



Getting your hands dirty as part of a carbon stock assessment can be an important part of learning curves for government officials who otherwise deal with the paper version of PES.

Photo: Brawijaya University /Widianto

Suggested Citation:

Mehmood-UI-Hassan M, van Noordwijk M, Namirembe S. 2017. Partnering and capacity development with local stakeholders in ecosystem service management. In: Namirembe S, Leimona B, van Noordwijk M, Minang P, eds. *Co-investment in ecosystem services: global lessons from payment and incentive schemes*. Nairobi: World Agroforestry Centre (ICRAF).

CHAPTER 24

Partnering and capacity development with local stakeholders in ecosystem service management

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Highlights

- Key partners for increased understanding and active management of ES are local resource user institutions and (emerging) intermediaries.
- Capacity development can focus on a set of six essential skills.
- Action research and researchers participating in locally developed agendas can use a range of tools and methods that allow both external and local learning.

24.1 Introduction

Although communities' incentives to participate in payment for ecosystem services (PES) schemes can be many¹, any variation on the PES theme requires a common understanding between contracting parties of what the contracts are about in a technical and operational sense. Contracts need to specify institutional arrangements and the capacities needed to make them work². PES contracts are often developed between ES beneficiaries, who are formally established and well informed of what needs to change in ES management on the one hand, and local communities, often not constituted in formally recognised groups and whose understanding of ES management is limited to what is locally relevant on the other hand. As PES-like contracts are new for most ES providers, this requires that steps be taken towards full free and prior informed consent of local communities for what is being proposed by outside stakeholders and intermediaries as solutions and the ensuing expectations and requirements from the communities (ES providers). These steps must be integrated into the designs.

Often, several sets of new capacities in terms of knowledge, skills and attitudes are required to comply with newly instituted administrative procedures and financial resource management and transparency.

Given that ES improvements usually require collective action, it is important that existing capacity at institutional levels of the communities be carefully evaluated and that capacity-related interventions be designed as necessary. By 'institutional capacities' we here mean the capacities existing amongst individuals and various community structures, both formal and informal, and how those structures interact between local institutions in landscapes generating ES, ES beneficiaries, private sector and the various related layers of governance (Figure 24.1).

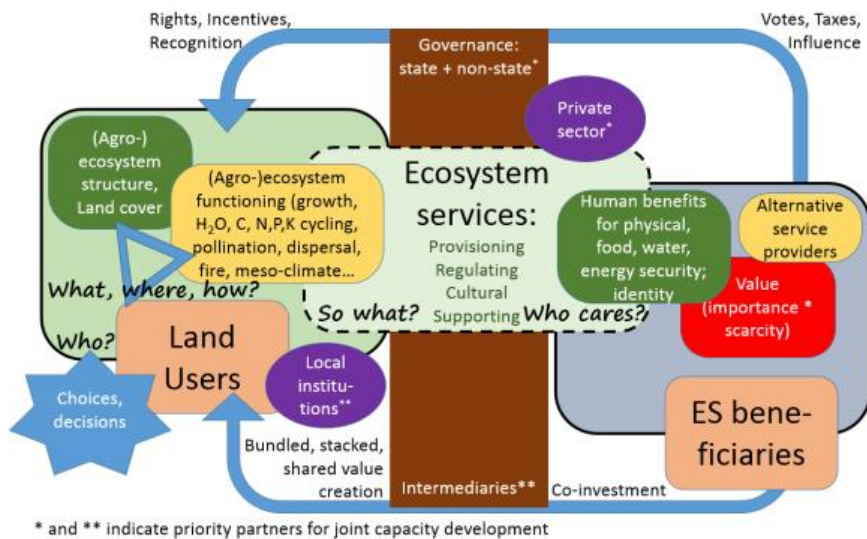


Figure 24.1 Main components of the structure, function, services, benefits, value cascade and the links between human well-being and land use as subsystems, identifying the priority partners for joint capacity development (modified from figure 2.1)³

Many of the case studies presented in this book have indicated locally relevant issues for making PES and PES-like schemes function as designed at community level:

- Often poor awareness about ES sustainability and the role that the actions and interests of various actors—buyers, sellers, intermediaries, users—play in enhancing or threatening sustainability of ES.
- Institutional readiness for PES requires group formation and networking, the mechanisms for which do not necessarily exist on the ground. Where local institutions do exist, they may have varying levels of legitimacy and acceptability among community members.
- The knowledge and awareness about ongoing ES governance initiatives (including green economy and land restoration) remain low amongst communities.
- Understanding of conditional rewards is inadequate, and innovative and locally suited reward or payment mechanisms are not well articulated, such as suitability and availability of mobile money transfer, micro-finance, credit and investment.
- There is a paucity of monitoring skills within communities about devising contextually appropriate indicators, methodologies for collection and analysis of data and devising appropriate course corrections.

This chapter will therefore focus on:

- 1) What local capacity is needed in dealing with the institutional side of PES (and PES-like) contracts and how 'readiness' can be assisted;
- 2) What role 'intermediaries' can play in facilitating capacity strengthening; and
- 3) Examples of tools and material that may be useful for 'intermediaries' who want to support local learning of the relevant skills (assuming that skills, rather than knowledge or values, form the major bottleneck).

24.2 Capacities needed

Underpinning resource management at scales from the individual to the global community is a common view on six types of knowledge-related human skills: 1) observing and monitoring change, 2) understanding the consequences of conditions and trends, 3) analysing trade-offs, 4) innovating in areas of recognized problems or opportunities, 5) integrating and forecasting expected consequences of change at scenario level, and 6) forming platforms and coalitions for change. The first three can be grouped under diagnosis of context, the next two as a focus on new options, and the last as the social, psychological and political dimensions of 'action'. See Figure 24.2.

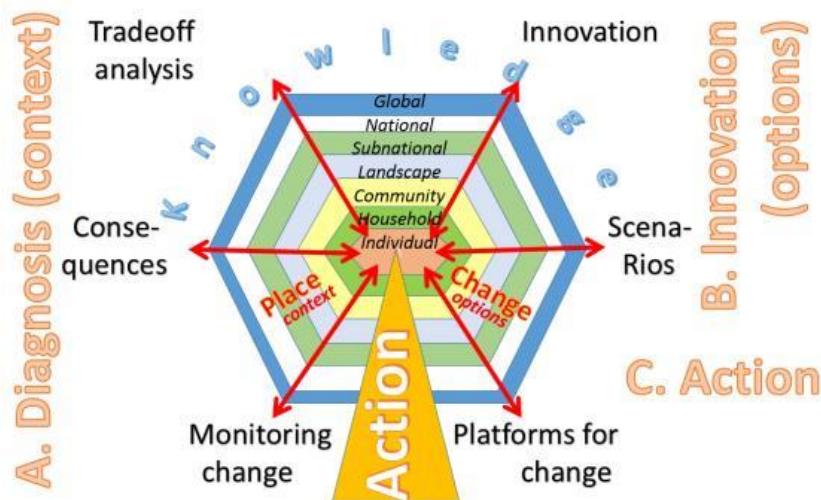


Figure 24.2 Steps involved in learning loops from individual to global levels that link knowledge with action (decisions, adoption, policy change and implementation) in integrated natural resource management⁴

Change in formal contractual relations between any two sets of stakeholders assumes that all parties to the contract have adequate capacity to^{5,6}

- set goals, evaluate options and take decisions considering their aspirations and goals;
- formulate, implement and monitor coherent programmes making effective use of human, financial and environmental resources available;
- gather, assess and share reliable information related to the contractual obligations and rights;
- interact inter-institutionally and to co-ordinate plans and programmes within;
- adapt to changing internal and external circumstances; and
- learn from mistakes and to undertake internal re-organization.

Several of these assumptions, however, do not hold true when it comes to field implementation of PES projects and programmes. Institutional shortcomings, especially at the local community level, dominate in the 'platform for change' category (Figure 24.2). Thus, the fundamental question in making PES initiatives a success remains how to overcome a suboptimal 'status quo' and become a force for change, and what roles intermediary organizations could play to capacitate the communities⁷.

24.3 Capacity-development role of intermediaries as partners

It is clear from the presented cases in this book that the likelihood of success amongst the projects that engage external actors and intermediaries as facilitators in a partnership mode, rather than in the execution mode, remains high. The Asian examples include the roles played by 3PAD in community mobilization, training, and fund transfers in partnership with village elders in Vietnam⁸, by the Biodiversity-Based Economy Development Office (BEDO) in Thailand, and by the NGO Rekonvasi Bhumi in Indonesia⁹. Other examples include strengthening local capacity and enhancing understanding of national PES through facilitating structured and semi-structured deliberations and dialogue among PES providers and users in Vietnam¹⁰. *Examples also include* participatory landscape analysis to clarify issues, challenges and opportunities, and assistance provided to PES initiatives in identifying and engaging ecosystem service buyers as well as facilitation of co-designed PES incentive schemes in a partnership mode considering the community strengths, weaknesses and aspirations. Intermediaries also help advise ES beneficiaries on what payment of reward mechanisms are appropriate without compromising collective action¹¹.

In a nutshell, the intermediary organizations can play the following roles in PES and PES-like schemes and programmes to stimulate and support the establishment of ecosystem services management:

1. facilitate cooperation and synergy amongst key stakeholders;
2. advise the local government and facilitate conflict resolution between communities and local government;
3. communicate and promote the ES to the potential seller and buyer;
4. bridge the interests of sellers and buyers in the implementation of PES; and
5. monitor, evaluate and verify the performance of PES activities periodically.

24.4 Existing materials and tools available for intermediary organizations

A number of tools and materials are available as international public goods for use and adaptation by intermediary organizations that can assist in stakeholder capacity development for PES. A number of critical tools that can be deployed at various stages of the PES programmes are briefly presented below.

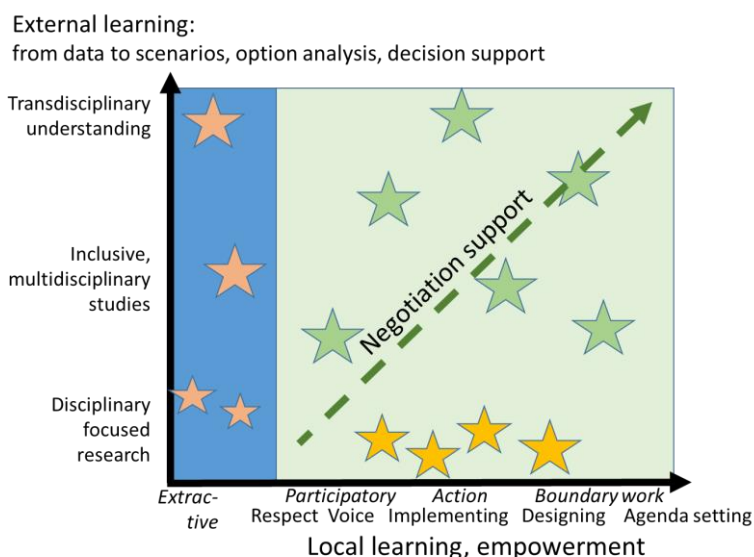


Figure 24.3 Two-way classification of methods in current use for local and external learning, with opportunities to enhance both¹²

- 4.1 **Assessing Capacity Needs of Communities.** This can be achieved through a workshop-based methodology designed to explore individual groups' knowledge, skills, strengths, weaknesses, opportunities, threats, assets and other elements of the rural space that constitute the organizations' enabling environment. The workshop is designed based on an appreciative inquiry process, and prioritizes the use of participatory learning methods. Appreciative inquiry is a four-stage approach that encourages participants to identify their strengths and focus on what they can achieve. This workshop takes participants through three stages of appreciative inquiry: discovery, dreaming and design. A final fourth stage, destiny, is to be realized by participants following the workshop, in the subsequent stages of the Strengthening Rural Institutions Model. Throughout the workshop, participatory methods such as group discussions and presentations allow participants to highlight common challenges they face, identify their stakeholders and give an indication of how they perceive the roles and importance of these stakeholders. The use of role plays highlights the importance of participation in group activities, communication among members, gender roles and the risks posed by dependence on external assistance¹³.
- 4.2 **Rural Resource Maps,** a part of Rapid Rural Appraisal Toolkits¹⁴, can be used to engage the community in identifying and analysing the current state of natural resources, conflicts, management challenges, and untapped potential.
- 4.3 **Participatory Decision Trees¹⁵** can be deployed to establish suitability of PES schemes for local contexts.
- 4.4 **Stakeholder Rainbow Diagrams** can be used to establish the degree of affecting or being affected of various stakeholder groups by the PES schemes¹⁶.
- 4.5 **The Talking Toolkit** assists in running focus-group discussions with farmers and other village members by development workers, extension workers or other intermediaries. These are interdisciplinary and participatory tools that can be used in villages in the early stages of developing locally appropriate solutions for agriculture, agroforestry and forestry. They include ways of mapping issues in a village, carrying out household surveys, identifying hazards and finding solutions¹⁷.

- 4.6 **5 Capitals tools** help users understand critical development issues, such as the extent to which pre-existing asset endowments determine the outcomes of value-chain development, the relationship between asset building at enterprise and household levels, and the role of market, political and institutional factors in facilitating or hindering favourable outcomes of a scheme. The methodological framework underlying 5 Capitals helps users separate the changes caused by interactions and interventions in value chains from those induced by the overall context. The tool typically facilitates learning about the potential of value-chain development (VCD) to strengthen rural livelihoods and improve business performance. Learning is derived from measuring and observing changes in various assets managed by smallholder households and the enterprises with which they have direct contact. These smallholder-linked enterprises play a critical role in linking smallholders to markets¹⁸.
- 4.7 **Mapping the Potential of New Technologies/Innovations** tool can be adapted and used for assessing what technological innovations could work best where.
- 4.8 **Negotiation-support Toolkit for Learning Landscapes** can be used to equip various stakeholders in understanding their own position vis-a-vis other stakeholders in dealing with critical environmental issues¹⁰.
- 4.9 **Guide for Developing the Local Natural Resource Management Plan** is intended for facilitators and development workers involved in natural resource management (NRM) planning and implementation. This can help interested intermediaries and stakeholders to prepare a local NRM plan to better protect and manage natural resources important to them. Through a locally developed NRM plan, communities are guided by a shared practical vision and set of strategies and priorities. The plan will guide them on how to optimize limited manpower and budgets in order to manage local natural resources better. As a result, stakeholder communities can be more effective in protecting their remaining forests and water supply, rehabilitating degraded upland areas, improving farm productivity, and expanding rural income opportunities¹⁹.
- 4.10 **The Stakeholder Approach to Risk informed and Evidence based Decision making (SHARED)** is a process-based approach comprising four inter-related phases, applied on a case-by-case basis. These are tailored to the specific context of decision makers, stakeholders and resources. Working with the local governments in Kenya, the ICRAF SHARED team has integrated technical and human resources with the development of tools to support informed decision making at various scales, including community levels. <http://www.worldagroforestry.org/SHARED/>.
- 4.11 **Landscape Leadership Course** aims at helping the staff of intermediaries, and other key stakeholders in landscapes, to identify and connect with relevant stakeholders in and around their respective landscape, analyse their situations and design and facilitate participatory, innovative processes. The course is aimed at developing the participants as landscape leaders through cutting-edge knowledge and resources, delivered both in online sessions and through the provision of a catalogue of materials for offline use. These sessions and supporting materials are tried-and-tested in real-world environments and packaged by experienced leadership and landscape experts.
- 4.12 **Ecosystem-service Friendly Land-use System Analysis** may have to start with clarifying to all involved parties how the various subsystems interact, with a wide range of potential 'ecosystem services' as a starting point (Box 24.1). Role-play games such as developed in the RUPES programme^{20, 21, 22} allow the consequences of poorly defined conditionality to become clear to all involved.



Interactions during a RUPES game implementation where a 'village' discusses how to respond to offers from on one hand logging and oil palm companies to convert their land, and from PES agents who offer support for conservation oriented scenarios during the CDI-CIFOR-ICRAF landscape course in 2016. Photo: World Agroforestry Centre/Meine van Noordwijk

These tools are tentatively mapped against capacity gaps mentioned earlier in Table 24.1.

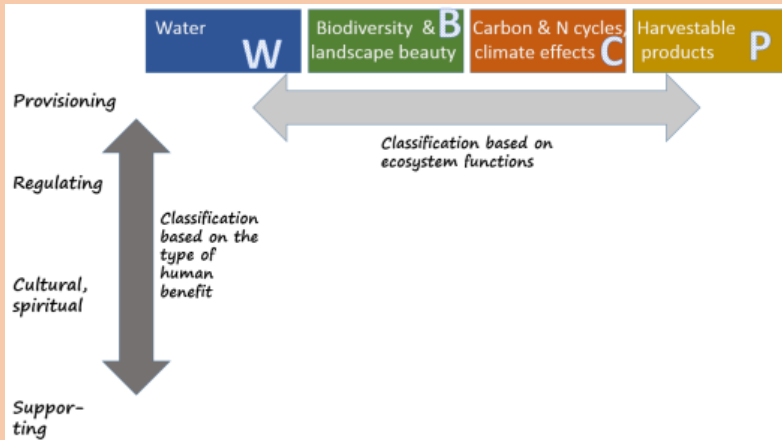
Table 24.1 Tools available for addressing capacity gaps in PES (compare Figure 24.2)

Capacity gap	Tools to address gap
Goal setting	4.2, 4.3, 4.5, 4.11, 4.12
Monitoring	4.2
Information access and use	4.11
Negotiation	4.3, 4.8, 3.12
Learning and adaptation	4.5, 4.7
Awareness of roles of parties	4.1, 4.4, 4.8
Awareness of broader NR governance	4.1, 4.10
Conditionality of rewards	4.12
Institutional readiness	4.9

Various tools have been developed for goal setting, creating awareness of roles of different stakeholders, learning and adapting. Tools for monitoring, developing institutional readiness, accessing and using information are fewer and probably less widely tested. Conditionality, which is given as a key characteristic of PES, does not have a specific tool, but its relevance has emerged in the RUPES role-play game²⁰.

Box 24.1 Two-way Classification of Ecosystem Services

In Chapter 2, two ways of classifying Ecosystem Services were introduced: one based on the key resources (water, biodiversity, carbon and nitrogen cycles, productivity), and another on the type of human benefit (provisioning, regulating, cultural and supporting functions). The following exercise, best done in small groups, is meant to explore the relationship between these two perspectives, by placing cards representing services in a 4-by-4 matrix.



Now, please consider a set of ecosystem services (or aspects of landscapes that are somehow related to ES):

Many aspects of 'ecosystem services'

Fish in lakes & rivers	Pest and disease control in plants, live-stock and humans	Restoration of soil fertility (physical, chemical and biological dimensions).	Existence value of wildlife
Drinking, domestic & industrial water supply	Waterfalls, white-water rivers, lakes, other recreation opportunities	Production of crops, trees, livestock, fish and derived products such as medicines	Reduce the footprint of products: less GHG emissions, higher C stock due to land use
Hydropower	(Semi-) domesticated flora and fauna, incl. "bushmeat", mushroom	Evolutionary services of continued adaptation	Pollination of crops
Avoided siltation of reservoirs	Reducing anthropogenic climate destabilization	Hydrological cycle, restoring soil water storage and infiltration	Facilitating production of crops, trees, livestock, fish via buffered climate, water, biotic relations
Ecotourism as business opportunity	Plant dispersal agents and agency	Social relationships from shared rules and responsibilities for emission reduction	Carbon and Nitrogen cycles in terrestrial systems, interacting with atmosphere and oceans and biota
Water for Irrigation agriculture	Coral reefs protecting coast from waves	Soil structure enhancement from increased soil organic matter	Forest products (timber and non-timber) and other wild harvests
Avoided floods and droughts	Mangroves as spawning grounds for fish		
Sacred forests and spiritual retreats	Fish eating mosquito larvae, stopping Malaria		
Hydro-climatic effects of vegetation	Coral reefs as ecotourism attraction		
Landscapes as ecotourism objects			
Species and gene pool for future use			

The exercise consists of the following steps:

1. Print a copy (e.g. on a sheet of A4-sized paper) of the 32 services, and cut them into separate cards. Also print the matrix (or draw a 4-by-4 one on a larger sheet of paper);
2. Consider each of the 32 service cards and make sure the group has a common understanding of what they mean (if you want: in the local context);

- Place each card in the most 'fitting' cell of the table, and make sure it sticks there

	Water W	Biodiversity & B landscape beauty	Carbon & N cycles, climate effects C	Harvestable products P
Provisioning				
Regulating	Please place the 32 'services' in this 4 x 4 matrix			
Cultural, spiritual				
Supporting				

- Count the totals per row and column and report to the larger group for comparison;
- Report the borderline cases (e.g. is 'fish' linked to water, biodiversity or productivity?), and explore which cards were interpreted differently between subgroups;
- Group / individual Debate arguing for and against the statement "the classification of ES is an art rather than a science", exploring how local context rather than generic rules can determine the higher-level categories P, R, C) to which specifics (such as fish in the river) are assigned.
- Further steps** (enrichment):
 - Repeat the exercise with a specific landscape in mind, add new cards where relevant and omit cards that are not relevant
 - Select the 7 services that you expect to be most relevant for each of three audiences: local farmers, a district government and the national agency reporting on the Sustainable Development Goals (SDG's)
 - Which 10 services might be the most relevant for further analysis, quantification and valuation in your specific context?
 - Go back to the set of 28 cards and classify them according to a two-by-two table:

	Excludable (access can be withheld from non-payers)	Non-excludable (global access includes 'free-riders')
Non-sharable (use affects availability to others)	I. (private)	III. (common pool)
Sharable (use does not affect availability to others)	II. (club)	IV. (public)

- Discuss: What are the consequences of this classification for expectations of private versus public investment in the various ES? Can a given ES be 'repackaged' to move from categories III and IV to categories I and II to make market- and club-based investment feasible?



Farmers, scientists and government officials sharing knowledge on water infiltration and litter layer dynamics in a mixed coffee garden, discussing implications for watershed services. Photo: World Agroforestry Centre/Meine van Noordwijk

24.5 Conclusion

The PES and PES-like contracts require communities to be strongly involved in implementation and monitoring of such contracts as a party. Often intermediaries are required to raise community awareness and capacitate individuals and institutions. Intermediary organizations' critical support role in such projects and programme needs to be that of a 'partner and supporter' and not that of an 'executor'.

It is also important that prior to the design and implementation, the community's consent to participate is secured, without any pressure or imposition through their existing institutions.

Community capacity needs to be critically assessed for the PES and PES-like arrangements, and capacity-related interventions need to be based on the findings of such assessments. Intermediary organizations may not always have the necessary tools, approaches and methodologies. On the other hand, several such resources are available as international public goods and can be accessed through the internet. They may not always be suitable for a direct use into PES projects beyond those where these were developed, but offer potential for adaptation and inspiration to support the work of intermediary organizations. This chapter has pointed to a number of methodologies and tools that can inspire and guide the work of intermediary organizations in making PES programmes successful.

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