



# Negotiation-support toolkit for learning landscapes

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# 48 | Multi-scale payments-for-environmental services' paradigms (MuScaPES)

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Beyond the umbrella term of 'payments for environmental services', a range of paradigms and associated mechanisms have emerged that differ in articulation and in economic, social and political assumptions. This tool helps clarify the range of possibilities.

## ■ Introduction

As discussed in volume 1 (van Noordwijk et al 2011), rewards for the continued or enhanced provision of environmental services are an attempt to close the loop and link the concerns of stakeholders who are external to decision making about land use in a certain landscape to those that make the decisions.

'Payments for ecosystem (or environmental) services' (PES) (Swallow et al 2010, Namirembe et al 2014) have been broadly defined as a conditional instrument where environmental stewards are given incentives to maintain or improve the flow of environmental services by those who benefit from these flows. We have identified three main paradigms within this concept: 1) commoditization (also termed commodification); 2) compensation; and 3) co-investment, which use the acronyms CES, COS and CIS (van Noordwijk and Leimona 2010).

**Table 48.1.** Reward mechanisms under the three paradigms of commodification, compensation and co-investment

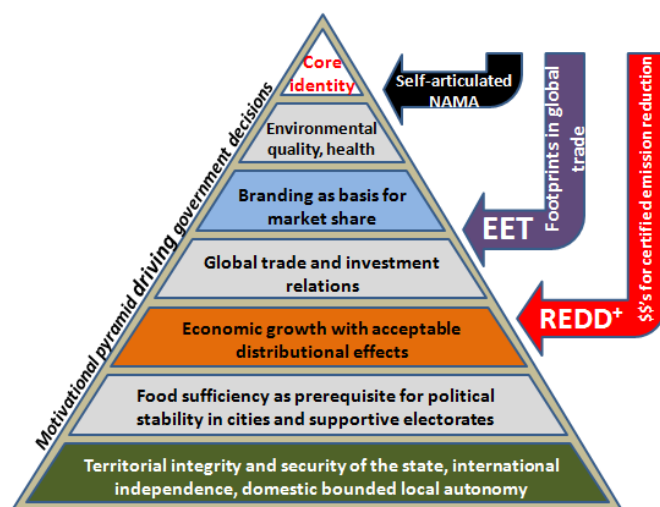
Reward mechanism	Sub-category	Performance indicator	Example of source of reward
Commoditisation	Commoditisation of environmental services as such	Delivery of specified services above agreed baseline level	Global regulated or voluntary carbon markets
	'Environmental service' branding of established commodities	Audited compliance with certification standards, with clarified force majeure clauses	Eco-certified coffee, cocoa or tea; Forest Stewardship Council certification of timber
Compensation	Compensation	Adherence to restrictions or proxies for generation of specified services beyond legal requirements	International conservation organisations, wildlife tourism or niche market commodity consumers

Reward mechanism	Sub-category	Performance indicator	Example of source of reward
Co-investment	Payment for effort proven or trusted to generate specified services	Proof of actions known for generation of specified services	Conservation organisations, conservation funds, carbon brokers
	Incentive for a set of efforts for ecosystem management without specifying which services	Achievement of mutually negotiated actions for maintaining or enhancing baseline condition of an ecosystem	International conservation organisations, conservation funds, national governments
	Incentives for private businesses that generate positive ecosystem services' externalities	Maintaining or enhancing baseline condition of ecosystem	National governments

**Source:** modified from Namirembe et al 2014

PES has often been described as 'internalizing externalities' because it tries to make the micro-economic incentives for farm-level decision making aligned with meso- and macro-economic interests and to reduce the negative impacts of decisions on other stakeholders. Beyond micro- and macro-economies, however, we now recognize the giga-economics of planetary boundaries and also the pico-economic scale of brain-level decision making (van Noordwijk et al 2012). The real internalization can now be seen as touching on the underlying layer of emotions that guides human decisions before they are 'rationalized' as a way of communicating with others. That raises the question where environmental issues sit in a hierarchy of emotions.

Van Noordwijk et al (2013) proposed a 'motivational pyramid' that can be used to discuss the priorities of a local or national government and its concerns for the health and well-being of its citizens, as well as relations to global environmental quality, global commodity trade and development.



**Figure 48.1.** Motivational pyramid of the concerns of a typical government and its interactions with possible mechanisms to reduce greenhouse gas emissions

**Note:** NAMA = nationally appropriate mitigation actions; EET = emissions embodied in trade; REDD+ = reducing emissions from deforestation and forest degradation plus conservation

**Source:** van Noordwijk et al 2013

## ■ Objectives

Assist local, national and international proponents of PES and PES-like arrangements in choosing a locally appropriate paradigm and understand its relation with underlying motivation.

## ■ Steps

- ① Conduct focus-group discussions with proponents of PES and PES-like arrangements (local communities, government officials, NGOs and private entities) to understand the paradigms, similarity in goals and differences in ways of achieving them, as well as the positive and negative connotations of the terms used (buyer/seller/intermediary/market versus compensator/compensatee versus co-investors/shared risks and benefits). Make a list of local examples and discuss their clarification according to Table 48.2.
- ② Explore the preconditions, appropriateness of underlying principles and strictness of conditionality (Table 48.2) in the local context in separate discussions and in-depth interviews with key stakeholders.

**Table 48.2.** Decision table to identify suitable sub-categories of PES instruments

Preconditions	Type of reward	Principle for establishing reward	Strictness of conditionality	Sub-category
Clarity of property rights over land and trees; compliance with legal requirements for generation of environmental services	Cash or in-kind rewards to individuals or groups. Sometimes with co-benefits	Willingness of buyers to pay for environmental services additional to a baseline status	Payment proportional to quantity of specified, verified and certified environmental services additional to a baseline.	Commoditisation of environmental services as such
Existing commodity markets with interest in enhancement of environmental services	Maintenance of market share (traded volumes) and/or price	Willingness of consumers to pay premium price for quality of production process rather than the product as such	Certification standards and auditing practice are under public scrutiny	'Environmental service' branding of established commodities
Legality of environmental-services reducing practices that are foregone and now compensated	Cash or in-kind rewards to individuals or groups. Sometimes with revenue or benefit sharing	Willingness of sellers to accept compensation for opportunity costs for maintaining or enhancing existing baseline environmental services' status	Payment proportional to opportunity cost of land and/or of adherence to specified restrictions or conservation actions	Compensation



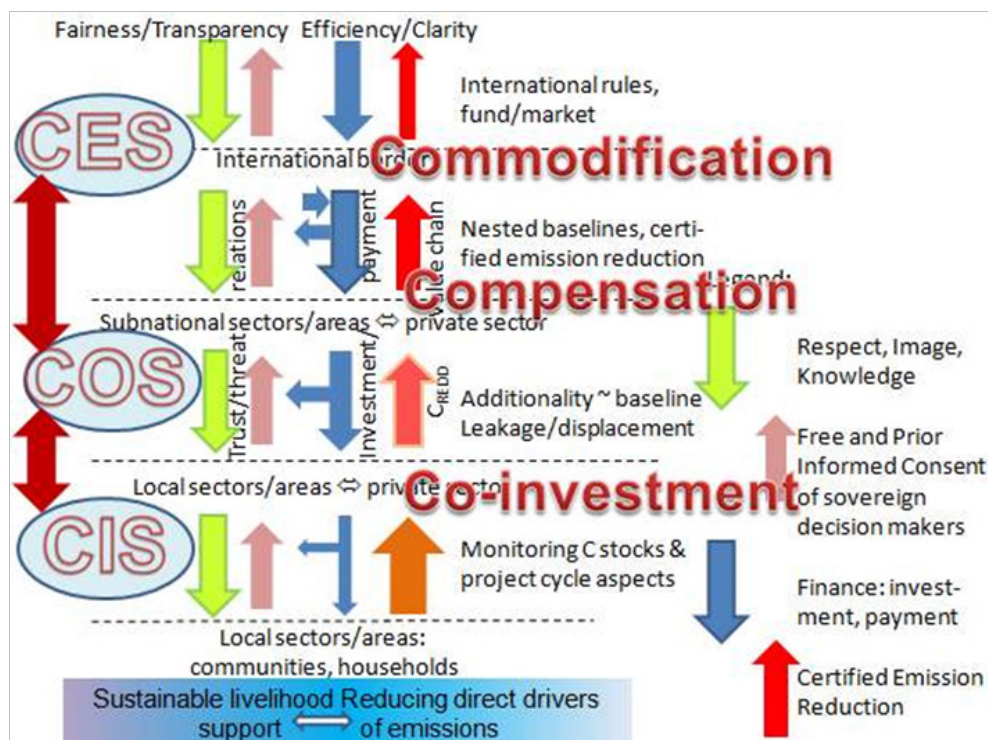
Preconditions	Type of reward	Principle for establishing reward	Strictness of conditionality	Sub-category
Applicable where preconditions for other reward mechanisms are not yet achieved	In-kind to groups. Inputs, for example, seedlings, labour. Sometimes with capacity building and advisory support	Mutual sharing of roles to achieve livelihood and environmental services' outcomes. Ownership of environmental services sometimes distinct from ownership of livelihoods.	Payment proportional to effort (for example, number of trees planted) for achieving environmental services' outcome	Payment for effort proven or trusted to generate specified environmental services
	In-kind: access to or (co-) ownership of resources or land, tree seedlings, support of conservation friendly enterprise, for example, bee keeping. Benefit sharing	Precautionary investment in management plans for meaningful participation of local stakeholders as insurance banking for environmental services without market demand.	Negotiated rewards provided fully and good relations maintained, with continuous negotiation and encouragement of good performance. Rewards can be completely withdrawn but this is rare	Incentive for a set of efforts for ecosystem management without specifying environmental services
	License permits, rights or (co-) ownership of resource to businesses or community organizations	Willingness of buyers to pay for high value commodities or services that may maintain or enhance or unspecified environmental services	Permits upheld provided there are no negative environmental impacts	Incentives for private businesses that generate positive environmental services externalities

- 3 Focus-group discussion: is the motivational pyramid of Figure 47.1 applicable and/or does it need modification to understand local conditions?
- 4 Building on the approach and results of FERVA, consider the opportunities to balance fairness and efficiency at three scale transitions: 1) the international border of a country; 2) the interactions between national government and sub-national/local governments and private sector actors; and 3) the interactions between a local government and/or private sector agent mandated (through a concession) by government and local community members and agencies. Is it feasible (and if so under what conditions) to combine paradigms across scales without compromising on transparency and clarity? Identify examples where such combinations operate.
- 5 Bring the conclusions of preceding steps into local discussions of options for locally appropriate PES arrangements. Identify opportunities and bottlenecks for improvement of existing PES approaches and options to address these. Contribute to the debate on which designs are appropriate at international, national and local scales, bringing in the local experience and evidence.

## ■ Case study: CES, COS and CIS in Africa

Namirembe et al (2014) classified 50 existing PES applications in Africa according to the CES, COS and CIS framework and found 15, 6 and 29 projects that (predominantly) use the paradigms, respectively. Within CES, which applies exclusively to carbon at this stage, the prices used were subsidized ('compensated for co-benefits') above market levels.

As an example of Step 5, Minang and van Noordwijk (2013) discussed the emerging lessons of the REDD+ discussion (Figure 47.2) and concluded that a multiple paradigm construction is feasible. While it adds complexity at the interfaces, it allows a balance between fairness and efficiency (see FERVA) to be struck at each level, beyond what a single paradigm approach might achieve.



**Figure 48.2.** Cross-scale relations of the fairness exchange (respect versus commitment) and the efficiency transactions (environmental service enhancement per unit funds invested)

**Source:** modified from Minang and van Noordwijk 2013

## ■ Key references

- Namirembe S, Leimona B, van Noordwijk M, Bernard F, Bacwayo KE. 2013. Co-investment paradigms as alternatives to payments for tree-based ecosystem services in Africa. *Current Opinion in Environmental Sustainability*. <http://dx.doi.org/10.1016/j.cosust.2013.10.016>.
- van Noordwijk M, Agus F, Dewi S, Purnomo H, Lusiana B, Villamor GB. 2013. *Reducing emissions from all land uses in Indonesia: motivation, expected funding streams and multi-scale policy instruments*. ASB Policybrief 34. Nairobi, Kenya: ASB Partnership for the Tropical Forest Margins.



The landscape scale is a meeting point for bottom–up local initiatives to secure and improve livelihoods from agriculture, agroforestry and forest management, and top–down concerns and incentives related to planetary boundaries to human resource use.

Sustainable development goals require a substantial change of direction from the past when economic growth was usually accompanied by environmental degradation, with the increase of atmospheric greenhouse gasses as a symptom, but also as an issue that needs to be managed as such.

In landscapes around the world, active learning takes place with experiments that involve changes in technology, farming systems, value chains, livelihoods' strategies and institutions. An overarching hypothesis that is being tested is:

Investment in institutionalising rewards for the environmental services that are provided by multifunctional landscapes with trees is a cost-effective and fair way to reduce vulnerability of rural livelihoods to climate change and to avoid larger costs of specific 'adaptation' while enhancing carbon stocks in the landscape.

Such changes can't come overnight. A complex process of negotiations among stakeholders is usually needed. The divergence of knowledge and claims to knowledge is a major hurdle in the negotiation process.

The collection of tools—methods, approaches and computer models—presented here was shaped by over a decade of involvement in supporting such negotiations in landscapes where a lot is at stake. The tools are meant to support further learning and effectively sharing experience towards smarter landscape management.

