Payments for Ecosystem Services: A tool for leveraging political attention and public and private financing (7. (d) Biodiversity, and valuation of and payment for forest ecosystem services)

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The Economics of Ecosystems and Biodiversity

• The Economics of Ecosystems and Biodiversity study (TEEB) was launched by Germany and the European Commission in response to a proposal by the G8+5 Environment Ministers (Potsdam, Germany 2007) to develop a global study on the economics of biodiversity loss.

• TEEB is an independent study hosted by the United Nations Environment Programme with financial support from the European Commission; Germany and the UK joined by Norway, the Netherlands and Sweden.
Ecosystem Services

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Valuation of Ecosystem Services and Biodiversity: Measuring what we manage

• Natural capital has no dedicated systems of measurement, monitoring and reporting. Services are un-priced or underpriced in markets and price signals do not reflect the true value of natural capital.

• Decision-making affecting people and using public funds needs to be objective, balanced and transparent. Access to the right information at the right time is fundamental to coherent policy trade-offs.

• Better understanding and quantitative measurement of biodiversity and ecosystem values to support integrated policy assessments are a core part of the long-term solution.
Valuing ecosystem services

Monetary: e.g. avoided water purification costs, value of food provision, value of carbon storage

Quantitative: e.g. cubic metres of water purified, tonnes of carbon stored, share of population affected by loss of food provisioning

Qualitative: range and materiality of various ecosystem and biodiversity benefits provided by the ecosystem instance being evaluated, and knowledge gaps

Source: P. ten Brink, Workshop on the Economics of the Global Loss of Biological Diversity, 5-6 March 2008, Brussels

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Innovative tools for rewarding long-term conservation of ecosystem services and biodiversity

• Payments for ecosystem services

• Tax and public compensation mechanisms
• Shared benefits derived from genetic resources
• Greening the markets
Payments for Ecosystem Services (PES)  
Definition  
PES can be defined as a *voluntary* transaction where a *well defined ecosystem service* (or land use likely to secure that service) is “bought” by at least one *ecosystem service buyer* from at least one *ecosystem service provider*, if – *and only if* – the ecosystem service provider secures provision of that ecosystem service (conditionality).
Payments for Ecosystem Services (PES)

- PES schemes are designed to stimulate transactions in which a well-defined environmental service is bought by at least one user from at least one provider. They can be private or public. The payments involve a positive incentive to the provider, and are conditional on performance.
- Whether incentives are conditional on measures of the service or the actions of providers depends on the feasibility and cost of monitoring. Because of the difficulty in measuring many environmental services directly, payments may be based on either the actions of the service providers or on indirect ecological indicators.
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PES stakeholders and their interactions

Governance Structure

- National/Regional/Local government/Agencies
- Multi-actor organizations
- Committees

Ensure transparency and impartiality

Beneficiaries

Mostly public sector
Private sector
Citizens/consumers (via NGOs, public or private Sector)

Financing and Payment Mechanisms

- Direct public payments
- Direct private payments
  - Tax incentives
  - Voluntary markets
- Certification programmes
  - Etc.

Providers

- Single farmers/associations
- Forestry owners/workers
- Communities
- NGOs
- Business
- Public authority

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Opportunities of PES schemes

- PES schemes may make the value of ecosystem services more obvious and modify or reverse incentives for users to over-exploit or convert them.
- Voluntary aspect is a key feature but needs a legal/regulatory framework to function properly.
- Potential to scale up from local to national schemes for cost-effectiveness.
- Involving the private sector in PES schemes may raise additional finance and complement public funds. But governments may need to provide extra incentives or alternative solutions to cover start-up or operating costs.
Challenges of PES schemes

• Demand for ecosystem services is currently low but could increase with resource scarcity;
• Requires significant investment in information and capacity-building;
• Doesn’t work where tenure or user rights are poorly defined or enforced.

However,

• PES schemes can be part of a broader mix of policy tools that addresses the full range of ecosystem services from an area
Overarching conditions for success of PES schemes

Effective PES requires and can help to strengthen *enabling conditions*:

- Reliable scientific information;
- Economic data;
- Identification and participation of stakeholders.

Successful PES schemes show:

- Transparency;
- Reliability;
- Cultural appropriateness;
- Strong commitment by all parties.
Key criteria and prerequisites necessary for a successful PES scheme according to the OECD

- Remove perverse incentives;
- Clearly define property rights;
- Clearly define PES goals and objectives;
- Develop a robust monitoring and reporting framework;
- Identify appropriate buyers and ensure long-term sources of finance;
- Identify sellers and target ecosystem service benefits;
- Consider opportunities for bundling or layering multiple ecosystem services;
- Establish baselines to ensure additionality;
- Reflect ecosystem service providers’ opportunity costs through differentiated payments;
- Address leakage;
- Ensure permanence.
Examples of large PES schemes

• The US spends more than US$ 1.7 billion a year in direct payments to farmers for environmental protection: sustainable use of irrigation, nutrients and fertilizers, integrated pest management and wildlife protection.

• The European Union mechanism for promoting environmentally friendly agriculture and forestry is a major part of the EU Rural Development programmes, worth some EUR 4.5 billion annually. In 2005, agri-environment schemes covered an area reaching 36.5 million hectares for EU-27 (excluding Hungary and Malta), through 1.9 million contracts with farmers.
Web resources:

• www.teebweb.org
• www.unep.org
• www.unep.org/greeneconomy
Thank you!