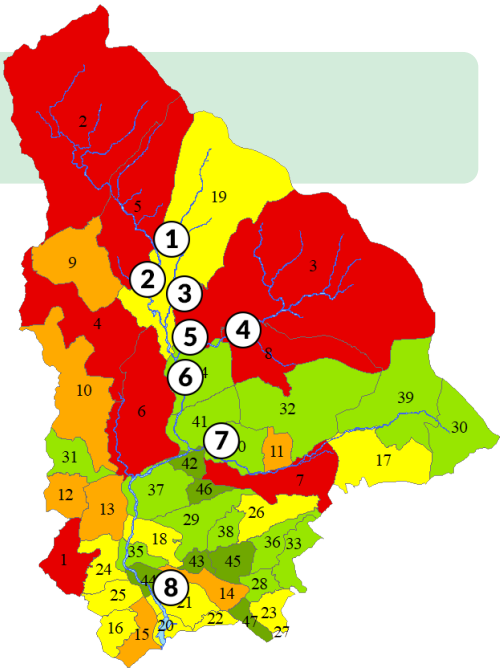
Figure 04: *Network analysis on institutional roles and linkages in designing PES at national level*

3.3 Strategy 03: Identify and prioritize key ecosystem service beneficiaries and their respective ES providers through spatial mapping and analysis of Environmentally Sensitive Areas.

An essential step in developing an effective PES framework is the identification of key ecosystem service beneficiaries and their respective ES providers across critical landscapes. This process involves the use of spatial mapping and geospatial analysis to pinpoint Environmentally Sensitive Areas (ESAs) and vulnerable community-managed ecosystems that play a vital role in providing watershed protection, carbon sequestration, and biodiversity conservation services.

A case from GCF Knuckles: Mini hydropower-based PES scheme in Hulu Ganga Sub watershed

The GCF Knuckles project identifies mini hydropower operators as potential ES beneficiaries. Hulu Ganga sub-watershed has identified as the pilot site since the availability of high number of mini hydropower operators in the area. Therefore, the catchment areas for hydropower has delineated using spatial mapping. The critical ES Providers in the Hulu Ganga sub-watershed were identified through a ranking approach that considered population density, severity of soil erosion, proximity to the river, and the number of people engaged in agriculture-intensive land-based activities. The priority values were extracted in GND levels (Figure 05).



FID	Name of Mini hydropower plant
1	Mahapathana (Proposed)
2	Upper hulu ganga
3	Huluganga Minihydro iii
4	Moragahaoya
5	Hulu ganga small hydro (I & II)
6	Galabodawatta
7	Werapitiya
8	Giddawa

Figure 05: *Priority GNDs for potential ES providers considering Mini-hydropower as ES beneficiary*

3.4 Strategy 04: Develop technical and operational capacity, utilizing advanced technologies for accurate valuation of natural capital.

The quantification and valuation of Ecosystem Services (ES) are essential for developing the technical and operational capacity required to implement PES in Sri Lanka. Ecosystem services depend on the interaction between natural, human, and social capital, with natural capital such as vegetation, soil biodiversity, and nutrient cycles forming the foundation for supporting, regulating, and provisioning services that contribute to economic and social well-being**.**

Strengthening technical and operational capacity for PES requires:

- Establishing standardized ES quantification and valuation frameworks;
- Integrating GIS, remote sensing, and hydrological models for accurate natural capital assessment (Table 02);
- Linking valuation outputs to decision-making and payment mechanisms; and
- Ensuring that valuation approaches capture both ecological and social dimensions of ecosystem benefits.

Table 02: *Typology of ES quantification methods, values, data sources and scale of measurements.*

Method	Main ES measured	Main data	Values measured	Scale of applications
Mathematical models combining pattern and process understanding and information to predict ES	Provisioning (+) Regulating (+++) Cultural (+)	Primary biophysical (+) Secondary biophysical (+++) Primary social (+) Secondary social (++)	Ecological (+++) Economic (+++) Social (+)	Global (+++) Regional (+++) Local (+)
Extrapolation of field data and databases weighted by cartographic data	Provisioning (++) Regulating (++) Cultural (+)	Primary biophysical (+++) Secondary biophysical (++) Primary social (++) Secondary social (++)	Ecological (++) Economic (++) Social (++)	Global (++) Regional (+++) Local (++)
Look-up tables. Use of existing landcover classes to summarize ES values from the literature	Provisioning (++) Regulating (+++) Cultural (+)	Primary biophysical (+) Secondary biophysical (+++) Primary social (+) Secondary social (++)	Ecological (+++) Economic (+++) Social (+)	Global (++) Regional (+++) Local (+)
Expert field measurements of parameters associated with ES through instrumentation or surveys	Provisioning (+++) Regulating (+++) Cultural (+)	Primary biophysical (+++) Secondary biophysical (++) Primary social (++) Secondary social (+)	Ecological (+++) Economic (+++) Social (++)	Global (+) Regional (+) Local (+++)
Expert knowledge of ecosystems and associated services	Provisioning (+) Regulating (++) Cultural (++)	Primary biophysical (++) Secondary biophysical (++) Primary social (++) Secondary social (+++)	Ecological (++) Economic (+++) Social (++)	Global (+++) Regional (++) Local (+++)
Participatory indigenous approaches. Involves assigning quantities based on deliberative stakeholder negotiations	Provisioning (+++) Regulating (++) Cultural (+++)	Primary biophysical (++) Secondary biophysical (+) Primary social (+++) Secondary social (++)	Ecological (++) Economic (++) Social (+++)	Global (++) Regional (++) Local (+++)

(The + signs indicate the level of emphasis on a particular aspect, i.e. most (+++), moderate (++) and least (+). The typology was developed from the Millennium Ecosystem Framework and literature. Source: Chapter 04, Co-investment in ecosystem services, CIFOR-ICRAF)

3.5 Strategy 05: Build Sustainable Financial Mechanisms by Mobilizing International Climate Finance and Private Sector ESG Investments for Voluntary-Based PES Schemes

A key element in establishing a long-term and functional PES mechanism is the creation of sustainable financial mechanisms that ensure consistent funding and foster collaboration among diverse stakeholders. This strategy focuses on mobilizing international climate finance, including carbon trading mechanisms, alongside private sector Environmental, Social, and Governance (ESG) investments to support voluntary-based PES schemes in Sri Lanka.

It emphasizes the identification of feasible ecosystem service (ES) beneficiaries and active engagement with entities such as hydropower companies, water utilities, and tourism operators to secure their willingness to participate. This engagement process involves clearly demonstrating the mutual benefits of ecosystem conservation and sustained service reliability, thereby aligning ecological protection with economic incentives. Equally important is the co-development of payment structures between ES buyers and ES sellers, ensuring that payments are fair, transparent, and reflective of the true ecological and social value of the services provided.

a) Negotiation with ES beneficiaries to attract willingness to participate in a PES scheme

To ensure effective negotiation, two key inputs are required: an economic risk assessment and an evaluation of the socio-economic benefits derived from managing ecosystem services.

- Economic Risk Assessment: This will translate projected changes in hydrological services into quantifiable economic impacts for ES beneficiaries. The assessment should highlight:
    - Continuity risks are associated with potential discontinuation of services by ES providers.
    - Natural variability risks (e.g. linked to water quality and quantity fluctuations) beyond ES provider interventions.
    - Free-rider risks resulting from non-contributing beneficiaries benefiting from the investments of contributing parties.
    - Transactional costs related to monitoring, verification, and auditing.
- Evaluation of the economic benefits derived from managing ecosystem services; focuses on understanding how sustainable ecosystem management supports their long-term operational and financial stability. For example,
    - Hydropower companies benefit from regulated water flow and reduced sedimentation, which lower maintenance costs and improve energy efficiency (Figure 06).
    - Water supply agencies gain from improved water quality and consistent supply, reducing treatment expenses.
    - Tourism operators profit from enhanced scenic beauty and biodiversity, attracting more visitors.

By quantifying these benefits, ES buyers can recognize the economic value of investing in conservation practices that secure the ecosystem services vital to their operations.

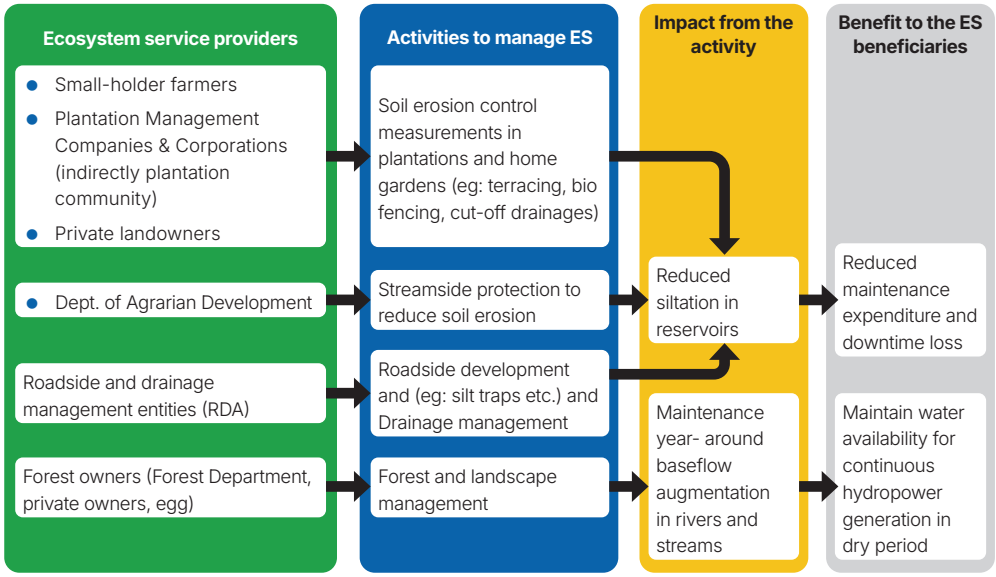


***Figure 06**: Hydropower companies benefit from regulated water flow and reduced sedimentation*

b) Co-develop payment structures with ES buyers and ES sellers

This activity involves collaboratively designing fair and transparent payment mechanisms through Focus Group Discussions (FGDs) and field data collection with both ES sellers (e.g., local communities, farmers) and ES buyers (e.g., hydropower companies, water supply agencies). The process includes conducting cost estimations and cost–benefit analyses to determine the appropriate payment levels that reflect the value of ecosystem services while ensuring that conservation practices remain economically viable for local providers.

- Cost Estimation for Sustainable Land Management (SLM) Interventions: The recurring costs will form the basis of rewards (payments) that ES beneficiaries provide to ES providers under the PES scheme. These may include:
  - Community labour contributions.
  - Tools infrastructure, materials and equipment.
  - Capacity-building and training programs.
  - Risk premiums (where applicable).
  - Opportunity costs of land-use change.
  - Transactional costs for monitoring and audits.

3.6 Strategy 05: Establish comprehensive PES monitoring systems by developing a national PES monitoring framework aligns with global and national sustainability commitments

This Principles, Criteria, and Indicators (PCI) Framework for PES monitoring provides a broad-scale, nationally applicable framework to guide and assess the implementation of PES initiatives across Sri Lanka. It provides a structured mechanism to evaluate progress, effectiveness, and coherence of PES interventions with national environmental and development priorities. PCI Framework was co-developed at the national workshop on PES organized by ICRAF. This framework aligns with national strategies such as the Sustainable Development Goals (SDGs), National Environmental Action Plan (NEAP), National Biodiversity Strategic Action Plan (NBSAP) and Nationally Determined Contributions (NDCs) offering a unified approach to strengthen accountability, adaptive management, and equitable benefit-sharing while promoting long-term sustainability of ecosystem service conservation at the national level.

Table 03: *Principles, Criteria, and Indicators (PCI) Framework for PES monitoring at national level*

Strategy	Principle	Criteria	Indicator
I. Strengthen the policy, legal, and institutional foundations	Institutional support and governance are foundational; policy coherence enhances legitimacy	Alignment of PES framework with NDC 3.0, NBSAP, NEAP, NAP, and other national/ subnational strategies	• Number of policies, strategies, or implementation plans integrating PES concepts • PES guidelines or policy tools developed and adopted
	Transparent and accountable governance builds trust in PES implementation	Review of existing environmental and land-use laws, and identification of enabling provisions and barriers for PES	• Number of reviewed and harmonized legal instruments • Policy briefs or recommendations developed from legal assessments
	Learning from previous initiatives strengthens institutional design	Examination of previous PES or PES-like schemes in Sri Lanka to identify barriers and lessons learned	• Number of documented PES case studies analyzed • Key lessons integrated into PES framework design

Strategy	Principle	Criteria	Indicator
II. Develop technical and operational capacity on ES valuation	Evidence-based decision-making enhances effectiveness	Use of GIS, remote sensing, and hydrological modeling for ES mapping, valuation, and monitoring	• Number of spatial datasets developed for ES mapping • Number of technical reports produced on ES valuation using geospatial data
	Quantification and valuation strengthen PES negotiation and pricing mechanisms	Application of standardized methods for ecosystem valuation and development of a national ES database	• Number of ES valuation studies conducted • Centralized ES database established and maintained
	Capacity building ensures sustainability and local ownership	Integration of PES, biodiversity credits, and carbon credits into national training programs	• Number of training sessions/modules on innovative financing tools • Number of government, NGO, and private-sector stakeholders trained
III. Identify and prioritize key ecosystem service providers	Ecosystem-based spatial planning supports equitable PES targeting	Mapping of environmentally sensitive areas (ESAs), critical landscapes, and vulnerable communities	• Spatial maps of ES providers and beneficiaries developed • Number of priority areas identified for PES interventions
	Cross-sectoral linkages increase co-benefits	Linking upper watershed conservation with renewable energy, water supply, and tourism sectors	• Number of cross-sectoral PES pilot models implemented • Number of sectoral partnerships established (e.g., hydropower, tourism)
IV. Build sustainable financial mechanisms and partnerships for Voluntary PES schemes	Economic incentives drive long-term ecosystem stewardship	Mobilization of climate finance, ESG investments, and public-private partnerships for PES	• Amount of PES-related funding mobilized from public/private sources • Number of active partnership agreements formalized
	Negotiation and equitable benefit-sharing ensure fairness	Negotiation with ES beneficiaries to determine willingness to pay and co-development of payment structures with ES buyers and sellers	• Number of stakeholder consultations and negotiated PES agreements • Documented benefit-sharing mechanisms established

Strategy	Principle	Criteria	Indicator
V. Promote stakeholder engagement and strengthen governance structures	Multi-stakeholder collaboration enhances transparency and inclusiveness	Establishment of a PES intermediary or coordination body for fund management and governance	• Functional intermediary or coordination body established • Number of stakeholder institutions participating in PES governance
	Participation and co-benefits strengthen long-term sustainability	Engagement of government agencies, private entities, NGOs, and CBOs through awareness, dialogue, and joint action	• Number of stakeholder engagement workshops held • Level of participation of community and private actors in PES schemes
	Social and environmental safeguards maintain accountability	Establishment of grievance, transparency, and MRV mechanisms	• PES MRV framework developed • Number of MRV reports and audit documents published annually

Community consultation in co-designing PES

Photograph: Chamika Gallage, ICRAF

Chapter 4.

A roadmap for PES implementation in Sri Lanka

As Sri Lanka currently lacks a dedicated policy or regulatory framework governing PES, the initial phase of implementation will focus on developing and operationalizing voluntary PES mechanisms. Therefore, initial steps should allow for the practical testing of concepts, establishment of institutional arrangements, and building of stakeholder trust and capacity before formal legislation is introduced. Voluntary PES initiatives can serve as demonstration models that generate empirical evidence and lessons to inform future policy formulation.

In the longer term, the transition from voluntary to compliance-based PES will be guided with necessary amendments to existing Acts or a new PES Act, led by the Ministry of Environment, with the aim of mainstreaming PES into national environmental governance and sustainable financing systems. The proposed roadmap (Figure 07) therefore principally outlines the sequential steps required to establish, pilot, and scale up voluntary PES schemes in Sri Lanka, setting the foundation for an enabling regulatory environment to set up compliance-based PES in the country. In particular, information generated here will facilitate the actions taken by Ministry of Environment that has already appointed a working committee to work on PES.

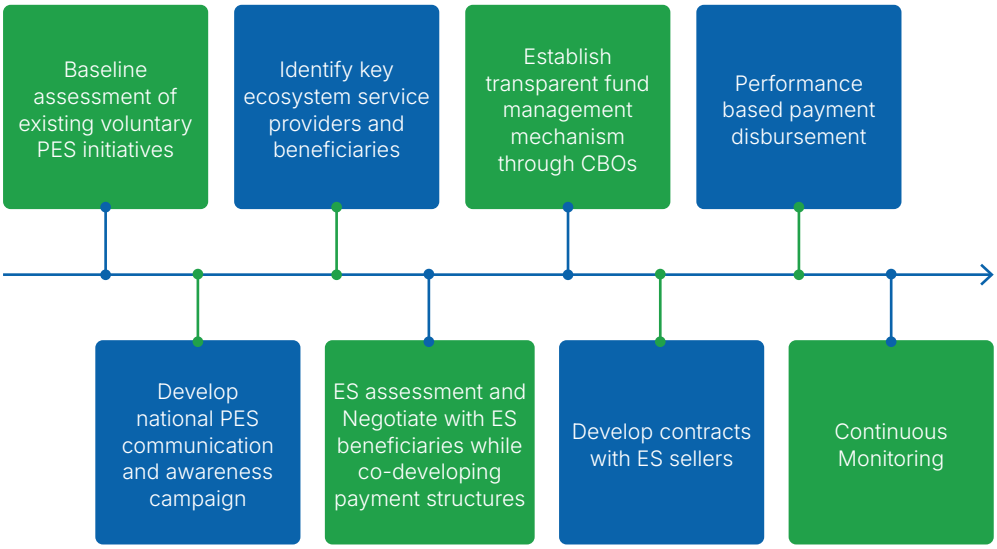


Figure 07: *A roadmap for voluntary PES implementation in Sri Lanka*

4.1 Progress of the GCF Knuckles Project on Voluntary PES Implementation

Following the development of the national PES roadmap, the GCF Knuckles Project has made significant progress in operationalizing the voluntary PES pathway through a series of targeted interventions aimed at establishing enabling conditions, stakeholder engagement, and piloting mechanisms within priority sub-watersheds.

Key activities completed to date include:

1. **Baseline assessment of existing voluntary PES initiatives**
   - Conducted comprehensive review of existing PES and PES-like initiatives and general scoping assessment on existing conditions and national policies relevant to the implementation of Payment for Ecosystem Services in Sri Lanka to identify barriers and lessons learned.
   - Analyze the existing legal and institutional framework to identify policy gaps, overlaps, and opportunities for integrating PES mechanisms within current environmental regulations.
   - Developed a national-level PES framework and strategic roadmap through multi-stakeholder consultation.

2. **Develop national PES communication and awareness campaign**
   - Conduct a National workshop on developing strategies, institutional arrangements and PCI analysis on PES implementation in Sri Lanka

3. **Identify key ecosystem service providers and beneficiaries**
   - Identified priority ecosystem service providers and beneficiaries within the Hulu Ganga sub-watershed through spatial and socio-economic assessments.

4. **ES assessment and Negotiate with ES beneficiaries while co-developing payment structures**
   - Engaged with Resus Energy Pvt Ltd as a potential ecosystem service beneficiary to explore willingness to participate in the pilot PES scheme and facilitated negotiations to co-develop payment structures and monitoring mechanisms.

5. **Establish transparent fund management mechanism through CBOs**
   - Initiated establishment of a PES intermediary at GND level with CBOs and government consultation, for coordination and transparent fund management at voluntary scale.

6. **Continuous monitoring**
   - Developed Principle Criteria and Indicators (PCIs) and PES monitoring framework with national level involvement.

4.2 Information Flow for Compliance-Based PES Implementation at the National Level

The Information Flow outlines the structured coordination and communication pathway required to operationalize PES mechanisms under a regulatory and policy-driven framework. This flow ensures that data, decisions, and feedback move efficiently among key institutions; from local implementers and provincial authorities to the national-level governing bodies. By establishing a clear information pathway, the framework enables transparent monitoring, reporting, and verification (MRV) processes, enhances accountability, and supports evidence-based decision-making.

Policy & Regulatory Level

Ministry of Environment (MoE)

- Formulate national PES policies, compliance standards, and legal instruments.
- Establishes national PCI framework, monitoring protocols, and reporting formats.
- Delegates implementation authority to relevant agencies (Sectoral institutions).

Coordinating & Oversight Level

National PES Coordination Body

- Acts as the intermediary between MoE and implementing agencies.
- Ensures national-level consistency, cross-sector coordination, and fund management oversight.
- Consolidates performance and compliance reports from all implementing agencies.
- Conducts technical reviews and compliance audits based on national PCI indicators.

Implementing Agency Level

Sectoral institutions

- Agencies such as DAD, CEA, CEB, SEA, SLTDA, FD, DWC and Provincial Councils implement PES activities within their mandates.
- Collect and report data on:
  - Ecosystem condition and service delivery
  - Compliance with PES contracts and safeguards
  - Fund disbursement and benefit-sharing mechanisms

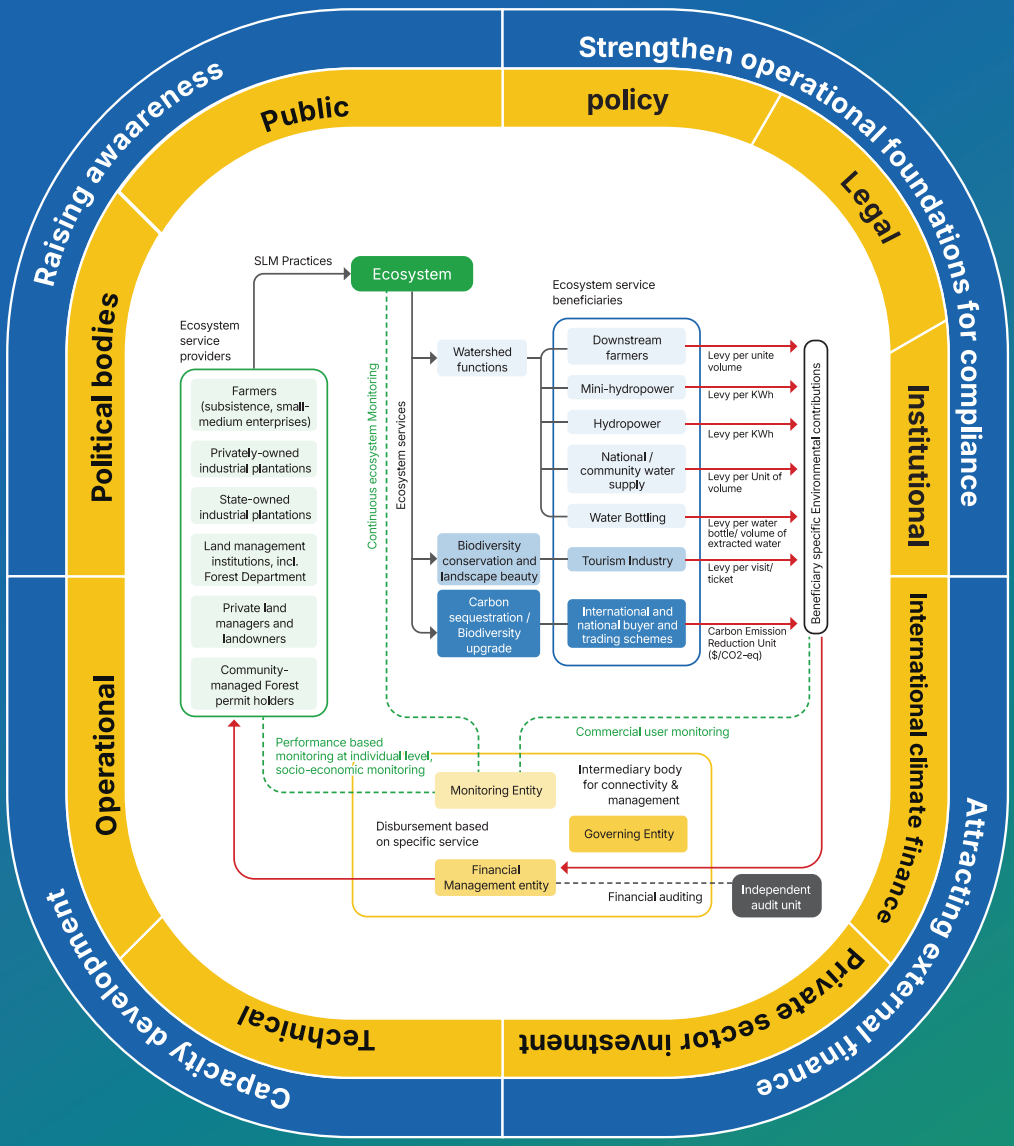
Local/Project Level

Local/Project Level Intermediaries

- Local authorities, community-based organizations (CBOs), or NGOs execute PES activities;
  - Fund disbursement
  - Maintain MRV systems (Monitoring, Reporting, Verification) for environmental and social compliance.

Living with nature brings prosperity !

Photograph: Chamika Gallage, ICRAF



PES framework in a nutshell...

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