

Payment for Environmental Services

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What are ecosystem services?

- Ecosystem services (MEA, 2005)

Provisioning services	Supporting services	Regulating services	Cultural services
<ul style="list-style-type: none">- Food- Fresh water- Fuel wood- Fibre- Bio-chemicals- Genetic resources	<ul style="list-style-type: none">- Soil formation- Nutrient cycling- Primary production	<ul style="list-style-type: none">- Climate regulation- Water purification- Disease prevention	<ul style="list-style-type: none">- Educational- Spiritual and religious- Recreation and tourism- Sense of place- Cultural heritage

The major ES

- **Carbon sequestration and storage** (e.g. electricity company paying farmers in the tropics for planting and maintaining additional trees)
- **Biodiversity protection** (e.g. conservation donors paying local people for setting aside or naturally restoring areas to create biological corridor);
- **Watershed protection** (e.g. downstream water users paying upstream farmers);
- **Landscape beauty** (e.g. a tourism operator paying a local community not to hunt in a forest being used for tourists' wildlife viewing).

Introduction to PES

- Brundtland Report (Brundtland 1987) and the Rio 1992 conference
- Tropical conservation gradually headed in a more people centered direction.
- Alleviating poverty as a new way to conserve and protect the environment.
- Integrated conservation and development projects (ICDPs), and sustainable forest management: intended to simultaneously increase incomes and conserve the environment

Introduction to PES

- Neither approach has so far achieved major shifts in tropical land-use trends
- Need for a more direct conservation approach
- As wilderness and natural habitats shrink, ES previously provided free by nature are becoming increasingly threatened.
- This emerging scarcity makes them potentially subject to trade.

PES and other conservation approaches

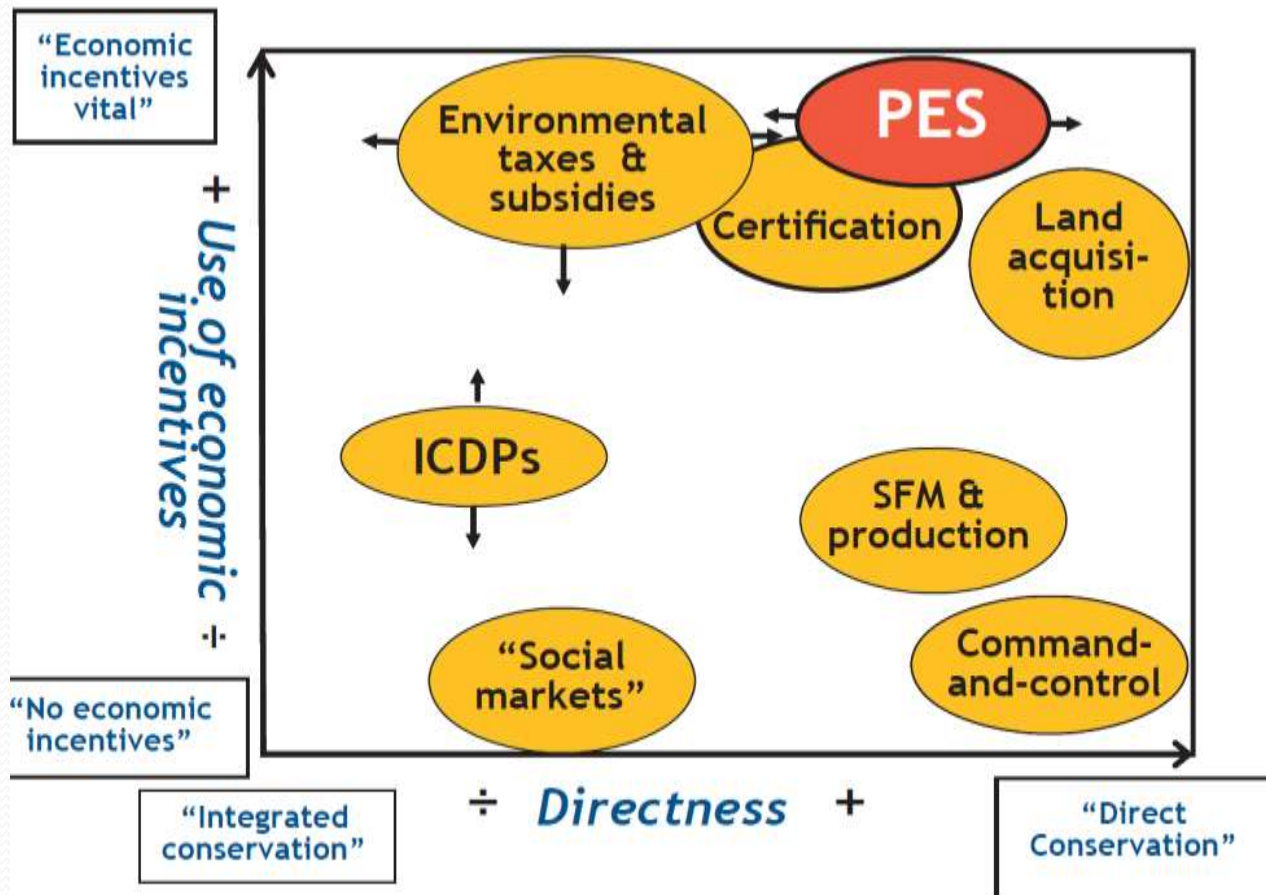


Figure 1. Comparing PES to other conservation approaches

PES defined...

- “A PES is a **voluntary** transaction in which a **well defined ES** is bought by at least one ES **buyer** from a minimum of one ES **provider**, if and only if the provider ***continues to supply*** that service (conditionality)”
- PES - support positive environmental externalities through the transfer of financial resources from beneficiaries of ES to those who provide these services or are fiduciaries of environmental resources
- The core idea of PES is that external ES beneficiaries make direct, contractual and conditional payments to local landholders for adopting practices that secure ecosystem conservation and restoration

Types of PES

- *Area-based schemes*: contracts stipulate land- and/or resource-use caps for a pre-agreed number of land units. E.g. conservation concessions
- *Product-based schemes*: consumers pay a 'green premium' on top of the market price for a certified production scheme.
- The premium is for a product meticulously linked to the use or non-use values of pristine habitat e.g. ecotourism, for agro-ecological production modes preserving relatively high ES levels e.g. shade-grown coffee, organic farming

Types of PES

- *Public schemes*: the state acts on behalf of ES buyers by collecting taxes and grants and paying alleged ES providers.
- *Private schemes*: buyers pay directly.
- *Use-restricting*: reward providers for *conservation*, for capping resource extraction or for fully setting aside areas, such as for protected habitat. Here, landowners are paid for their conservation opportunity costs.
- *Asset building*: restore an area's ES, for example (re)planting trees in a treeless

Challenges with PES

- ES arise from complex processes, making it difficult to determine which actions affect their provision,
- Identify precisely who the providers and beneficiaries are
- Agreeing on who holds the rights to enjoy ES
 - Beneficiaries not used to paying for a service might show resistance to doing so.
 - Suppliers may need to adopt novel practices with some degree of uncertainty.

PES limitations

- Based on scientific generalizations not supported by empirical studies;
- Implemented in a context where they are not the most cost-effective method to attain the goals established;
- Service providers, users and the service itself are sometimes not properly identified;
- Implemented without a proper monitoring or control mechanism;

PES limitations

- The cost of ES are set arbitrarily; no studies on demand and economic valuation of the resource;
- They depend largely on external financial resources; and
- Programs and activities are disseminated poorly among the local population.

Requirements for PES

- ***Identifying Beneficiaries and Generating Demand:*** Look out for free riders and create WTP among potential buyers
- ***Generating Revenues for Services Providers:*** Sustainability of PES revenues; on-going as opposed to one time payments
- ***Establishing Scientific Knowledge and Valuing Ecosystem Services:*** reliable scientific knowledge of landscapes and relationship between land uses and the provision of ES.

Requirements for PES

- ***Understanding the Legal and Policy Environment:*** possibility of regulatory or fiscal hurdles e.g. perverse subsidies in the form of free or unregulated access to resources
- **Property rights:** need for a strong and undisputed and tenure system
- ***Establishing an Institutional Structure*** . Need institutions to help in scientific research, capacity building, technical assistance marketing, and linkages with national and international actors

Requirements for PES

- ***Financing the PES System*** : continuous flow of financial resources into the system to fund payments over the long term
- ***Managing Transaction costs***: The transaction costs should not exceed PES benefits

Why PES in our countries

- Enormous costs of conservation on local people-failure of the fortress approach
- Over stretched national budgets
- High rates of environmental damage
- Poverty