

Key messages, summary and recommendations

Key messages

1. Forests provide critical environmental services. Tropical forests, in particular, are giant carbon dioxide “vacuum cleaners” and manufacturers of renewable biomass, and they also protect vital water catchments, harbour a large part of terrestrial biodiversity and help regulate regional climates.
2. Many users of tropical forest environmental services pay little or nothing for them. The absence of adequate payments for environmental services increases the vulnerability of many tropical forests to degradation and conversion to more profitable land uses.
3. There are now many successful examples of schemes to compensate tropical forest owners and managers for environmental services. Some of these PES schemes are national, but most are still at a relatively small scale.
4. By providing forest owners and managers with income and increasing the economic competitiveness of SFM, PES schemes can help alleviate rural poverty, reduce tropical deforestation, stimulate the rehabilitation of degraded forestlands, and increase the adoption of SFM.
5. Overall, however, PES schemes are not having the desired impacts in the vast majority of tropical forests that are vulnerable to deforestation and degradation, and they are benefiting only a few of the many millions of forest peoples and other owners and managers. Action is needed, therefore, to scale up PES.
6. Currently there are more sellers than buyers of the environmental services provided by tropical forests. There is a need to increase demand, develop formal markets with the engagement of the private sector, and increase the availability of secure, sustainable financing by creating an enabling environment.
7. Indigenous peoples, local communities and private forest owners should be able to participate in schemes to pay for tropical forest environmental services as entrepreneurs rather than simply as passive receivers of compensation. PES schemes should promote gender equality, ensure the participation of all stakeholders and encourage employment creation, especially among young people.
8. To be successful and sustainable, PES schemes should use inclusive processes and sustainable practices, be transparent and accountable, and have robust and transparent institutional frameworks and enabling policies, and their benefits should be accounted for.
9. Forum participants agreed on the need to:
 - Better quantify and value the environmental services provided by tropical forests through scientifically sound studies with the aim of increasing the effectiveness of PES schemes.
 - Work together to raise awareness of the importance of environmental services, the role of tropical forests in providing such services, and the necessity of paying for such services.
 - Create enabling conditions at all levels to increase demand and develop markets for PES.
 - Increase collaboration and exchange on PES experiences, options and support for scaling them up, including through south–south and triangular cooperation and by tapping the convening power of international organizations such as ITTO and FAO.

Summary and recommendations

This international forum explored how payments for the environmental services provided by tropical forests can support forest owners and managers to increase incomes and manage forests sustainably.

Costa Rica hosted the forum because of its groundbreaking experiences in innovative payments for environmental services. The forum was co-organized by ITTO, FAO and FONAFIFO. More than 150 people from 60 countries attended from governments, regional and international development partners, civil-society organizations and the private sector. The following is a summary of the key points raised in presentations, background materials and discussions, and of the recommendations that emerged.



Forest environmental services perform a range of functions, such as protecting stream and river channels and coastal shores from erosion.
Photo: R. Carrillo/ITTO

The need for payments for tropical forest environmental services

- Tropical forests provide many critical environmental services, especially by protecting water catchments, sequestering carbon and conserving biodiversity.
- However, many people who benefit considerably from tropical forest environmental services—such as urban dwellers, big industry and developed countries—pay little or nothing for them, with the result that tropical forests are often undervalued compared with alternative land uses, leading to forest degradation and deforestation.
- Action is needed, therefore, to increase the financial remuneration for tropical forest environmental services as a means of reducing and reversing forest degradation and deforestation and rewarding forest owners and managers for good forest stewardship. Such remuneration is usually referred to as payments for environmental services (PES).



Tropical forest environmental services maintain biodiversity.

Photo: R. Carrillo/ITTO

- There are many functioning PES schemes in tropical forests. Costa Rica's scheme, for example, arose after catastrophic deforestation reduced forest cover to 21% of the national land area. The introduction of a PES scheme in 1997, in which landholders are paid to retain forest, contributed to an increase in forest to the current 52.4% of the land area.
- An estimated US\$1.25 billion was paid for various forest environmental services in 42 developing countries in 2011, most (US\$1.11 billion) of which was for watershed protection. The total area covered by these PES projects is estimated at 117 million hectares.² Not all these data are for tropical forests, but there are indications that

PES schemes are beginning to generate financial flows over significant forest areas in some tropical countries.

- Not all compensation for environmental services is financial. Some environmental service providers may obtain greater benefits from increased tenure security, for example, or from in-kind compensation such as grain to enhance food security. PES also offers opportunities for positive “branding” that might have sufficient value (for a company or a country) to justify long-term investment in PES schemes.

PES for SFM

- PES can help increase the economic competitiveness of SFM by assigning a financial value to previously unmarketed forest benefits. Often there is a considerable gap between the income that can be earned from SFM compared with that obtainable from certain agricultural land uses (such as pineapple-growing, in the case of Costa Rica), known as the opportunity cost. PES can help bridge this gap.
- Properly developed forest management plans can be effective mechanisms for SFM, and their implementation can help ensure the maintenance of tropical forest environmental services. Specifically, there is convincing evidence that timber harvesting in tropical forests applied using SFM principles causes a relatively small loss of carbon compared with deforestation and “conventional” logging, especially when the wood is used for long-term purposes, and that the lost carbon is quickly reabsorbed by the regrowing forest, indicating a sustainable system of carbon storage. There is also strong evidence that the harvesting of timber and non-timber products applied under SFM conserves most forest biodiversity and protects watersheds.
- Timber certification is a way of paying for the services protected or enhanced by good forest management, assuming that such payments can be included in the price of timber. However, the market price of certified timber is rarely significantly higher than the price of uncertified timber, indicating a current low willingness of consumers to pay for forest environmental services through this mechanism or a lack of awareness among consumers of the importance of doing so. The primary benefit provided by certification is access to markets, rather than a price premium. Additional PES mechanisms that focus on environmental services can contribute to the competitiveness of timber from SFM.
- In countries where PES is already an important policy tool for implementing SFM, there is evidence that such schemes are producing significant socioeconomic outcomes. For example, they can provide “bridge financing” to enable communities to pursue other income-generating activities. Local-level PES schemes

² Source: Payments for environmental services (PES) of tropical forests: a brief review of current approaches. Background paper for the International Forum on Payments for Environmental Services of Tropical Forests, San José, Costa Rica, 7–10 April 2014.

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Properly developed forest management plans can be effective mechanisms for SFM, and their implementation can help ensure the maintenance of tropical forest environmental services.

Photo: J. Malleux/ITTO

can be part of broader strategies for climate-change mitigation and adaptation.

- Nevertheless, there is a lack of robust studies on the effectiveness of PES in achieving conservation outcomes, although there is plentiful circumstantial evidence. Globally, the value of PES is dwarfed by, for example, the income generated by timber or agricultural products.
- PES schemes should be sufficiently broad and flexible to encompass the environmental services provided by the full continuum of forests and trees in landscapes. This requires much more intersectoral interaction and cooperation than is evident in most PES schemes to date.
- PES schemes can be particularly effective if they are incorporated within a sustainable development model that integrates ecological, poverty-reduction and economic objectives across sectors and value chains.

Developing innovative financing mechanisms

- In many existing PES schemes, the supply of environmental services far outweighs demand and, in the case of government-funded schemes, the availability of funds. Increasing capacity to assess and value environmental services provided by SFM could help stimulate investment in PES schemes by demonstrating their benefits.
- PES schemes will not succeed if there is no buyer for the environmental services. Even when there is demand, however, PES schemes may fail if there is: a lack of coordination or collective action among environmental service providers; no enabling institutional framework; or cultural or political resistance. PES schemes may also struggle to be

effective if compensation is considerably lower than the opportunity cost of foregoing other, more profitable land uses. Financial mechanisms should have clear rules, transparent oversight and political legitimacy.

- PES schemes may be voluntary or compliance-driven. The users of environmental services might choose to invest in PES as a cost-effective way to secure key inputs (voluntary schemes), or regulations might require them to do so (compliance-driven schemes). In the latter, it has been shown that governments can stimulate demand through regulations that “change the rules of the game”.
- PES is a mechanism by which companies can achieve corporate social responsibility objectives. There is an opportunity for governments to encourage large corporations to make bigger contributions to PES, if necessary through regulation.
- The key to the success of PES schemes (either voluntary or compliance-driven) is a clear demand for environmental services and the capacity of providers to supply them. Suitable financial mechanisms are most likely to emerge when these conditions exist.
- Most PES markets are currently weak, and the prices for environmental services (for example, in markets for greenhouse gas emission reductions) are uncertain, diminishing the interest of investors in PES schemes. Moreover, subsidies for agriculture and other land uses continue to devalue forests as a land use. Efforts are needed to stabilize, strengthen and diversify financing mechanisms for PES, account for the benefits provided by PES schemes, and create an enabling environment for PES investment.
- The private sector is likely to be interested in PES schemes when the benefits are clear, the risks can be estimated with reasonable certainty, monitoring and compliance are tracked, and schemes are economically efficient. Intermediary organizations can facilitate private-sector involvement by providing flexible investment options and increasing confidence in PES outcomes.
- The most critical and difficult issue in scaling up PES initiatives is a lack of functioning markets, the underlying cause of which is a lack of awareness among users of the need to pay for their use of environmental services, or, if such awareness exists, a lack of a willingness to pay. Converting “free riders”—users of environmental services who do not pay and cannot be excluded from use—into buyers is arguably the single biggest challenge of PES schemes. Effective communication about PES benefits could help increase the interest of potential buyers.
- PES schemes are increasingly marketing services either in merged “bundles” or on an individual service basis with the aims of increasing revenues and reducing or optimizing transaction costs. Most existing examples of such arrangements are in Latin America, where PES markets are generally more mature, but there is growing interest in stacking and bundling PES in, for example, Kenya, Indonesia, the United Republic of Tanzania and Viet Nam.

Ensuring benefits for local communities

- A joint effort through PES schemes can help build trust between indigenous peoples and local communities, government and the private sector and ensure the application of human rights principles in forests. PES schemes are also a way of acknowledging the valuable role of indigenous peoples and local communities in ensuring forest health.



Indigenous peoples, local communities and other forest owners should be active participants in PES schemes as resource owners, rights holders and entrepreneurs rather than as passive receivers of compensation.

Photo: N. Kingman

Establishing robust governance and institutional arrangements

- Nevertheless, there is a risk that poorly conceived or implemented PES schemes, especially top-down schemes, can violate the rights of indigenous peoples and local communities. Safeguards such as the right to free, prior and informed consent should be built into all PES schemes and honoured.
- Secure tenure—of land, forests and environmental services—is a precondition for successful PES. Who owns the environmental services of a particular forest or landscape may be determined by legislation or contractual arrangements, or it may be implied, but clarity is needed if financial mechanisms are to function successfully. Overlaps between statutory and traditional tenure must be resolved transparently and fairly.
- Indigenous peoples, local communities and other forest owners should be active participants in PES schemes as resource owners, rights holders and entrepreneurs rather than as passive receivers of compensation. Both women and men play strong roles in resource management, and PES schemes should promote gender equality, including in property rights.
- Considerable effort is required to build capacity in tropical forest communities to implement PES schemes. Given that they are often dispersed and small-scale, such communities may need support from institutions, NGOs or other actors to form cooperatives and other mechanisms to market their environmental services more effectively.
- Another challenge for PES schemes is to ensure effective coordination between policy measures taken at the national or international level with the efforts of local entrepreneurs to market the environmental services provided by their forests. Top-down approaches must be complemented by bottom-up approaches, and methods are needed to mesh the two approaches.
- At all levels, good governance in PES schemes requires knowledge of the stakeholders involved, the forest practices required, the appropriate institutional mechanisms, and accountability.
- To develop an effective legal and institutional framework for a PES scheme, understanding is needed of the impacts of forest users on the provision of the environmental service(s) and the characteristics of the service providers, such as whether there are many small-scale or a few large-scale providers.
- Flexibility is critical in the development of PES schemes. Each stakeholder and owner is different, and a variety of payment mechanisms and means should be offered to accommodate such differences. The best way to determine the most effective approaches is to work closely with stakeholders through, for example, multi-stakeholder forums. Capacity building and funding may be required to ensure effective participation in such forums by marginalized people and groups.
- More research is needed on the effectiveness of different institutional arrangements and their costs. In general, however, the best arrangements are likely to be developed with an adequate understanding of local conditions and when they are transparent and easily adapted to changing circumstances.
- Many governments are centralizing the tenure of environmental services, especially emission reductions, but this has potentially serious implications for social cohesion, equity and the effectiveness of interventions. Devolving such tenure offers possible win-win situations for governments, communities and the private sector as well as the potential to better adapt international frameworks to domestic situations.
- In most situations, PES schemes are unlikely to fully finance SFM, so broader business models are needed that include other revenue-generating activities for environmental service providers. PES schemes can act as platforms to support market development and revenue diversification. Increasing the value of forests as a land use will, in turn, make PES more effective.
- Establishing and managing strong, viable, long-term PES programs requires substantial institutional strengthening. Key enabling institutional elements include: well-defined property rights; codes, standards and other legal structures that reduce risk and uncertainty; inclusive policies; and appropriate multi-stakeholder platforms and institutional structures that allow PES to be mainstreamed in national planning and financial decision-making.

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- There are excellent long-term examples of payments for water catchment protection financed by water users. The City of Yokohama's scheme, which has been in place for nearly 100 years, fully finances the management of its water catchment by a charge levied on water use by its citizens. This charge is mandated by law and ensures sustainable and predictable funding from users, and awareness-raising programs are implemented to maintain user support for the legal framework. A range of support measures is provided to local communities to ensure the sustainable management of all forests in the catchment.

Recommendations

Proponents of PES schemes are encouraged to:

- Understand the dynamics of the communities with whom they are working and acknowledge, respect, support and accommodate the wide cultural diversity present in most forest environments.
- Assist forest owners and managers to develop and implement forest management plans to maintain forest environmental services, and include measures to assess the effectiveness of PES in the design of PES projects.
- Build in—and honour—safeguards to PES schemes to protect the rights of indigenous peoples and local communities.
- Improve the business climate for PES schemes, such as by reducing transaction costs, ensuring that payments are made in a timely manner, promoting entrepreneurship along the value chain, and continually providing information to society with the aim of increasing payments for goods and services from sustainable forestry.

Governments, civil society, the private sector, donors, academics and PES providers and users are encouraged to work together to:

- Quantify and value the environmental services provided by tropical forests and the outcomes of PES schemes through scientifically sound studies with the aim of increasing the effectiveness of PES schemes.
- Raise awareness of the importance of environmental services, the role of tropical forests in the provision of such services, and the need to pay for them. Important messages to convey include:
 - Tropical forests protect vital water catchments and biodiversity and help regulate regional climates.
 - Tropical forests are giant carbon dioxide “vacuum cleaners” and manufacturers of renewable biomass.
 - Tropical forests are life-support systems for present and future generations.
 - SFM is a means of ensuring the long-term maintenance and enhancement of environmental services in tropical forests.
- Create enabling conditions at all levels to enhance PES.
- Promote south–south and triangular cooperation and other collaboration and exchanges on PES experiences and options and provide support—such as seed funding and capacity building—for scaling up PES.
- Conduct robust studies on the effectiveness of PES in achieving conservation and sustainable-development objectives and the effectiveness and cost of different institutional arrangements for PES.



Promote collaboration and exchanges on PES experiences and options, especially south–south cooperation. Photo: Gerardo Sánchez V., INECOL, Casasola/El Instituto de Ecología

Donors are encouraged to:

- Prioritize PES funding to helping start up PES schemes with seed funding.

International organizations are encouraged to:

- Help document and promote experiences on PES, develop appropriate financial mechanisms, build capacity in the delivery of PES schemes in tropical forests, and provide appropriate technical support, including through the possible creation of a global facilitating “platform”.
- Use their convening power to inform policy development and promote action on PES in tropical forests.
- Promote policies in other economic sectors to internalize the cost of environmental services with the aim of increasing the size of PES markets.

Expression of appreciation

Forum participants expressed their:

- Appreciation for the warm hospitality of the Government of Costa Rica and gratitude to ITTO, FAO and FONAFIFO for convening the Forum.
- Hope that Costa Rica's exemplary leadership on payments for the environmental services provided by tropical forests will inspire initiatives in other countries.
- Commitment to share information and experiences on PES with the aims of improving the livelihoods of forest-dependent people and increasing the application of SFM in the tropics and worldwide.

These key messages, summary and recommendations were developed by the conference organizers and do not necessarily represent the official positions or views of the member states of ITTO or FAO.

All presentations and speeches from the Forum, details of speakers, videos and other materials can be downloaded at www.fao.org/forestry/84884/en/.

