



KATOOMBA ISSUE BRIEF

Payments for Ecosystem Services in Vietnam's Mangrove Forests

This brief summarizes research by the Katoomba Group's Legal Initiative into key barriers to and opportunities for payments for ecosystem services in Vietnam's mangrove forests.¹

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At the intersection of land and sea, mangrove forests provide a wealth of ecosystem services: sequestration of carbon; mitigation of storms, floods, and erosion; provision of forest products; processing of waste and nutrient pollution; and habitat for aquatic and terrestrial species. For people living in coastal areas, these ecosystem services are key to their way of life in every sense, providing income, subsistence, and natural protection from high winds and waves. Yet, in Vietnam as in many other areas of the world, short-term development needs are undermining long-term benefits from standing mangrove forests as the pressures of large coastal populations drive mangrove loss. Fortunately, compensation for conservation and restoration can potentially help reverse this trend.

In 2010, the Katoomba Group's Legal Initiative launched a study into the use of payments for ecosystem services (PES) to generate conservation-based revenue in mangrove areas. The study was undertaken with Vietnamese analysts as well as partners at the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)² and the Netherlands Development Organisation (SNV), with financial support from the Norwegian Agency for Development Cooperation, the Gordon and Betty Moore Foundation, the Australian Government Aid Program, and United Nations Development Programme's Global Environment Fund.

In theory, PES provide new revenue streams that incentivize mangrove conservation and encourage sustainable development in sensitive mangrove areas. Particularly promising in Vietnam are payments to mangrove managers for carbon sequestration, storm and flood protection, and aquaculture support.

This brief summarizes key barriers and opportunities for PES in Vietnam's mangrove areas.

¹ Slayde Hawkins, et al. 2010. *Roots in the Water: Legal Frameworks for Mangrove PES in Vietnam*. Katoomba Group's Legal Initiative Country Study Series. Forest Trends: Washington, DC. Available at www.forest-trends.org/vnmangrovepes.

² In 2011, GTZ combined with Deutscher Entwicklungsdienst (DED), GmbH, and Insent – Capacity Building International Germany, to form Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), a federally-owned German enterprise.

CHALLENGES AND OPPORTUNITIES

The existing policy and institutional context in Vietnam can provide the requisite certainty for PES to occur. Furthermore, emerging policy changes such as the newly issued decree 99 on payments for forest ecosystem services appear to make additional progress in this regard. Most importantly, mechanisms exist at national and provincial levels to allocate mangrove rights and benefits to local people, either directly or via a management board or other government body.

However, challenges to successful PES remain, most notably related to: (1) high opportunity costs, (2) coordination and management difficulties, and (3) stakeholder capacity.

Overcoming High Opportunity Costs

Opportunity costs, or the forgone profit from alternative activities, are particularly high when mangrove conservation or restoration competes with aquaculture, highly profitable fishing operations, or industrial and residential development. High opportunity costs make it difficult for PES to tip the balance away from harmful development activities.

Options to avoid or mitigate high opportunity costs include:

- Prioritizing the use of PES where the primary drivers of mangrove loss have low economic returns and therefore have low opportunity costs. Opportunity costs may be low, for example, where fuel wood gathering or subsistence fishing drives mangrove loss.
- Combining PES with other conservation-friendly sources of revenue like ecotourism, mushroom cultivation, or the sale of sustainably harvested non-timber forest products.
- Capitalizing on the value of multiple mangrove ecosystem services (e.g., carbon, storm protection, and aquaculture support) in connection with the same mangrove conservation or restoration activities.

Finding Clarity in Mangrove Management and Regulation

Regulatory and management challenges in Vietnam's mangrove areas include weak official management and oversight, poor coordination among relevant ministries and departments, and overlapping tenure rights and claims, for example where protected areas have been established without regard for existing rights. In many cases, the division of authority over mangroves between the natural resources and environment departments (which are responsible for managing the land) and the agriculture and rural development sector (which is responsible for managing forests and trees) is unclear, subjecting mangrove activities to layers of inconsistent and conflicting legal requirements and leaving regulatory gaps.

Options to minimize regulatory and management challenges include:

- Working within emerging collaborative state or regional mangrove management plans, such as co-management model being tested in Kien Giang, Nghe An, and Xuan Thuy National

Park. These programs create a structure for coordinating the activities and goals of various authorities and sectors in mangrove areas and for balancing economic development with mangrove conservation.

- Implementing screening criteria identify PES opportunities where tenure is clear and/or regulatory authority is more certain and less controversial.
- Using open, transparent consultations with stakeholders and authorities during planning stages to identify specific challenges and necessary steps to gain clarity.

Building Local Capacity for Mangrove Management and Sustainable Development

Capacity building is needed at multiple levels. Because there is no government department with exclusive responsibility over mangroves, expertise in mangrove regulation and management must be developed and consolidated across various provincial and national departments. At the local level, the authorities responsible for direct outreach, deployment of new management techniques, allocation of mangrove use rights, and regulatory enforcement need to understand their options and obligations under relevant laws and regulations.

Increased capacity is important for local people as well. Local households and enterprises may have a limited awareness of legal limitations on land uses in mangrove areas; they may also lack an understanding about the value of mangroves or the effect of their activities on mangrove ecosystems and may need training or additional support in order to pursue alternative livelihood activities in mangrove areas. Furthermore, local people affected by a program or project must fully understand its requirements and implications before they can give free, prior, and informed consent.

Therefore, it will be important to incorporate capacity-building activities into mangrove PES or conservation initiatives to enhance regulatory and enforcement capabilities, engage local people, and increase compliance with land-use restrictions and mangrove protection measures. Capacity building could include, for example:

- Workshops for stakeholders describing their rights and responsibilities as well as key aspects of the planned program and providing opportunities for stakeholder input.
- Training in alternative livelihood activities, like mushroom cultivation and marketing.
- Creation of a resource center to maintain information about mangrove conservation, PES, the proposed initiative, and/or training resources in a central location.

LOOKING FORWARD

Addressing challenges to the successful use of PES in mangrove areas will require a range of approaches that are adapted to local circumstances and take into consideration drivers of mangrove loss, local law and politics, and socio-economic conditions.

Today, pilot programs and projects are being implemented around the country and will provide valuable lessons for the future use of PES in mangrove areas. For example, two province-level pilot programs, in Kien Giang and Thanh Hoa, are likely to provide particularly useful insights as they each explore a type of in-kind compensation for ecosystem services. For details, see boxes below.

Box 1: Pilot program for In-Kind Compensation for Ecosystem Services in Kien Giang – Comprehensive Mangrove-Use Planning & Increased Mangrove Land Allocation

The approach being tested in Kien Giang province under the 7:3 policy allocates long-term mangrove use rights while requiring landholders to observe land-use restrictions and maintain 70% of allocated land under forest cover. Land-use restrictions apply to various activities, such as tree-cutting and aquaculture, and vary depending on the type of mangrove forest present. Increased land allocation creates income opportunities for local people while minimum forest cover requirements ensure continuing mangrove conservation.

Box 2: Pilot Program for In-Kind Compensation for Ecosystem Services in Thanh Hoa – Co-Management, Conservation Zoning, and Integrated Natural Resource Management

Mangrove co-management, as deployed in Thanh Hoa province, is built on coordination between all relevant authorities and stakeholders; it determines allowable land uses via conservation zoning and integrated natural resource management. Under this model, local people are granted mangrove use rights, along with the responsibility to observe sustainable management practices. Unlike the 7:3 model, which allows for some development on each parcel of land, conservation zoning is used to define what economic development and subsistence activities may occur in which areas while strictly protecting high-priority mangrove forest.

Such pilot programs provide insights for options to reverse mangrove loss in Vietnam, thereby preserving and enhancing valuable mangrove ecosystem services. Looking forward, it will be important to continue to test promising approaches while taking local circumstances into account in program planning, design, and implementation.

For more information:

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