



Making Environmental Financing Work
Payment for Ecosystem Services

PES

Experiences from the Philippines

Contributing Authors

Raoul Geollegue, Robert Harley, Ann Koontz, Susan Naval,
and Julie Stein



To achieve well-functioning ecosystem services that support poverty alleviation and conservation the old saying it takes a village falls short. It does not take a village but rather it takes a landscape and all its stakeholders. Upland and lowland people working together; donors, government, private sector, communities, NGOs, and academe collaborating; and technical, evidence-based approaches put in the context of local cultures and values. Relief International – EnterpriseWorks Worldwide/Philippines (RI-EWW/P) has been honored to work with a rich diversity of landscape-level stakeholders in the Emerging Champions Project. Each contributed their expertise, viewpoints and resources, but most importantly, a willingness to work with all the other stakeholders to make real progress in sustainably managing ecosystem services vital to everyone's well-being. The women and men that started with RI-EWW/P as Emerging Champions now carry on the work as Champions for Biodiversity Conservation and Improved Ecosystem Services. RI-EWW/P thanks them all and our funders, the European Union and USAID, for their leadership and support.

Special acknowledgements go to Susan Naval, Raoul Geollegue, and the RI-EWW/P Mindanao and Palawan teams. Susan, as Program Director, led us and worked tirelessly to make sure each individual stakeholder's viewpoint and voice were represented and contributed to the successful project outcomes. Raoul, as Technical Team Leader, with his vast expertise, mentored and guided us on the evidence-based realities of the Philippines' forest conditions and what has to happen to restore well-functioning ecosystem services.

We also acknowledge our international payment for ecosystem services (PES) experts, Ann Koontz (Relief International), Rob Harley (BioClimate), and Julie Stein (Wildlife Friendly Enterprise Network), who contributed their global experiences to inform the most promising PES options for the Philippines.

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Section 1

Introduction



“Making Environmental Services Work” provides an overview of the most promising payment for ecosystem services (PES) options and experiences from the Philippines for watershed management, forest carbon sequestration and ecotourism that are integrated with biodiversity conservation. The PES options are based on secondary and primary research as well as pilot applications in Mindanao and Palawan. Lessons learned and recommendations from the Emerging Champions PES pilot activities provide guidance for other stakeholder groups considering PES as a sustainable financing mechanism for conservation.

The Emerging Champions for Biodiversity Conservation and Improved Ecosystem Services Project (ECBCIES or Emerging Champions), led by Relief International – EnterpriseWorks Worldwide/ Philippines (RI-EWW/P), advances integration of environmental sustainability to reduce poverty and address degradation of ecosystems through conservation in key biodiversity areas (KBAs) of the Philippines. Funded by the European Union, with co-financing from USAID, the project was undertaken between 2011 and 2015 in six KBAs of Mindanao and Palawan (see maps). To achieve its overall goal, the Emerging Champions worked to:

1. Strengthen capacity for improved natural resource management and environmental service delivery.
2. Institute better governance and enforcement mechanisms, including watershed management plans, for biodiversity conservation.
3. Broaden opportunities for environmental financing and enterprise development.



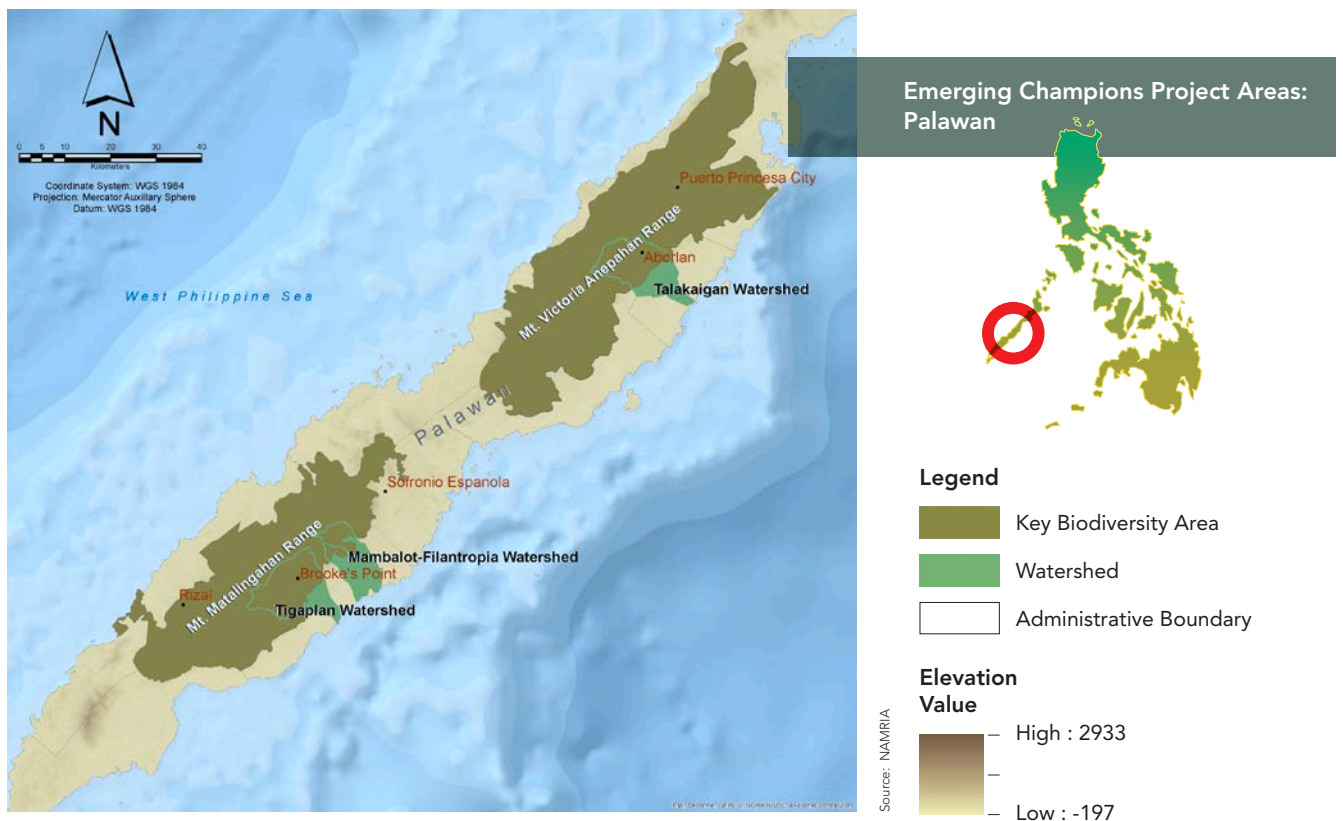
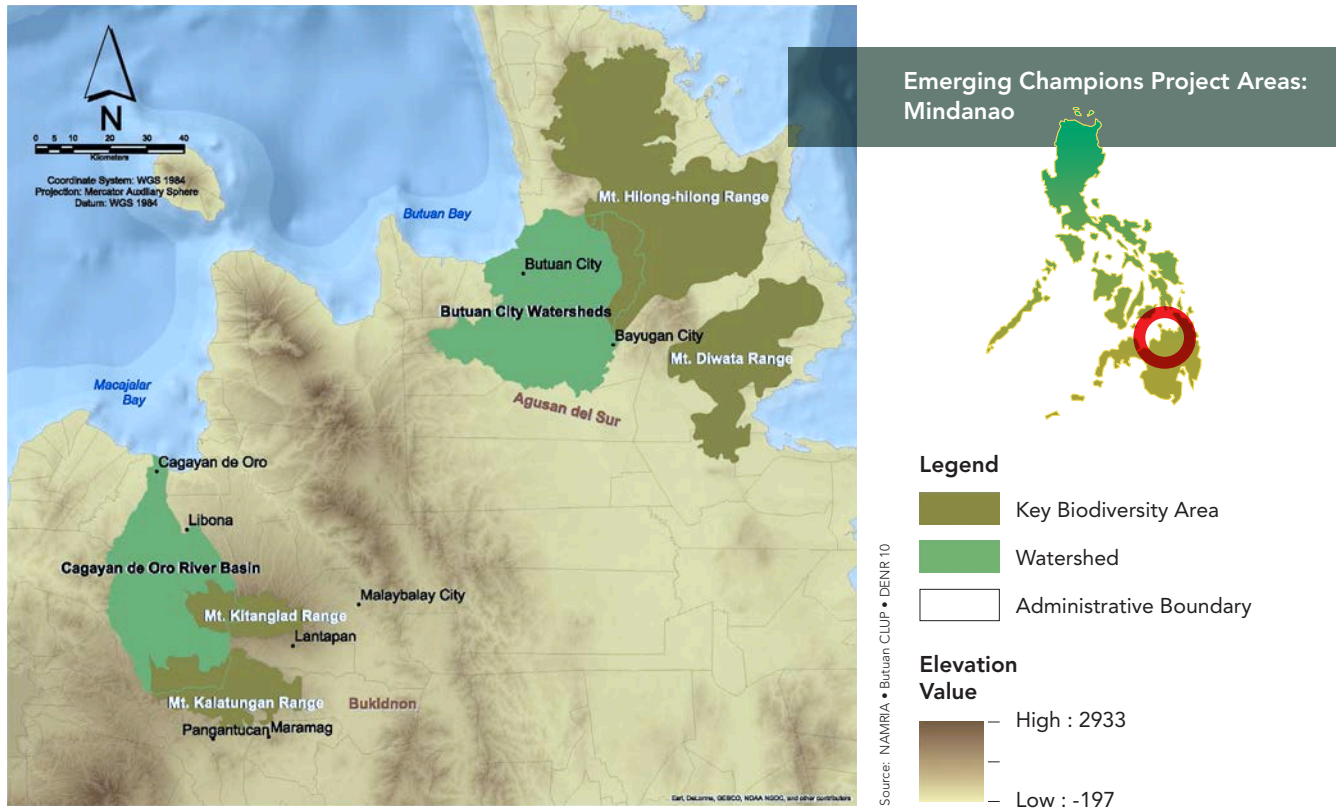
It is in this context that RI-EWW/P introduced payment for ecosystem services (PES) to Cagayan de Oro, Bukidnon, Butuan, and Palawan. RI-EWW/P worked in conjunction with a broad spectrum of Philippine stakeholders to advance PES as a sustainable financing mechanism.

The stakeholders included the:

- Department of Environment and Natural Resources (DENR).
- Local government units in Cagayan de Oro, Bukidnon, Butuan, and Palawan.
- Community based forest management (CBFM) groups, including indigenous people.
- Other People's Organizations, including Bagobuk Marketing Association.
- Private sector, including UNIFRUITI and Del Monte Foundation.
- Local NGOs.
- Academe, including Xavier University, Central Mindanao University, Bukidnon State University.
- Office of the President's Adviser for Environmental Protection (OPAEP).

"RI-EWW/P initiated PES and it is now multiplying in the Philippines, changing our landscape for the better"

– Mindanao Emerging Champions stakeholder.



Section 2

Overview of Payment for Ecosystem Services • PES •

A photograph of two young children climbing a large tree. The child in the foreground is smiling and looking towards the camera, while the child behind them is also smiling. The tree has thick, textured bark and many green leaves. The background is a clear blue sky. The image is used as a background for a text overlay.

Payment for Ecosystem Services (PES) covers a wide variety of arrangements that support people to restore, protect and manage ecosystems. Early ideas of PES focused on valorising and providing economic incentives or financial compensation for environmental protection and management. Over time, the idea of PES has been broadened to include various financial and non-financial forms of support for activities that directly or indirectly help to maintain ecosystem services and enable communities to derive greater socioeconomic benefits.



PES can include cash payments, non-financial, and/or indirect financial forms of support (often referred to as “co-benefits”), which include:

- **Land tenure** - enabling communities to gain secure or greater rights and control over land, forests and other natural resources.
- **Technical assistance** - strengthening the technical knowledge and management capacity of communities so that they can benefit from more productive and resilient ecosystems.
- **Social services** - the provision of community services, such as health care and education, that support economic and social activities and improve community life.
- **Protecting primary livelihoods** - securing ecotourism, fisheries, agriculture and other key livelihoods through water regulation, soil conservation and biodiversity programs, among others.

What these different forms of PES have in common is a transaction: the beneficiaries of ecosystem services provide financial payments and/or non-financial forms of support to agents (in the Philippines’ context, community members) that carry out activities necessary to maintain ecosystem services. If incentives or support are provided in exchange

for ecosystem services, those services must be measured. In theory, PES transactions can be based on a variety of performance metrics corresponding to whatever particular ecosystem services are provided. In reality, however, PES transactions only tend to happen when the services can be measured simply and reliably.

Globally, ecosystem services are classified into four major interlinked categories: 1) Provisioning Services (such as food, water and medicinal resources); 2) Regulating Services (such as water filtration and moderation of extreme climate events, including floods); 3) Habitat or Supporting Services (such as maintenance of genetic diversity and wildlife habitat); and 4) Cultural Services (such as places that provide aesthetic, recreational, sense of place and spiritual experiences).¹ These four categories include dozens of services (bee pollination, clean air, soil quality, etc.) but only a handful of services have been incorporated into a PES mechanism at any significant scale globally. (See Box 1).

Ecosystem services are often mutually reinforcing, and it is possible to generate multiple ecosystem services and benefits by focusing on a limited set of project activities using a variety of ecosystem metrics or approaches to measuring benefits. For example, in the Philippines’ context, a watershed management plan would identify watershed flow services, forest carbon sequestration and forest ecotourism PES opportunities but focus on two major project activities for all three mechanisms: 1) protection of old growth forests and their biodiversity and 2) replanting of denuded forests with integrated agroforestry and endemic forest species. Each PES mechanism would include the metric of number of hectares protected and reforested, with more specific metrics such as tonnes of CO₂ sequestered and specific endangered wildlife conserved, for forest carbon and ecotourism respectively, for example.

Box 1. Ecosystem services most commonly targeted by projects globally

- **Watershed management services:** *Improved water quality and quantity, the regulation of water flows and flood risk mitigation, and reduced sedimentation in lakes and estuaries.*

Water services often depend on improved watershed protection and management, which in turn usually involves actions upstream to restore and conserve forests and improve agricultural land management. Water-related PES services feature a range of strong co-benefits, notably land tenure, livelihoods protection for rural incomes and technical assistance.

- **Forest carbon sequestration:** *Carbon sequestration and the reduction of greenhouse gas emissions.*

These services can be provided by renewable energy, energy efficiency, waste management and other industrial projects, and also by projects that facilitate improvements in the management of terrestrial ecosystems such as forests, wetlands and agricultural land areas.

- **Cultural services:** *Recreation and tourism, for example, made possible by the aesthetic and non-material benefits associated with healthy ecosystems.*

The ability to market and deliver tourism and recreational services frequently depends on the preservation of the natural beauty and wonder of landscapes and ecosystems, and therefore on many of the same activities that ensure the continued provision of other ecosystem services. Conservation of biodiversity, especially diverse habitats that support wildlife, is essential to ecotourism.

- **Biodiversity services:** *Habitat restoration, species conservation and the reduction of biodiversity impacts associated with farming, extractive industries, building and infrastructure development.*

Biodiversity services are often either closely connected with, or the result of, other activities, including watershed protection and management, forest restoration and conservation, improved agricultural land management, and preservation of cultural services. In the Emerging Champions project, biodiversity services are integrated with these PES mechanisms.

-
- **Combined ecosystem services:** *Two or more of the above (or any other ecosystem service) grouped in one transaction.*

With a basic understanding of what PES is along with the most promising subsets of PES globally as well as for the Philippines, we next turn to understanding who are the potential buyers and supporters of PES (See Box 2). PES work globally uses a combination of the funding categories. The Emerging Champions Project tapped into four out of five categories (investment by bilateral and multilateral agencies has not yet been tapped).

At the outset, the Emerging Champions project embraced a broad working definition of PES. Major categories of PES were analyzed, investigated on the ground with local stakeholders and the most promising initiated pilot deals. Watershed management, forest carbon and ecotourism PES were prioritized and approached from a starting point of watershed management plans, environmental enforcement, and stakeholder capacity building activities. All three PES mechanisms emphasized conserving the Philippines' biodiversity and stressed prioritization of key biodiversity areas (KBAs), use of native species in reforestation, and protection of threatened and endangered species. The diversity of stakeholders and economic activities within the watersheds recognized a portfolio of PES approaches would be needed to generate sustainable financing for landscape level watershed management and conservation of the Philippines' KBAs. In the Philippines, given its island geography, the ridge to reef concept (see Figure 1) captures the landscape level ecosystems, species, and economic activities diversity, which provide multiple opportunities for PES.

Sections 3, 4 and 5 summarize trends for each mechanism, experience from piloting in the Philippines, key markets for PES and recommendations to scale



up PES in the Philippines. Section 3 covers watershed PES and how the watershed management planning process was used to bring stakeholders together and identify potential buyers and sellers of water services. Section 4 explores forest carbon PES and the important lesson of deciding not to continue with a PES modality when markets change. Section 5 delves into ecotourism, a very promising area for the Philippines with specific advice on how to tap into international standards and certifications to protect the Philippines' endemic biodiversity and gain a greater ecotourism market share from a very strong and growing market.



Box 2. Major Categories of Funding Support for Ecosystem Services

- **Grants, donations from donors/individuals to enable PES** Development projects to support conservation, climate adaptation, poverty alleviation. Typically used to educate on PES, assess technical potential, develop PES methodology, and build capacity of PES buyers and sellers to engage in sustainable PES mechanisms.
- **Investment by the private sector for specific ecosystem services** Carbon credits, watershed management, biodiversity, social responsibility. Usually done through a company's corporate social responsibility (CSR) or foundation, but tied to core needs of business. For example, sustainable supply of water for agriculture production or protection of endangered species that is key to an ecotourism product.
- **Investment by bilateral and multilateral agencies.** This can include the World Bank, International Finance Corporation, regional banks such as the Asian Development Bank, and United Nations agencies, channeled through national governments or private entities to advance and/or invest in PES.
- **Local tax/fees, revenues and legal rights directed to communities that conserve watersheds and other critical ecosystems needed by a broad range of citizens.** Usually collected from all users of a service (e.g. water supplies) to ensure production side of services is maintained for the benefit of all users.
- **Service/Product buying linked to conservation certification mechanism.** For example, buyers who purchase certified Wildlife Friendly® forest, ecotourism and agricultural products with the expectation that choosing certified products over non-certified products protects endangered species and their habitats.



Figure 1. Philippines Landscape Level

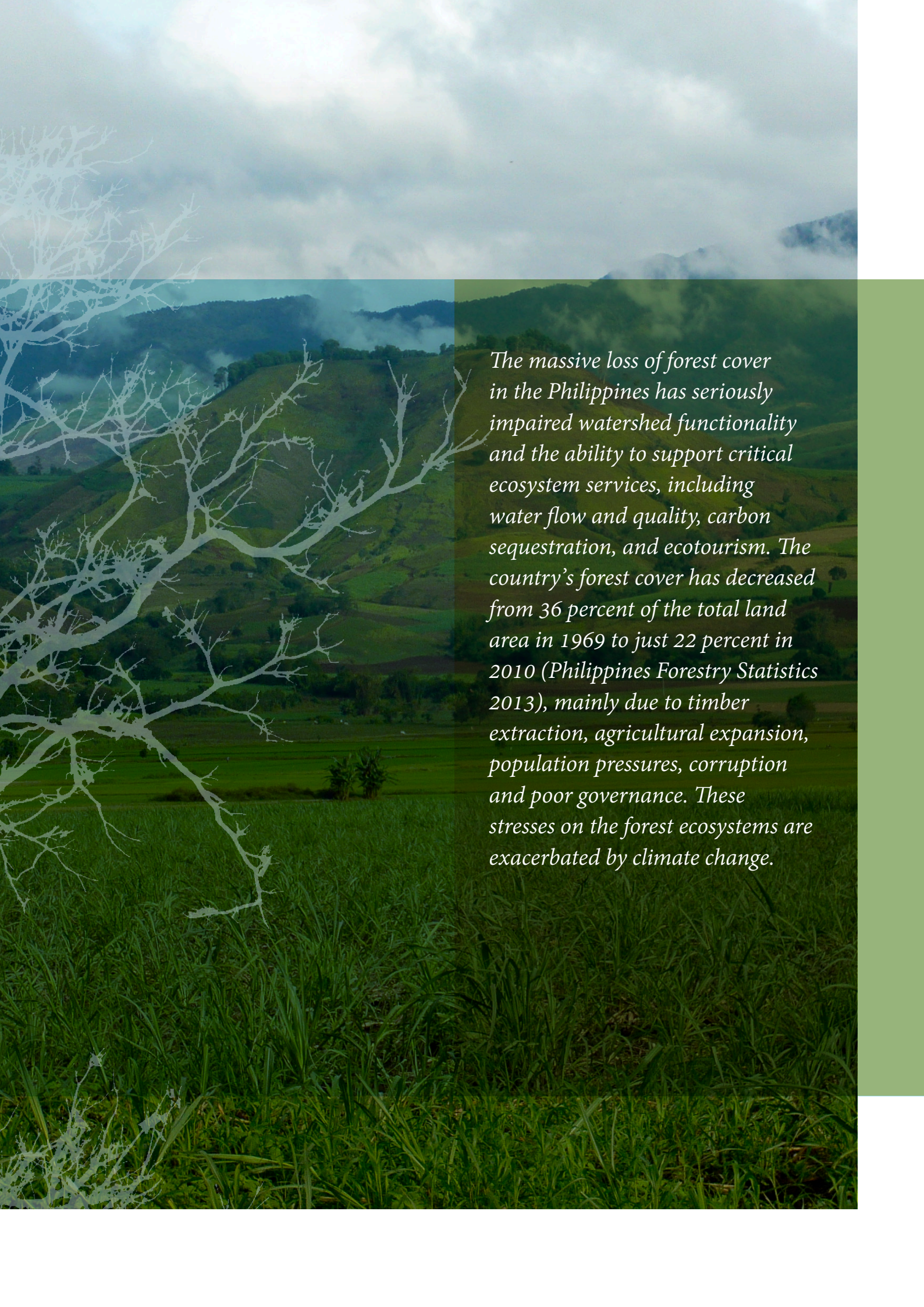
Ridge to Reef

Diversity of ecosystems, species, and economic activities provide multiple opportunities for PES



Section 3

Watershed PES



The massive loss of forest cover in the Philippines has seriously impaired watershed functionality and the ability to support critical ecosystem services, including water flow and quality, carbon sequestration, and ecotourism. The country's forest cover has decreased from 36 percent of the total land area in 1969 to just 22 percent in 2010 (Philippines Forestry Statistics 2013), mainly due to timber extraction, agricultural expansion, population pressures, corruption and poor governance. These stresses on the forest ecosystems are exacerbated by climate change.

Watersheds are life support systems for humans and wildlife as well as vital to major economic activities – agriculture, fisheries, and tourism, among others. The undervaluation of watersheds' contribution to the national and local economy and the indiscriminate ways by which products and services are exploited is costing the Philippines and countries around the world. It is in this context the RI-EWW/P, through the Emerging Champions for Biodiversity Conservation and Improved Ecosystem Project (Emerging Champions), worked with local stakeholders to introduce watershed PES mechanisms. The case of the Cagayan de Oro River Basin exemplifies the situation in other watershed areas under Emerging Champions coverage (See Box 3).

Trends in Watershed PES

Globally, watershed PES mechanisms represent the largest volume of PES transactions. As of 2013, US \$9.6 billion has been invested to restore and protect 365 million hectares of watersheds worldwide. This is equivalent to the land mass of India. Global watershed PES modalities have strong social benefits for local communities with US \$6 billion or 63 percent of total PES revenues going directly to local people. This translates to over 7 million households globally receiving watershed payments and/or co-benefits. The strong co-benefits represent increased incomes for poor and indigenous people and sustainable rural employment. Ninety percent of watershed PES funds come from local public programs (the Chinese Government is the global leader) with local water utilities, energy, beverage, and agriculture firms leading watershed PES payments for the private sector (see Figure 2). While there are no leading standards or certifications for watershed PES, some form of hydrological and other biophysical reporting is used in 54 percent of watershed PES deals globally as of 2013.¹

This global trend, the Philippines' context, and the potential for local buyers meant watershed PES became the most promising environmental financing mechanism assessed under Emerging Champions.

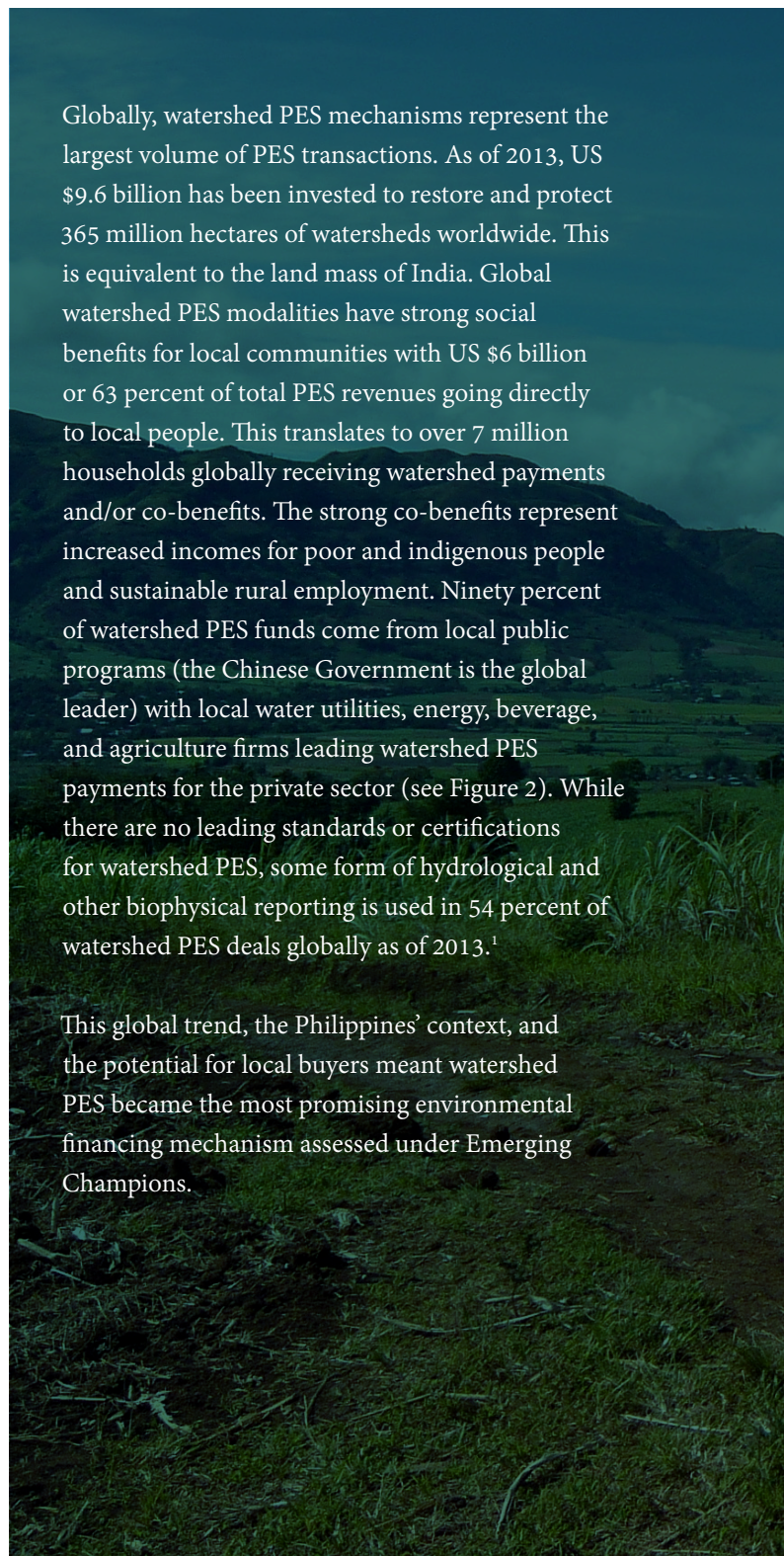
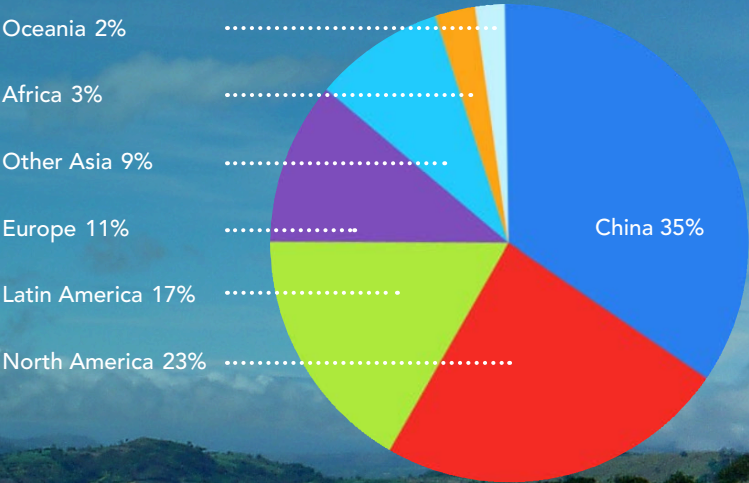


Figure 2. Watershed PES Programs Globally 2013



Box 3. The Cagayan de Oro River Basin: Context for Watershed PES

The destruction of the Cagayan de Oro Watersheds started in the wake of the logging boom in the 1960s. The Philippine Government awarded logging concessions to harvest the dense forests covering the headwaters straddling the upstream slopes of Mt. Kitanglad and Mt. Kalatungan Natural Parks – two of the nation’s important Key Biodiversity Areas (KBAs). These KBAs host some of the few remaining large blocks of natural forest in the Mindanao Region.

The watersheds of Cagayan de Oro provide critical ecological, socioeconomic, and cultural services to city residents and lowland communities in terms of food production, energy generation, water supply for domestic, agricultural and industrial use along with mitigation of natural hazards like flooding and drought. Yet the watersheds’ services were largely undervalued, and Mindanao’s historical experience of low typhoon risk meant the warning signs of its depleted ability to provide natural hazard services were ignored.

In December 2011, Typhoon Sendong traversed Northern Mindanao triggering a tragic flood, which took over 2,000 lives with many more missing. Billions of Pesos worth of infrastructure in the Cagayan de Oro river basin were heavily damaged or destroyed. The poor state of the watersheds, improper farming practices and the unbridled expansion of large plantations in forested hillsides were widely blamed for the devastating flood waters and mudflows. Six more storms of similar impact followed from 2012 – 2014 and residents understood this was Mindanao’s new normal. Typhoon Sendong could not be dismissed as a hundred-year storm. Public and political attention to rehabilitate the dysfunctional watersheds now became a priority and was in everyone’s interest to cooperate.

To rehabilitate vast watersheds in a manner that strengthens their resilience to extreme weather events requires sustainable funding, along with the broad support of society and appropriate revegetation technologies. It was in this context that RI-EWW/P initiated work to assist local watershed councils to formulate their watershed management plans and introduce payment for ecosystem services (PES) and specifically watershed PES mechanisms, as the means to provide financial support for reforestation and protection initiatives.



Watershed Planning to Prepare for PES

The development of watershed management plans was always a significant component of the Emerging Champions project, irrespective of the potential watershed PES development. Watershed management plans are an important catalyst for

stakeholder engagement across the spectrum of governmental, community and private sector actors. The watershed planning process facilitates landscape level planning and helps all stakeholders appreciate that without investment in watershed rehabilitation

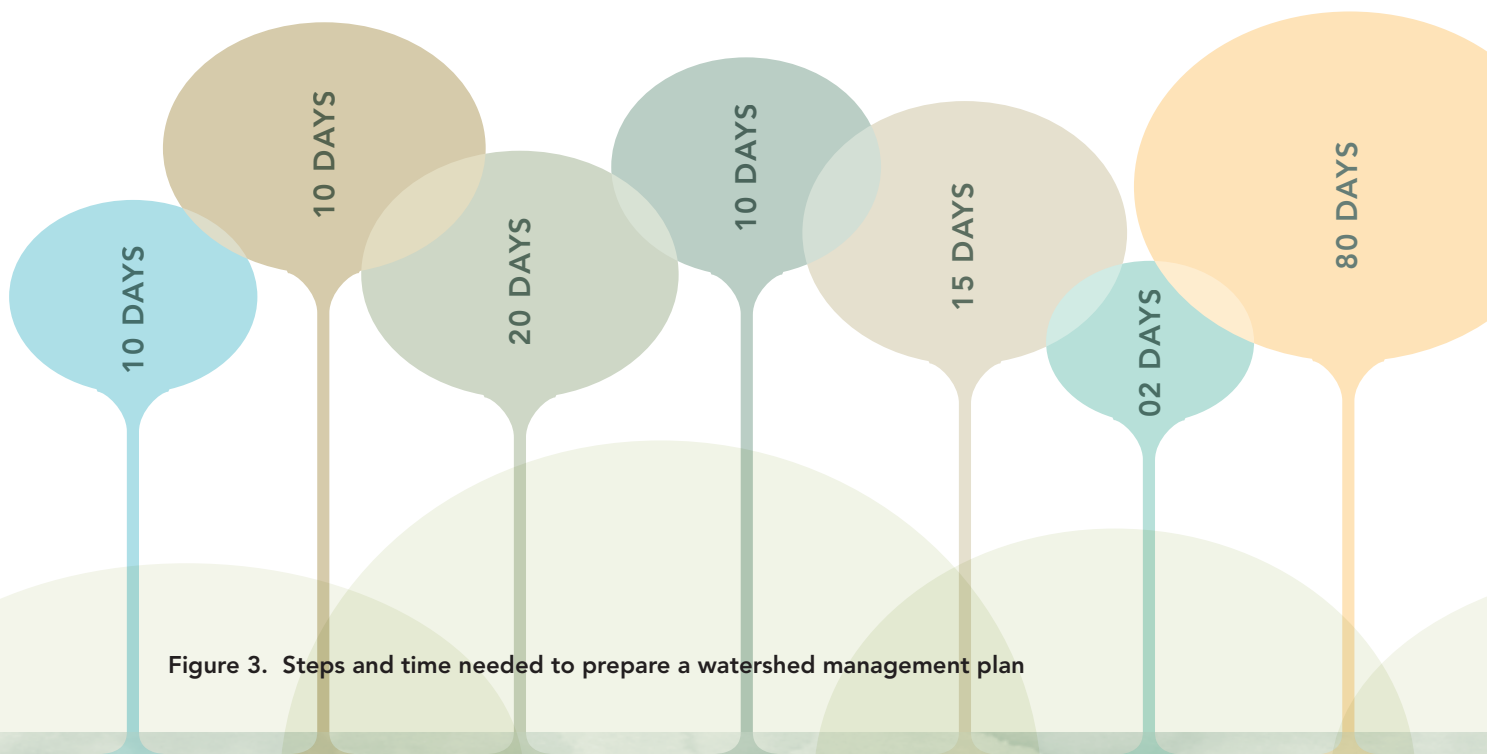
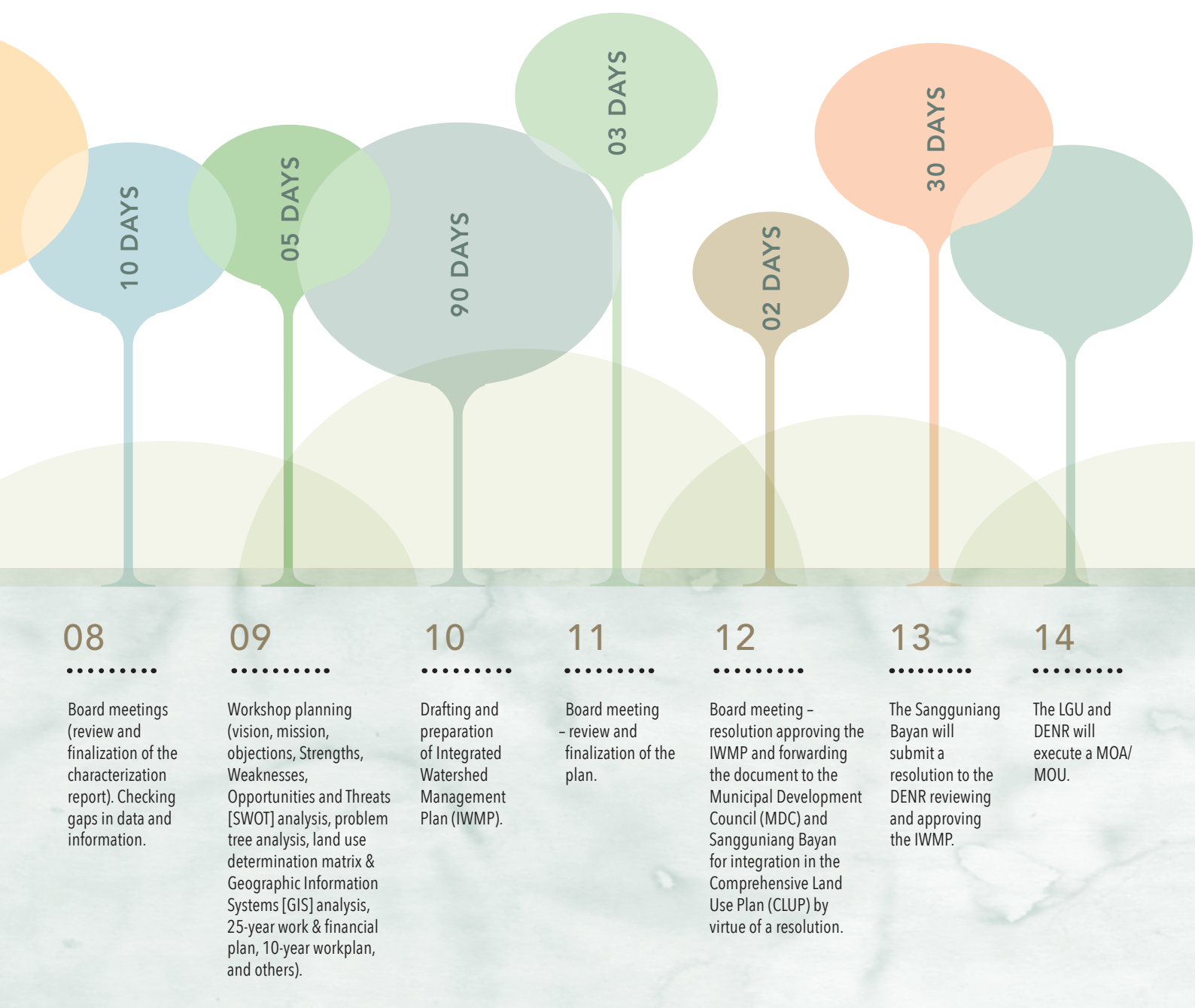


Figure 3. Steps and time needed to prepare a watershed management plan

01	02	03	04	05	06	07
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Meetings, courtesy calls, coordinations with concerned agencies.	Identification of key stakeholders and creation of Watershed Management Planning Team/ Watershed Management Board (WMB).	The Local Chief Executive (LCE) will issue an Executive Order creating the WMB/Lantapan Watershed Management Council (LWMC).	The NGO to be engaged in the said project will execute a MOA/ MOU with the LGU. Note: The LCE will request from the Sangguniang Bayan a Resolution authorizing the LCE to enter into a MOA/MOU.	Inter-agency/ board meetings and consultation (community consultation with the affected Barangays) including the information, education and communication (IEC) campaign to be conducted by concerned agencies.	Board meeting and tasking/ workplanning.	Data gathering (primary and secondary data) - characterization report.





287 DAYS
(minimum)

funded by water users, economic development and security from severe weather events will be in jeopardy. When multiple stakeholders are included in the process, then watershed management plans provide a platform for the development of PES

linked to watershed management and protection. Figure 3 provides the overview, steps and time investment needed to prepare a watershed management plan that can be used to develop PES deals.

Watershed PES Developments in the Philippines

Moving from watershed management plan development to implementation of payment for ecosystem services (PES) mechanisms required local stakeholders in the Philippines to first become familiar with PES. This was done in Mindanao and Palawan by holding multi-stakeholder trainings where the PES concept was introduced and examples from watershed, carbon, biodiversity and cultural global PES experiences were shared.

The next step was to put PES in the local Philippines context. The case of Libona illustrates how a global PES concept was adapted to take into account local conditions.

Libona is located upstream of Cagayan de Oro and a vast expanse of pineapple plantations is sited within the administrative jurisdiction of this municipality. The municipality was under pressure to rehabilitate its expanses of barren and degraded areas inside its watershed, which were blamed for the huge volume of mudflows and claimed thousands of lives in Cagayan de Oro City at the height of Typhoon Sendong.

There was frustration over the mudflows and flooding, but no data on industry users of the water and specific land conditions that could inform the most critical rehabilitation efforts needed. How the municipality was going to finance it was also unknown. RI-EWW/P worked to build evidence data sets and mapping when it provided technical assistance to the Municipality of Libona. As partners of Emerging Champions, the Libona Municipal

Government technical staff were trained to do water resources and user inventory mapping of the municipal streams, rivers, springs and aquifers, along with geo-tagging the various downstream water users. The purpose of this training was to equip the municipal staff with science-based information to prioritize rehabilitation and inform a methodology for determining reasonable “fees” for the various users of the municipality’s water resources. Understanding the threats, issues and drivers that cause watershed degradation in specific locations was also covered during the mapping exercise.

The maps and user profile information generated during the water resources and user inventory process were revealing (see Figure 4). Aside from identifying the different water users (households, poultry, piggery, pineapple plantations and other agricultural-industrial projects), the inventory assessment revealed the various modes of land misuse and abuses by water and resource users. For example, riparian vegetation and natural cover of headwaters were cleared, levelled and virtually obliterated to give way to expanding pineapple plantations. For the first time the government officials could see how water resources were being used and prioritize the most pressing rehabilitation needs. Based on this mapping information, an initial PES deal involved pineapple plantations as PES buyers and women’s groups as PES sellers to rehabilitate riparian areas. Other private deals were facilitated by RI-EWW/P, but it was quickly realized that to reach the scale needed, a local ordinance, which would institutionalize watershed PES, would be needed.



RI-EWW/P assisted the Local Government Unit of Libona to develop a watershed PES ordinance to put in place a sustainable source of funds required to rehabilitate its degraded ecosystem at scale. The case of Libona provides an example of the PES implementation process that took place over a 3 ½ year period. Mapping the water users and watershed condition took only a few months. Demonstrating a pilot PES deal enabled the stakeholders to collaborate on an actual PES mechanism, which informed the local ordinance. Crafting and passing of local legislation took three years, since Libona was the first in the Philippines to pass such a watershed PES ordinance (see Annex 1). It is expected that other municipalities can use the Libona ordinance as a guide, thus speeding up the process.

Table 1 provides other examples of how watershed PES mechanisms were built from the Philippines' watershed management planning process and facilitation of multiple stakeholders (private sector, government, and local communities) to structure complimentary private sector PES deals.

Box 4. Milestones in the Watershed PES Journey Municipality of Libona, Province of Bukidnon

Introducing the PES concept to the local government and stakeholders of Libona, Bukidnon, required RI-EWW/P to embark on a rigorous process of PES orientation and technical capacity building before the municipal council eventually legitimized the concept through an ordinance. In this journey, the project had discernible milestones, which serve as a guide for pursuing PES in similar situations. These milestones are:

- ▶ Conduct orientation on PES for local stakeholders and training of LGU technical staff on GIS-based resource inventory mapping.
- ▶ Create a Water Resources and Users Inventory Map (see Libona example).
- ▶ Hold stakeholders consultation on PES payments, schedules and arrangements between buyers and sellers of watershed ecosystem services.
- ▶ Craft PES ordinance and conduct public consultations and committee hearings to make payments standard across users.
- ▶ Hold deliberations and reach approval of PES Ordinance by the Municipal Council.

Table 1. Philippine examples of Watershed PES mechanisms**How the mechanism works**

- PES municipal ordinance was enacted in July 2015 imposing collection of levies on water and production assessment charges for all commercial, agricultural and industrial groundwater users.
 - Ordinance requires an accredited NGO to provide fiscal management of the PES fund and engage the services of upstream communities to restore and protect the municipal watersheds considered the most strategic sub-watershed of the Cagayan de Oro River Basin.
 - Pilot deal was done for riparian replanting of 3.5 ha that involved community women's group organized by Libona LGU and RI-EWW/P as PES sellers and Del Monte Foundation and Xavier Science Foundation managing the PES fund of the LGU (buyer).
 - Municipal LGU conducted the monitoring with support from RI-EWW/P. Pay for performance mechanism was incorporated; payments were tied to surviving seedlings planted.
- Watershed protection and development plan mandated under the Butuan City Watershed Code advances enabling mechanisms for PES, termed as Environmental Fund under Section 16 of the Butuan City Watershed Code.
 - The Watershed Code imposes an annual Environmental Tax on all areas zoned as agricultural and other economic undertakings in the Agroforestry/Non-Tillage Areas and Prime Agricultural Areas inside the watersheds. Environmental Tax is collected solely for the purpose of watershed protection, conservation and management programs and projects.
 - Watershed Protection, Conservation, Rehabilitation and Management Framework Plan for all the city's watershed areas was jointly prepared by RI-EWW/P and the LGU technical working group.
- Watershed management plan was included in the municipal Comprehensive Land Use Plan.
 - Funding of PHP 800k (EUR 14.2k) for watershed management included in approved municipal Annual Investment Plan. PES principles are being used to prioritize and structure rehabilitation.
- RI-EWW/P leads technical assistance to Cagayan de Oro River Basin Management Council to introduce PES and supports PES Technical Working Group's aggressive social marketing campaign to promote PES as a core strategy for watershed conservation and poverty reduction in northern Mindanao.
 - PES was developed between MILLALITRA, a Talaandig-Kalatungan Tribal Group with a Certificate of Ancestral Domain Title (CADT) including headwaters of Cagayan de Oro River inside Mt. Kalatungan Range, and downstream entities including cooperatives, national government agencies, and business sector (Shell Philippines and Del Monte Foundation). An initial fund of PHP 2 million is generated by the buyers to commence agroforestry and rehabilitation projects with MILLALITRA (sellers).
 - To expand the market base of Mt. Kalatungan PES, the Xavier Science Foundation launches PES social marketing project called "Valuing Ecosystem Services Together (VEST)," a campaign to engage different sectors to take part in PES.
- Watershed PES mechanism is adapted to indigenous peoples' culture, by developing a "sacred compact," in contrast to a traditional contract, to respect the customs of the Talaandig tribal community led by Datu Migketay Saway. The sacred compact was concluded with the private company, UNIFRUITTI, which is engaged in banana growing in the lower slopes of Mt. Kitanglad.
 - The "sacred compact" is, in every sense, a genuine PES arrangement with the seller of service being the tribal group, who is the traditional custodian of the watershed, offering to protect the upland forest and the buyer, UNIFRUITTI, which agreed to pay for this service to ensure continuous flow of water for irrigation of its banana plantation.
 - RI-EWW/P provided technical expertise and guidance to UNIFRUITTI to achieve equitable buyer-seller arrangement and in emphasizing the significance of the sacred compact as a model for popularizing the PES concept as a tool for nature conservation and poverty reduction in the country.

Key Markets for Watershed PES and Pricing Structures

The markets for watershed PES for the Philippines are local and include private companies and water payments collected by local government bodies and invested back in watershed management via a PES mechanism. A true market for watershed PES globally and in the Philippines is very much in the development stages. As such, there are no easy ways to look up pricing per hectare or unit of water bases to devise payment plans for watershed PES. Instead, case studies are being analyzed from actual sites to estimate local costs of employment and multi-year forest re-establishment costs under varying assumptions and forestry/community intervention plans (see Table 2 below). The Emerging Champions project researched how other countries have come up with payment plans, including field research in Costa Rica, where watershed PES mechanisms have over 20 years of data. The process in Costa Rica is similar to what the Philippines is doing now – start with local context and costing for forest rehabilitation, monitor, and adjust as more PES sellers and buyers join.



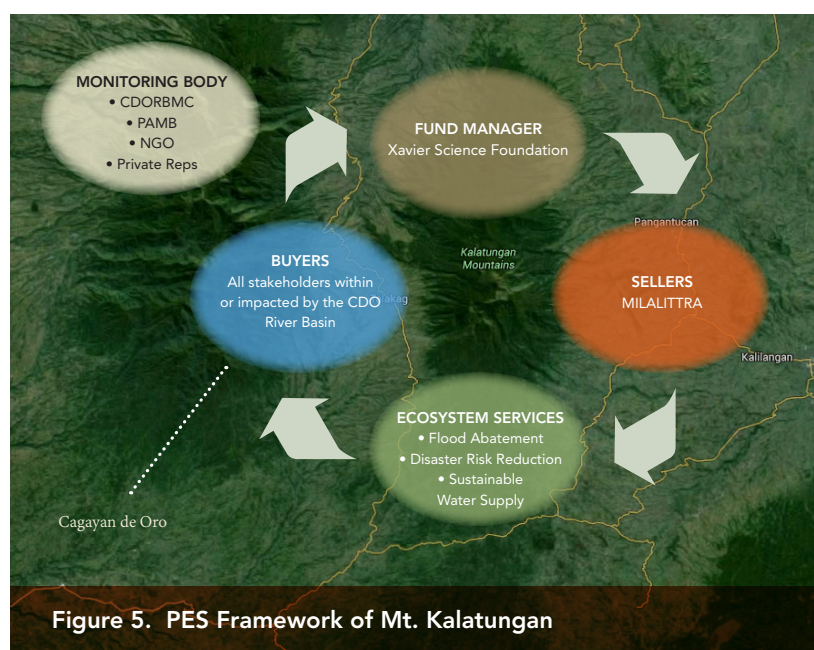
As the markets for watershed PES continue to grow in the Philippines, more formal mechanisms for monitoring performance and administering the payments between buyers and sellers will require a fund manager. In the northern Mindanao context, the Xavier Science Foundation is providing this fund manager role for several private-sector based watershed PES deals of Mt. Kalatungan, including the UNIFRUITI – MILALITTRA deal (see Figure 5).

Table 2. Cost Structures for Philippines' forestry rehabilitation to inform PES pricing

Payment related scheme & source of cost estimate	Forestry/community intervention	Cost/payment per ha (multi-year)
Kailane Ecofarm	Establishment of mixed forest and agroforests	PhP 45k
Butuan Water District	Agroforestry and fruit trees	PhP 60k
Hineleban Foundation Inc.	Succession planting using pioneer species coupled with livelihood improvement measures	PhP 63k
Green Fund of San Carlos City	Plantation of fuelwood and timber species	PhP 45.15k
Kalatungan PES pilot scheme	Agroforestry, forest rehabilitation and protection coupled with 5-year livelihood improvement measures	PhP 70k
National Greening Program	Reforestation at only 500 trees per ha	PhP 13.4k

Budget for the fund manager function has to be included in PES deals and be transparent to buyers and sellers. The cost structure for fund management is again an area with little data. Most fund management functions have been subsidized with donor support to develop the models first or, in the case of China, are handled by the government. Costing from international carbon PES fund manager functions indicates that the most cost effective mechanisms run about 15 percent of total PES payment when local monitors are used. The Philippines should be able to aim for this figure, given watershed PES is being developed locally and is not dependent on expensive international third party certification and verification requirements. In the near term, grant-based investments to increase rigor of monitoring and continue to build evidence-based data from actual deals started in Mindanao under Emerging Champions and collaborating programs will be required. Continued trust development between buyers and sellers and follow-through on watershed PES activities with participatory monitoring is required to ensure the strong initial work in Philippine watershed PES achieves the goal of re-establishing well-functioning watersheds with high biodiversity conserved.

Stakeholders ink 'Payment for Ecological Services' MOA during Manresa Days



OUR ENVIRONMENTAL PLEDGE

We pledge to conserve and protect our environment, and build a long-lasting synergy among the communities of Northern Mindanao. We appreciate and proactively support the Payment for Ecosystem Services (PES) program for the inclusive development and sustainability of life.

Recommendations

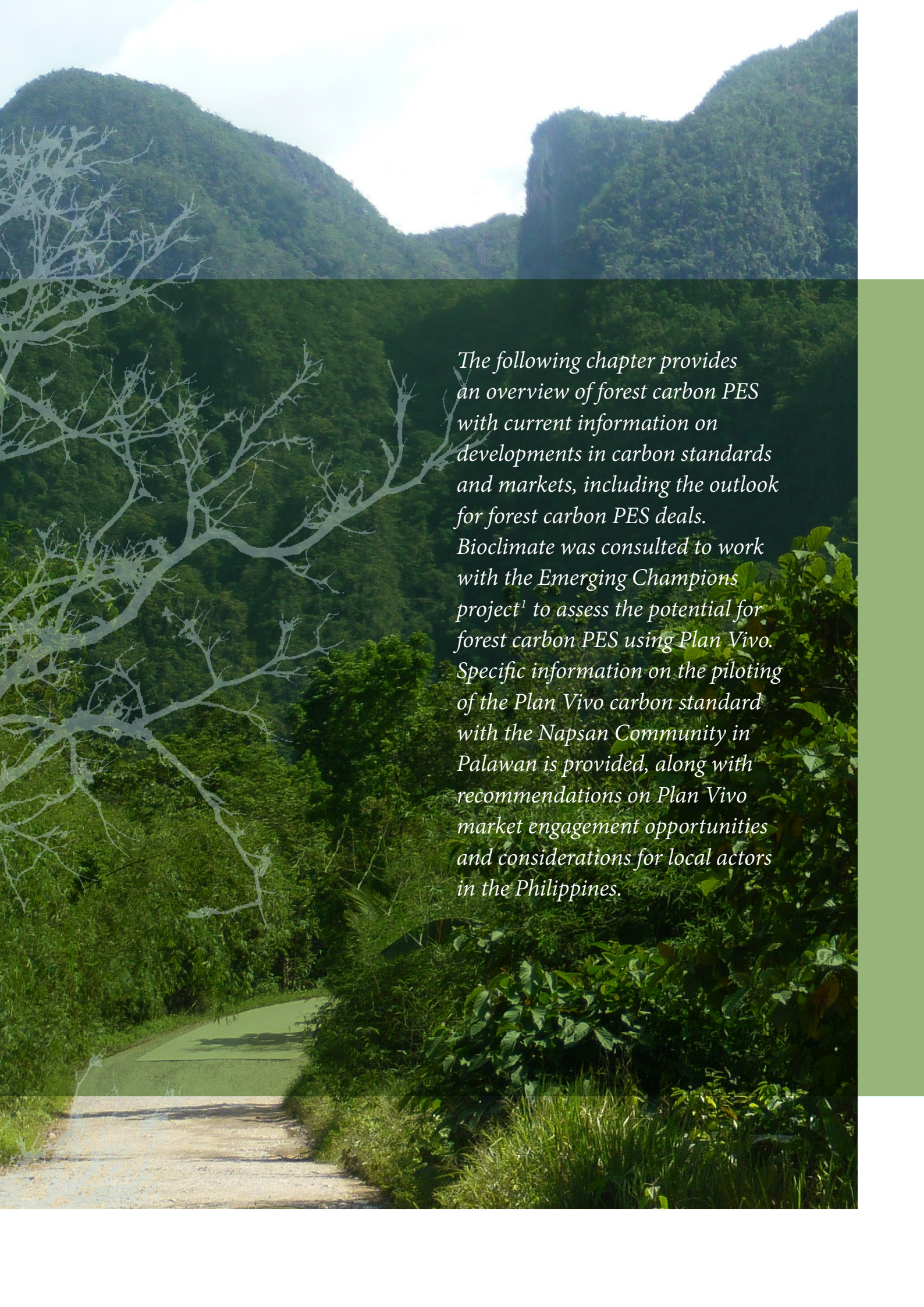
- 1) Take the time to do a strong watershed management plan with a set of stakeholders that includes government, communities (including indigenous people, where applicable), NGOs, and the private sector. A good plan will:
 - Be inclusive, and hold participatory meetings that share science-based information on the conditions of the watershed.
 - Conduct GIS mapping, inclusive of satellite images, to document boundaries and land-cover conditions with overlays of major water users.
 - Ground check land conditions to match activities in critical portions of the watershed to address most pressing needs (e.g. identifying agricultural cultivation up to river banks, which causes erosion, and agreeing on an action plan to address by planting riparian buffers with native trees).
 - Facilitate full discussion among stakeholders on issues and concerns to agree on specific responsibilities on watershed management. Facilitation usually needs an outside neutral party, such as an NGO.
- 2) Plan realistically for time and cost needed for watershed rehabilitation and protection activities. Ceremonial volunteer days to plant trees are wonderful to generate enthusiasm for environmental responsibility, but to attain and maintain well-functioning watersheds targeted investment in forest re-establishment and protection is required. Use Table 2 to budget for real costs and recheck costing at least every two years.
- 3) Do not be shy about asking and requiring water users to pay for water. Inadequate water or damage from flooding is more costly to households and businesses than paying modest and regular payments for more assured water supplies. Payments that are collected from water users must be invested in watershed management services with monitoring and accountability for funds use and changes in watershed condition.
- 4) Learn from neighbour municipalities and continue information sharing and cross-sector and actor collaboration. The stakeholders who participated in Emerging Champions all agreed that the strong progress in watershed PES in Mindanao was only possible because they worked together and shared expertise, resources and made real commitments to watershed PES.



- 5) Remember that any group developing a PES project ultimately has to answer six simple questions (although putting the answers into action is never easy and takes cooperation among multiple stakeholders):
- What activities need to be supported to generate particular ecosystem services and benefits?
 - Who needs to be supported to do the activities?
 - What forms and levels of support and resource inputs are necessary?
 - Who can provide the necessary support and resources?
 - How can everyone feel comfortable that the activities are effective and that the outcomes justify the level of support and resource inputs provided?
 - How does monitoring happen, and what performance-based system may be required?

Section 4

Forest Carbon PES



The following chapter provides an overview of forest carbon PES with current information on developments in carbon standards and markets, including the outlook for forest carbon PES deals. Bioclimate was consulted to work with the Emerging Champions project¹ to assess the potential for forest carbon PES using Plan Vivo. Specific information on the piloting of the Plan Vivo carbon standard with the Napsan Community in Palawan is provided, along with recommendations on Plan Vivo market engagement opportunities and considerations for local actors in the Philippines.

Understanding Carbon / Voluntary Markets and PES



Carbon markets are among the earliest and best known international markets for ecosystem services. One often sees or hears of references to ‘the voluntary carbon market’ and ‘the compliance carbon market’, especially when a distinction is being made between the types of carbon credits that are generated: certified emission reduction (CERs) credits in the case of compliance markets, and voluntary emission reduction (VERs) credits in the case of voluntary markets.

Yet in reality there is no single, homogenous voluntary or compliance carbon market. There are, rather, heterogeneous collections of markets that fall into one or other of the two market categories – compliance and voluntary.

Compliance markets: Compliance carbon markets are policy driven. They require and rely on the strict enforcement of compliance targets that create market scarcity and drive market demand. Without tight and binding international emission reduction targets, the very idea of capping emissions and trading credits to meet compliance targets becomes meaningless.



Voluntary markets: Voluntary markets operate according to a logic of their own – the voluntary actions and interests of buyers and sellers – and do not rely on official policy frameworks or government support for carbon pricing. Voluntary markets developed as a way of helping generate and channel financial resources for PES activities to projects, while at the same time enabling actors other than just aid agencies to support PES projects.



The buyers of voluntary credits are usually private sector companies and individuals. The sellers are usually non-government organizations that develop projects and transact the credits on behalf of project participants. In the case of terrestrial ecosystem projects, the project participants are usually community forestry groups and smallholder farmers.

Credits bought and sold across voluntary markets are perceived and priced differently, depending on the project standard, project geography and type of project or sector from which the credits originate. Credits are sold from a wide range of projects, including wind, clean cookstoves, geothermal and water, among others. Most forest conservation and Reducing Emissions from Deforestation and Forest Degradation (REDD) projects operate within the voluntary markets and compete with these other project types when selling credits.

To access carbon markets, one has to choose a standard for developing a project. Several major carbon project standards have emerged within the two market categories described above (see Box 5).

A CER, VER and Plan Vivo Certificate all represent a one-ton of CO₂ equivalent (CO₂e) savings, and each is commonly referred to as a carbon credit. Most forest carbon credits are transacted in the voluntary markets as VERs or Plan Vivo Certificates, therefore RI-EWW/P assessed the suitability of the various voluntary forest carbon standards for the Philippines. Particular attention was paid to development costs, market prices and buyers, and the suitability of Plan Vivo to the Philippines context.

*"RI-EWW/P assessed the suitability
of the various voluntary forest
carbon standards for the Philippines."*

Box 5. Main International Carbon Project Standards

UN Clean Development Mechanism (CDM): One of the flexible mechanisms created by the Kyoto Protocol enabling a wide range of emission reduction and afforestation and reforestation projects in Annex II (developing) countries to sell compliance carbon credits to Annex I (developed) countries needing to meet their regulatory emission reduction obligations. Carbon credits bought and sold under the CDM are Certified Emission Reductions (CERs).

Verified Carbon Standard (VCS): The most widely used voluntary carbon certification standard and applicable to a range of project types, including energy efficiency, renewable energy, waste management, agriculture, forestry and other land use. Carbon credits bought and sold under VCS are known as Verified Emission Reductions (VERs).

Gold Standard: A voluntary carbon and water certification standard that aims to ensure energy efficiency, renewable energy, land use and forestry and water projects meet social and environmental sustainability criteria. Carbon credits bought and sold under Gold Standard are VERs.

Climate, Community and Biodiversity (CCB) Standards: A voluntary project design and implementation standard that aims to ensure land and forest management projects deliver climate change mitigation and socioeconomic and biodiversity benefits. The standard requires that carbon reductions are quantified, and this is usually done using the VCS. CCB certification is an add-on to a VER.

Plan Vivo: A voluntary carbon certification standard for supporting land and forest management PES activities undertaken by smallholder farmers and rural community groups, including forest management groups. In addition to helping mitigate climate change, the standard requires projects to be designed in ways that strengthen the livelihoods of participating communities and contribute to biodiversity conservation. Plan Vivo is the longest-standing voluntary standard for forest carbon; the first Plan Vivo project credits were issued in 1997. Carbon credits bought and sold under Plan Vivo are known as Plan Vivo Certificates.

Trends in Carbon Markets

1. Average prices have been in decline for half a decade

Carbon prices have come under pressure across both compliance and voluntary markets over the last five to six years (see Table 4). Reasons for the downward pressure include:

- Government failures to agree on a new phase or successor international agreement to the Kyoto Protocol, which meant the large global compliance market that was expected to generate demand for millions of carbon credits never materialized.
- Failures in the management of the world's first and largest regulatory market, the European Emissions Trading scheme (EU ETS) and CDM.
- Slower growth in industrial emissions among developed nations as a result of the economic downturn triggered by the financial crash of 2008.
- The discovery of vast reserves of shale gas, which increased the availability of relatively cheap and less carbon-intensive energy.

While voluntary prices have been relatively resilient, they have undoubtedly been affected by compliance markets – for two main reasons:

- a. Some of the positive momentum in voluntary markets came from expectations that some voluntary credits might eventually be accepted in compliance markets. As positive policy signals vanished, the resulting weakness in compliance markets transmitted to voluntary markets.

- b. While voluntary market buyers are generally less price-sensitive than compliance buyers, the collapse in compliance prices has undermined demand for voluntary credits. Companies willing to voluntarily offset their emissions found they were in a position to meet their self-imposed emissions targets by buying cheap compliance credits.

Significant political progress in upcoming international climate change negotiations is needed to impact voluntary markets positively. There is little evidence to indicate this progress will be made. Equally, while weak prices may deter would-be project developers from establishing voluntary projects, it is not easy to clear carbon credits already generated from established projects quickly. As a result, many of the credit volumes from projects initiated over the last three or four years will continue to feed through to voluntary markets for years. Voluntary markets are thus likely to remain oversupplied, with buyers controlling pricing power, for the foreseeable future.

Table 3. Price declines in compliance and voluntary markets

	Compliance prices Certified Emissions Reductions (CERs)	Voluntary prices Average volume- weighted credit price (VERs incl. Plan Vivo credits)
2008	€24 per tCO ₂ e	US\$7.3 per tCO ₂ e
2014	<€1 per tCO ₂ e	US\$3.8 per tCO ₂ e

Source: Ecosystem Marketplace 2015

2. Popularity of different credit types has changed over time

Over the past seven years, Ecosystem Marketplace has endeavored to track developments in the voluntary carbon markets. Its annual *State of the Voluntary Carbon Markets* report² identifies important trends in the popularity and average prices of different credit types over time:

- The volume of credits from wind projects transacted every year since 2008 has been relatively steady, with average prices consistently low and declining relative to many other project types. In 2014 the price of wind credits fell to an all-time average annual low of just US\$2.1 per ton.
- Hydropower and landfill methane credit transaction volumes and prices have been on a downward trend in absolute and relative terms since 2008. In 2014 hydropower credits from smaller 'run-of-river' projects fetched an average reported price of US\$1.8 per ton (as opposed to large hydropower projects, which fetched just US\$0.8). The reported average landfill methane credit price in 2014 was US\$2.8 per ton.
- Transactions of clean cookstove project credits were first reported in 2011, at which time the social benefits of cookstove projects found favor in voluntary markets. Transaction volumes and prices have declined since 2011 as projects have ramped up and markets have become oversupplied. Although Ecosystem Marketplace reports an average price of US\$5.8 per ton in 2014, anecdotal evidence from project developers in 2015 suggests prices may have dropped to half these levels.
- Reducing Emissions from Deforestation and Forest Degradation (REDD) credit transaction volumes have increased over the past seven years. In 2014 this credit segment accounted for

the largest share (40 percent) of overall reported transaction volumes in voluntary markets. In the aftermath of the Bali climate talks in 2007, which propelled REDD to international prominence, it was anticipated that REDD credits would eventually be accepted in compliance markets. This has yet to happen. The 2014 reported average transaction price of US\$4.3 per ton looks unsustainable considering the sheer weight of credit volumes that are expected to come onto the market over the next few years.

3. Social and non-carbon environmental benefits have become increasingly important

In response to price pressure, international voluntary project standards and project developers have tried to accentuate or introduce new, non-carbon aspects into their overall value proposition.³ The trend is towards a much greater emphasis on the range of co-benefits projects can deliver. Certain types of projects (like cookstove and forest/land use projects) make a natural virtue of these co-benefits, and have therefore featured strongly among new project types over the past half-decade.

Projects have sought to recoup the costs involved in measuring, monitoring and reporting social and environmental co-benefits by levying a new form of co-benefits premium. Recent indications, however, are that buyers may resist this premium. For example, the serious decline in the prices of cookstove credits is due mostly to a supply and demand imbalance, but there is little evidence that co-benefits are supporting price levels. A second case in point is the weakening of prices for combined VCS-CCB credits over the past few years. The CCB component was supposed to add an environmental and social premium to the VCS carbon value proposition, but it appears this premium has degraded over time.

Suitability of Plan Vivo for the Philippines

RI-EWW/P drew on market research and the experiences of carbon projects in Africa and Asia to decide which voluntary forest carbon standard might work best for the Emerging Champions project stakeholders and their watersheds and key biodiversity areas. It matched each standard with the community-based forestry practices and size attributes of the potential project sites it selected. RI-EWW/P also analyzed project development costs and projected market prices under each standard. It decided that the Plan Vivo standard was the most promising forest carbon PES standard for the Philippines.

Over the last decade, the average Plan Vivo price has held firm in a fairly tight range of US\$6.00 - 7.00. This resilience is due to Plan Vivo operating as a specialized project standard with relatively low sales volumes, a clearly understood value proposition, and an established reference price within a niche market.

Plan Vivo Certificates are specialty credits, accounting for less than 1 percent of the voluntary market. Buyers are generally motivated by CSR agendas, and as a result there are limits to demand. Meanwhile, quality considerations extend beyond carbon to include livelihood benefits, biodiversity and other environmental considerations. Buyers often become established supporters of projects and are willing to pay a premium for credits to help projects cover their working capital requirements.

Plan Vivo is one of the original voluntary standards for forest carbon, and the only project standard that focuses exclusively on smallholder farmers

Box 6. Plan Vivo projects – key facts



81,427 ha

of forest and land under community management generating certified carbon benefits



2 million

Plan Vivo Certificates issued since 1997



US\$ 4.5 million

PES payments to smallholders and community groups



44 projects

at various stages of development, across 30 countries in Africa, Asia and Latin America



12 registered

and operational projects with the capacity to generate Plan Vivo Certificates, across 11 countries

Source: Plan Vivo Foundation 2015

and community groups. Plan Vivo is thus widely recognized as a community carbon standard with a clear objective to improve rural livelihoods. The value proposition is established and understood by sellers and buyers. With this in mind, individual Plan Vivo project groups have the latitude to develop and tell their own story, touching on themes and concerns that resonate with the CSR agendas of credit buyers.

" A Plan Vivo Certificate represents one ton CO₂e, plus environmental and social benefits."

A reference Plan Vivo Certificate price of US\$6.00 - 7.00 has been established over time. This has been possible due to the following factors:

- Projects have charged prices in the reference range long enough for these prices to become the norm.
- Prices have not been dragged down by a glut of credits from reduced deforestation projects, as has happened with VCS-CCB credits.
- Supply and demand in the Plan Vivo market have remained reasonably balanced over time.

As a result of the above factors, Plan Vivo projects tend to be comfortable with selling lower volumes at higher prices, in relative terms.

While Plan Vivo offers the most positive market attributes and appears well suited to the Philippines context, there are also reasons to be cautious when considering using Plan Vivo for a community forestry carbon project.

1. Sales are concentrated and buyers limited

Around three-quarters of certificate sales are accounted for by a handful of committed international resellers (Box 7). Significant potential exists for groups to develop Plan Vivo credit sales



Box 7. International resellers of Plan Vivo credits

CLevel (UK) www.clevel.co.uk
 Carbon Offsets to Alleviate Poverty (COTAP) (USA) www.cotap.org
 MyClimate (UK) www.myclimate.org
 Prima Klima (Germany) www.prima-klima-weltweit.de
 United Bank of Carbon (UBoC) (UK) www.unitedbankofcarbon.com
 ZeroMission (Sweden) www.zeromission.se

Source: Plan Vivo Foundation 2015

channels in their domestic markets and to cultivate local buyers seeking the benefits of strong CSR messaging. This potential has, however, not yet been converted into significant sales.

2. Projects have to invest in marketing to unlock value in the market

Plan Vivo projects have to find ways to unlock 'feel good' CSR value. Project groups need to be able to consistently produce compelling communications materials, which means they need to invest in building their project marketing and sales capacity early in the development of a Plan Vivo project.

Plan Vivo PES Engagement in the Philippines

Bioclimate carried out a PES scoping assessment for RI-EWW/P with support from USAID and the EU. The assessment looked at the potential to use Plan Vivo as a sustainable environmental financing PES option for the Philippines. Workshops to introduce PES and carbon mechanisms were first held with local stakeholders. After determining that the Plan Vivo standard held the most promise for the Philippines, Bioclimate was retained to conduct stakeholder consultations and assess several sites in Bukidnon and Palawan. The main recommendations from Bioclimate were to:

- Develop PES activities so they complement other project actions and institutionalize a long-term approach to natural resource planning, management, monitoring and sustainable financing.
- Prioritize one potentially successful Plan Vivo project site, and expand the experience gained here to other sites.
- Engage with prospective Plan Vivo Certificate buyers as soon as it becomes possible to estimate the likely carbon benefits from project activities.
- Focus on forest conservation and restoration activities, emphasizing assisted natural regeneration and native tree establishment methods and techniques.

RI-EWW/P followed up with the stakeholders and Barangay Napsan in Palawan was selected as a pilot Plan Vivo project site. The main proposed PES activity was avoided deforestation and the protection of 120 hectares of natural forest in the CBFM area

by the Bagobuk Marketing Cooperative (BMC). Relief International and Bioclimate worked with the stakeholders to develop a Plan Vivo Project Idea Note (PIN). The PIN was submitted to the Plan Vivo Foundation in June 2013 and approved, following revisions, in December 2013. Other groups considering developing a Plan Vivo PES project may find this to be a useful reference document – it is available for download at http://www.planvivo.org/docs/Bagobuk-PIN-for-Plan-Vivo_published.pdf.

With the PIN approved, Napsan moved to develop their Plan Vivo project design document (PDD) and to assess their baseline forest stocks. RI-EWW/P facilitated training in forest carbon stock measurement with its project partner, Asia Network for Sustainable Agriculture and Bioresources (ANSAB), from Nepal. ANSAB has been using community-based carbon stock measurement to develop local capacity to meet carbon PDD development and monitoring requirements. This south-south transfer of skills and capacity was well received by the Nepali and Filipino stakeholders.

Measurement and quantification of baseline forest carbon stocks in Bagobuk CBFM area were carried out using hands-on activities with local stakeholders. The resulting activity report⁴ offers a process template and set of tools and guidance that may be useful for other project groups doing carbon PES projects in the Philippines.

While progress was made with the development of the PDD in 2013, carbon market conditions began to deteriorate. RI-EWW/P, meanwhile, was developing other PES options. The decision not to proceed further with the Plan Vivo project for Napsan was made about a year into the pilot. The rationale is summarized in Box 8, but the decision boiled down to the relative attractiveness of alternative PES financing options, particularly watershed management and ecotourism. Plan Vivo remains an option for future PES financing. Understanding when to stop developing a PES option is an important lesson to have come out of the Emerging Champions project.

Box 8. Rationale for not pursuing Plan Vivo qualification

- Long lead time needed to become a registered Plan Vivo project and earn revenue from selling credits.
- Risk of assuming estimated cost recovery threshold of US\$6 per ton would be attained (despite evidence of long-term resilience in Plan Vivo prices).
- Watershed funding schemes have greater potential to instantly engage and energize multiple stakeholders.



Recommendations

Relief International has developed eight recommendations for groups in the Philippines that are thinking about pursuing PES opportunities in the Plan Vivo forest carbon PES market. Considering carbon market conditions in 2015 and the costs of reforestation/protection in the Philippines, forest carbon projects that rely solely on carbon sales are not viable. There is still potential for combining a Plan Vivo carbon PES project with other PES mechanisms. The guidance below is useful in developing such a portfolio of PES options.

1. Decide if a carbon PES project is the right option for you

It is only worth developing a carbon project if you can generate income for communities from the sale of carbon credits to private sector buyers. Project developers often assume that if their projects generate credits they will easily find buyers and be able to scale up their projects quickly. Current market fundamentals in voluntary markets, and even within the Plan Vivo market, do not justify this level of confidence. Project developers should assess whether other sources of financing, such as water payments and ecotourism, might make more economic sense than voluntary carbon finance.

2. Identify carbon credit buyers early and build relationships

If you decide to pursue the carbon finance option, you should build a network of relationships with credit buyers as soon as you know what your expected carbon benefits will be. Do not miss opportunities to cultivate potential buyers, but also do not over-estimate your expected carbon benefits. Avoid any promises that may lead to disappointment and undermine your chances of building productive long-term relationships with credit buyers.

3. Invest in your marketing capacity and follow a clear strategy

Just as you need a sales person for a project that helps communities grow and sell coffee, for a carbon PES project you need to have someone on your team with the skills and time to develop sales relationships with carbon credit buyers, especially with local and national private sector companies and organizations. The most successful Plan Vivo projects do not necessarily invest most in technical development, but they usually invest positively and early in developing their marketing and sales capacity. They also follow a clear marketing strategy, built around four key elements:

Key elements of an effective marketing strategy



Knowledge

Understand your buyers and how to communicate your project context and activities to them using key market concepts, technical terms, and a compelling human and environmental story.



Messages

Create a powerful project story using clear verbal messages, reinforced by powerful images and film – the communication of this story should be led by a team member with strong communication skills.



Engagement

Use available communication channels well, including: digital media, conventional media, printed materials and direct personal relationships (supported by communication tools like Skype and email).



Relationships

Cultivate a community of repeat buyers, and build strong relationships between this community and your project by continually servicing your communication channels and social media.

4. Understand your credit buyers and what motivates them

In the case of Plan Vivo credits, end buyers and resellers are motivated by quality considerations at least as much as they are by price. They will tend to have a much greater interest in the overall human and environmental story you tell, and less of an interest in carbon technicalities, although they may look for some assurances on technical quality. They will undoubtedly want to be perceived to be making a difference. For this reason, they will be interested in what makes your project unique, and how their association with your project will bring prestige and improve their brand image.

Based on the experiences of Plan Vivo projects in other parts of the world, buyers in the Philippines are most likely to be found in the sectors listed in Box 9.

Box 9. Sectors in which to look for carbon credit buyers

- Food and beverage
- Travel and tourism
- Packaging and paper
- Clothing and consumer goods
- Media, entertainment, events
- Infrastructure and engineering
- Diplomatic embassies
- NGOs and universities

5. Define your own value proposition

The compensation projects are able to get for non-carbon benefits is a very important part of the Plan Vivo value proposition. Non-carbon environmental benefits may be denoted by habitat restoration and protection, biodiversity conservation or water services, for example. Social benefits may be denoted by socioeconomic or subjective wellbeing indicators such as income, health or educational attainment. Projects have considerable flexibility to define their value proposition in ways that suit them or their target buyers, and to emphasize or accentuate different outcomes.

6. Be positive and proactive in setting credit sales prices

Ultimately, Plan Vivo credit prices are formed by the interplay of buyers' motives and willingness to pay, on the one hand, and the ambition of projects and resellers in naming a price, on the other. The compensation projects get for non-carbon benefits boils down to how persuasive they are in negotiating credit prices with buyers, and this depends on how well projects tell their story, because it is the story that is being bought.

7. Consider building a relationship with an international reseller of Plan Vivo credits

In most commodity markets resellers are the 'middle men' who take value away from producers. But in the Plan Vivo marketplace resellers play a vital role in finding credit buyers that projects might otherwise struggle to find. They have been responsible for a significant proportion of total certificate purchases and sales. If your organization is able to build a strong network of direct buyers, you may not need to consider using a reseller. But engaging a good international reseller may involve relatively little effort and may happen on favorable terms, so it is an option you should not discount completely.

8. Keep deal making simple

The process of developing and entering into sales agreements with credit buyers should be kept as simple as possible. It need not involve high legal costs. Legal contracting can take more time than price negotiation and deal making, but deal making is certainly a more difficult art. It takes some practice if you are new to it. Be positive about the deal making process, and positive in naming your credit prices.

Section 5

Ecotourism Cultural PES



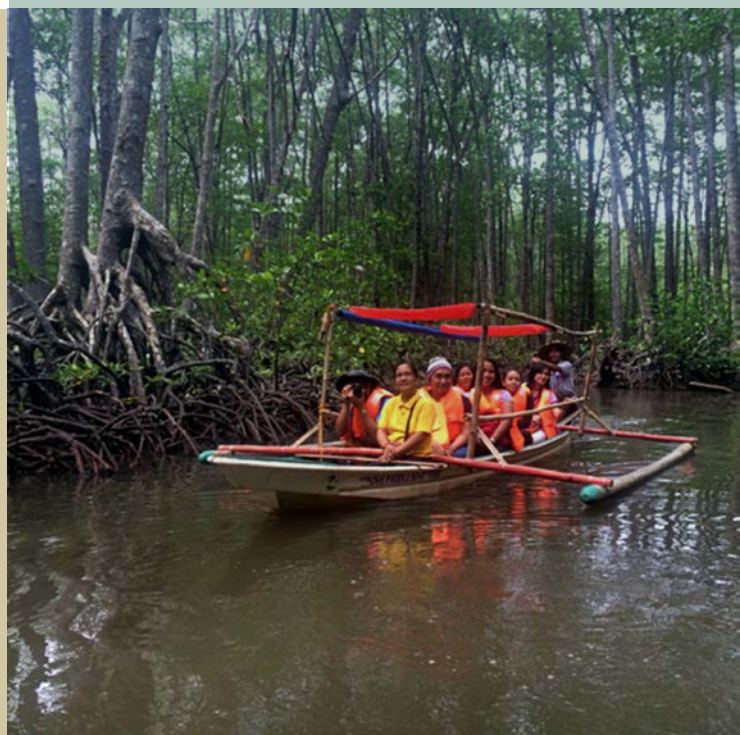
Ecotourism is a sector within cultural ecosystem services. Cultural ecosystem services are the nonmaterial benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation and aesthetic experiences. Yet in order to monetize cultural ecosystems services, there must be both buyers and sellers. In the cultural category, buyers of sustainable ecotourism are the potential payees for cultural ecosystem services and the sellers are the stewards of the habitat/culture and associated enterprises that provide support for conservation of the habitats and wildlife (i.e. local communities, tour operators and associated tour industry businesses).

Ecotourism, well managed, can be a boon for biodiversity conservation and can provide an economic alternative to converting specific habitats, like upland forests, to agriculture or mangrove forests to fishponds. But as consumer demand for authentic travel experiences to unique but fragile landscapes grows, so does the possibility that ecotourism will become a threat with destinations at risk of becoming degraded victims of their own popularity as well as generating conflicts over the best use of land.

Ecotourism is directly tied to intact habitats to be competitive and therefore, when done right, can support other ecosystem services such as soil conservation for farming, fish and seafood reproduction and disaster risk reduction from storm surges and flooding.

Using the Philippines and the Emerging Champions ecotourism PES pilot, this chapter explores trends within the “recreation and ecotourism” sector of cultural PES that can be extrapolated to other high biodiversity destinations around the world. We identify the growing market segment of tourists interested in biodiversity conservation and provide latest best practice guidelines such as certification and standard setting recommended for the Philippines tourism sector, governments and tourists so that ecotourism PES can be expanded.

Photo: Julie Stein



Trends in Sustainable Ecotourism/Cultural PES

In 2012 a record one billion tourists crossed international borders for the first time. Travel is big business now comprising 9 percent of global GDP, one in twelve jobs, 6 percent of world trade, and 8 percent of exports in least developed countries.¹

In addition to global growth in the travel industry as a whole, there is another important trend that relates directly to biodiversity protection, especially in developing countries. The World Tourism Organization (UNWTO) predicts that between 2010 and 2030, arrivals in *emerging economy* destinations are expected to increase at twice the rate (+4.4 percent a year) of those to advanced economies (+2.2 percent a year) and the travel market share of emerging economies, which has increased from 30 percent in 1980 to 45 percent in 2014, is expected to

reach 57 percent by 2030, equivalent to over 1 billion international tourist arrivals. As a result, arrivals in emerging economies are expected to exceed those in advanced economies before 2020. By 2030, 57 percent of international arrivals will be in emerging economy destinations (versus 30 percent in 1980). The strongest growth by region will be seen in Asia and the Pacific, where arrivals are forecast to increase by 331 million to reach 535 million in 2030 (+4.9 percent per year).²

With this boom in growth to emerging economies comes opportunities and challenges. Sustainable tourism is emerging as a viable solution to meeting the challenges. The UN, for example, has highlighted the important role of sustainable tourism in our transition to a Green Economy globally, for sustainable development and for poverty alleviation.³



Tourist dollars from travel to these often-remote destinations has the potential to support development goals through green growth.

Ecotourism,⁴ or tourism that is nature-based, is the fastest growing subsector and provides a vital source of income for many countries. Further, developing countries actually have a competitive advantage over developed countries in this regard as they have unique (such as Palawan Peacock only found in the Philippines) or pristine environments and intact cultural and biodiversity to offer adventurous travellers.⁵

Sustainable Ecotourism can

- Increase foreign exchange earnings. Tourism is a key export since foreign tourists make purchases using money brought from their home countries.
- Make the economic case for conservation and preservation of biodiversity.
- Provide incentives to communities to coexist with wildlife and protect biodiversity when tourism directly includes local communities in economic benefits.
- Sensitize and educate the tourist industry and tourists about local natural resource issues and biodiversity so they do not inadvertently harm species, local communities and their habitats.

But destinations can also become victims of their own success. Too many tourists not properly managed can quickly become too much of a good thing leading to negative impacts such as:

- Increases in greenhouse gas emissions.
- Increased water consumption.
- Problems with waste management.
- Direct impacts on wildlife including loss of biodiversity and degradation of habitat.

Box 10. What Sustainable Tourism Should Do

- Make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity.
- Respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.
- Ensure viable, long-term economic operations, providing socioeconomic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.

Sustainable tourism development requires the informed participation of all relevant stakeholders, as well as strong political leadership to ensure wide participation and consensus building. Achieving sustainable tourism is a continuous process and it requires constant monitoring of impacts, introducing the necessary preventive and/or corrective measures whenever necessary.

Sustainable tourism should also maintain a high level of tourist satisfaction and ensure a meaningful experience to the tourists, raising their awareness about sustainability issues and promoting sustainable tourism practices.

Source: *Making Tourism More Sustainable: A Guide for Policy Makers*, UNEP and UNWTO 2005

- Decrease of tourists due to degraded destinations, which leads to tourism boom and bust cycles.
- Loss of cultural diversity and increased conflict with local communities.⁶

The United Nations World Trade Organization (UNWTO) has defined sustainable tourism as an activity that should maintain essential ecological processes and help to conserve natural resources and biodiversity (see Box 10). It has also been recommended that criteria relating to the protection of biodiversity be directly integrated into certification standards and labels and that criteria for tourism use a ‘no net loss’ approach such that the standard not only have an explicit goal of contributing towards halting the loss of biodiversity, but also of achieving an increase and ability for monitoring and measurement.⁷ This is especially important in places such as the Philippines that have been defined as one of the ‘hottest of the hotspots’ for biodiversity globally.⁸

Standard Setting and Certification

One way to achieve sustainability across the tourism sector, using market forces rather than government regulation, is through standard setting and certification. As a response to these potential negative tourism impacts and to help destinations get ahead of the curve, one of the leaders in this sector, the Global Sustainable Tourism Council (GSTC), has spearheaded a multi-year collaborative effort to develop criteria for Hotels and Lodges, and for Destinations (see Box 11).

The GSTC collaboration process included a coalition of 27 organizations, outreach to 80,000 tourism stakeholders, and analysis of greater than 4,500 criteria from more than 60 existing certification programs, incorporating comments from 1,500 individuals.⁹

Box 11. The Global Sustainable Tourism Council Criteria on Biodiversity*



GSTC Criteria & Indicators
Hotels and Tour Operators

D3 Conserving biodiversity, ecosystems, and landscapes

D3.1 Wildlife species are not harvested, consumed, displayed, sold, or traded, except as part of a regulated activity that ensures that their utilization is sustainable, and in compliance with local to international laws.

D3.2 No captive wildlife is held, except for properly regulated activities, in compliance with local to international law. Living specimens of protected and wildlife species are only kept by those authorized and suitably equipped to house and care for them humanely.

D3.3 The organization takes measures to avoid the introduction of invasive alien species. Native species are used for landscaping and restoration wherever feasible, particularly in natural landscapes.

D3.4 The organization supports and contributes to biodiversity conservation, including natural protected areas and areas of high biodiversity value.

D3.5 Interactions with wildlife, taking into account cumulative impacts, do not produce adverse effects on the viability and behavior of populations in the wild. Any disturbance of natural ecosystems is minimized, rehabilitated, and there is a compensatory contribution to conservation management.

*The full set of Criteria and Indicators are available for download at <https://www.gstccouncil.org/en/gstc-criteria/sustainable-tourism-gstc-criteria.html>

These criteria have been widely endorsed, are publicly available online at no cost,¹⁰ and are meant to represent the minimum, not the maximum, standards, which businesses and destinations should achieve to approach social, environmental, cultural, and economic sustainability. It is recommended that destinations promote these criteria, and encourage their use, and relevant stakeholders should consider adopting, and exceeding, as many of the criteria as possible.

This benchmarking effort is proving useful to define and further refine terms, and to provide a common understanding for tourists, governments and the industry and in enforcing truth in advertising especially in light of the widespread overuse and misuse of 'eco,' 'green,' and 'sustainable' in almost every corner of the globe.

Certification, similar to international standards, offers many tangible benefits for local government, tourism sector (including tourist industry and tourists) as well as local communities and their environments. Certification is emerging as a powerful tool to increase transparency and use market forces to strengthen policies and regulation where they exist but are weak (thus lowering regulatory costs), or to stand in their stead where they are absent or unfunded. Certification can also work to build consumer trust in travel brands and assist tourists in making truly sustainably choices, raise standards across a destination, give the private sector a competitive advantage in a crowded marketplace, and attract outside investment while protecting the local economy and enabling the provision of ecosystem services.

Certification programs can be catalysts for change and adoption of best practices. Consumers have many choices on how and where to spend their limited disposable income and they want their holiday investment to do double duty – allowing them to both have an authentic travel experience and to make a larger contribution in support of the local environment and people. An ecotourism certification currently active in the Philippines is Certified Wildlife Friendly®.

Another certification, which beach resorts across the Philippines may find useful and with publicly posted criteria¹¹ is the Blue Flag, a voluntary eco-label, which has been awarded to more than 4,000 beaches and marinas in 49 countries with strict criteria relating to water quality, environmental education and information, environmental management, and safety.



Ecotourism PES linked to certification

Mangrove Paddle Boat Tour Guide Association

A Certified Wildlife Friendly® Enterprise

The Sabang mangrove forest has century-old trees and provides habitats to Convention on the International Trade of Endangered Species (CITES) - listed endangered mammals, reptiles, and birds, many of which are endemic to Palawan. The Mangrove Paddle Boat Tour Guide Association was created to protect the mangroves and offer a unique ecotourism experience.



The association employs 22 community members (mostly women), who conserve 47.55 hectares of high biodiversity mangrove habitat and protect endangered wildlife. In 2014 the association was awarded Wildlife Friendly® Certification, the first in the Philippines in recognition of its conservation of wildlife and community managed ecotourism enterprise. The association is using the certification to distinguish its tour in the market place.

Human pressures on coastal ecosystems of Palawan are high, with land competition for aquaculture, agriculture, infrastructure, and tourism. The delicate balance of the mangrove ecosystem is vital to the health and vitality of marine, freshwater and terrestrial species. "Our product is the beauty and service of the mangroves to the environment; protection of wildlife in the area is very much our concern" – notes Sabang community member and paddle boat guide, Crisanto. The Mangrove Paddle Boat Tours have increased community and visitors' awareness on the significance of the mangrove ecosystem and serve as patrols to protect the wildlife and their habitat.

Sabang Mangrove Paddle Boat Tour Association President, Nestor Elejan, estimates the age of a mangrove tree on Palawan for tourist guests while displaying his new Wildlife Friendly® certification, the first in the Philippines.

Ecotourism and Biodiversity Conservation



Ecotourism and Biodiversity Conservation

The United Nations Environment Programme (UNEP) Green Economy Report shows that global spending on all areas of ecotourism is increasing by about six times the travel industry-wide rate of growth.¹² When done correctly, ecotourism can result in positive biodiversity conservation. Responsible ecotourists should proactively educate themselves on the wildlife and natural resource issues of a destination prior to travel so that they can make the best choices to support biodiversity conservation, communities, sustainable practices and green growth. Destinations should make these educational resources available for tourists.

It is important that the marketing, packaging and the substance behind ecotourism programs take a holistic approach. Unique biodiversity provides the opportunity for specialized ecotourism offerings. A few examples include:

Wildlife Watching

Wildlife watching tourism, including birdwatching (see Box 12), is a fast growing sub-category of ecotourism that can make important contributions to both conservation and local communities by raising awareness and creating jobs and income. For example, in Cambodia, the Sam Veasna Center, which offers birding experiences, finds that birding add-on's capture tourism revenues that go directly towards conservation. Add-ons include donations for nest protection, and payments only if birds are seen by tourists. These payments go directly to the community for conservation and development.¹³

Box 12. Tourist Profile: Birdwatchers

Birders travel to far-flung destinations in the hope of ticking rare birds off their birding 'life lists', which contain an estimated 10,000 total possible bird species. For a bird to be added to a life list it must be: Wild, Free, Alive and Ethically Observed. Some birding tours are designed to focus on finding all the endemic birds of a given country. According to Avibase, the Philippines has 676 total bird species including 91 globally threatened species, and 222 endemics, which are found only in the Philippines.

Birdwatchers, or Birders, represent the largest niche within the ecotourism category, and represent a high value but low impact tourist who is ideal for fragile and remote destinations. The United States Fish & Wildlife Service (USFWS) puts the annual economic value generated by bird watchers and other wildlife watchers at around US\$ 32 billion per year in the United States alone. Birders can help support conservation efforts and bring in foreign income while supporting jobs and the local economies through direct and indirect spending.

Source: UNEP Press Release Bird Watching Can Help Ecotourism Fly High in a Green Economy

A Range of Habitat Experiences

Ecotourism that offers a range of habitat experiences, for example, a ‘ridge to reef’ concept (see Philippines Landscape Level in section 2), links the health of up-land forests and marine ecosystems. Flagship species and the communities that protect them – Philippine Eagle and indigenous tribes (representing the up-lands) and Giant Clam and fisherfolk (representing reef health) – can be showcased to educate tourists about important natural resource issues. Tourists can be engaged to play a part in contributing to local solutions. The Coron Tourism Initiative offers excellent examples of combining local community stewards and unique biodiversity in one tourism product.¹⁴

Engaging the Tourist in Conservation

Do not assume that since a tourist chooses an ecotourism product, that they know how to practice conservation and sustainable tourism. Always, take the opportunity to educate visitors on ecotourism best practices. For example, what a tourist purchases can be very important to local conservation. Encourage visitors to:

- Buy responsibly; how you tour and what you purchase as a souvenir makes a difference (see Box 13).
- Patronize shops that support locally made souvenirs that do not endanger wildlife.
- Learn to minimize negative impacts on wildlife by understanding behavioral effects of disturbance, physiological effects of disturbance and habitat damage. These impacts are cumulative and tourism and tourists must be managed properly to both minimize and monitor disturbance.

For more tourist guidelines on responsible wildlife watching and how to minimize threats to biodiversity in the Philippines please see the species fact sheets in the annexes.



Box 13. Souvenir Buyers Beware: The Illegal Trade in Wildlife

Demand for exotic pets, rare foods, trophies and traditional medicines is driving many species to the brink of extinction and contributes to the transmission of wildlife borne diseases, such as severe acute respiratory syndrome (SARS), avian influenza and the Ebola virus, to humans. This black market trade is also often linked to organized crime using many of the same actors and smuggling routes as illegal trafficking in arms, drugs, and humans. It is impossible to provide a reliable estimate of the scale of these illegal activities due to the secretive nature of the crimes but UNEP estimates the total global trade to be as high as US\$50-\$150 billion per year.*

Remember that part of being a responsible tourist is to be aware of the regional wildlife issues and laws before you travel. Make a decision not to patronize stores that carry products made from wildlife parts.

*Source: UNEP Yearbook 2014 Emerging Issues Update / Illegal Trade in Wildlife

Engaging Government and the Private Sector in Conservation

Governments and the private sector have important roles to play in protecting the resource upon which tourism depends. A best practice checklist for governments and the private sector follows:

- Support and/or create initiatives, through tourism or other PES, that protect forests where many key threatened species occur and expand protected areas whenever possible.
- Initiate conservation awareness campaigns among forest product collectors, tourism enterprises and tourists, who can help support conservation efforts.
- Conduct research before opening new tourism sites to determine possible impacts on species as well as the carrying capacity for tourists for each site to avoid disturbing wildlife or destroying critical habitat.
- Adopt and exceed as many of the Global Sustainable Tourism Council Criteria (GSTC) for Hotels & Lodges and Destinations¹⁵ with special attention to Criteria D3 Conserving biodiversity, ecosystems, and landscapes (see Box 11).
- If you are a private sector hotel, lodge or tour operator know how your business impacts species of concern that are important to the tourism industry like sea turtles (see Species Fact Sheets in Annexes).

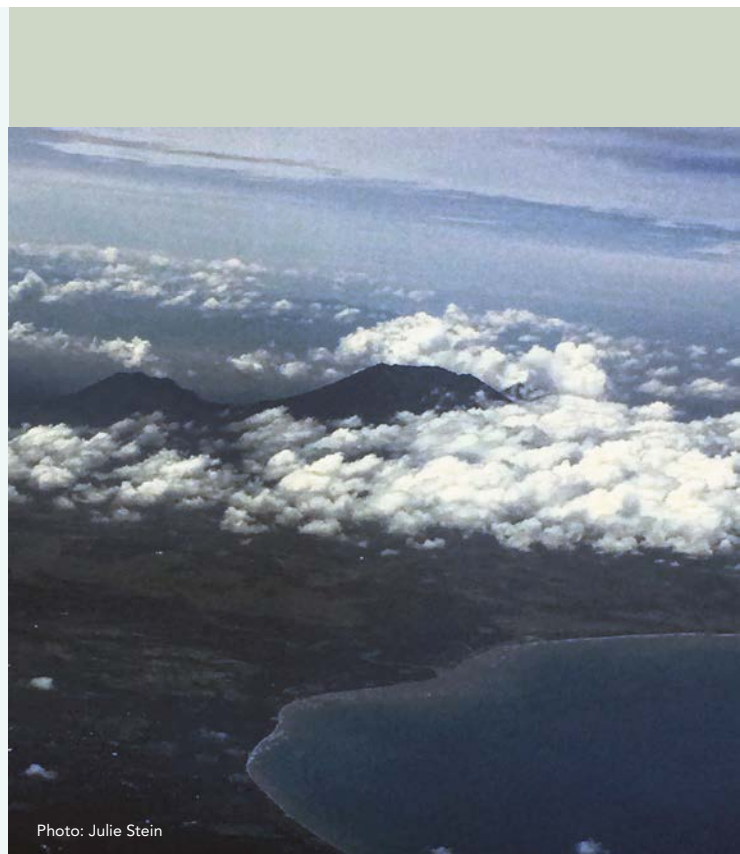


Photo: Julie Stein

A Ridge-to-Reef approach to ecotourism can be developed to highlight ecosystem approaches to conservation.

Key Markets for Ecotourism

In order to engage tourists effectively as partners in conservation it is important to understand the demographic of tourists interested in these issues and how best to engage them.

The Rise of the Aspirational Consumer

Recent consumer market research is showing a shift in consumer preferences with the rise of what is being called the ‘Aspirational’ consumer segment. As of 2014, Aspirationals comprised 2.5 billion, or 1/3, of global consumers.

Aspirational consumers are:

- Empowered Shoppers: 93 percent say “shopping for new things excites me.”
- Trusting in Brands: 50 percent say “they trust global companies to act in the best interest of society.”
- Positive Influencers: 90 percent say “I encourage others to buy from socially and environmentally responsible companies.”
- Responsible Consumers: 95 percent say “I believe we need to consume less to preserve the environment for future generations” and 90 percent say that they are “willing to pay more for products produced in a socially and environmentally responsible way.”
- Young and Female: Demographically, Aspirational consumers are most likely to represent the GenX (35 percent) and Millennial (33 percent) generations and they are more likely to be female (53 percent) than male (47 percent).
- Strong in Emerging Markets: A selection of the countries with the largest populations of Aspirational consumers that overlaps with the largest numbers of visitors to the Philippines include India (58 percent), South Korea (53 percent), China (51 percent), Canada (41 percent), the United Kingdom (41 percent), Australia (40 percent), and the United States (34 percent).¹⁶

The May 2015 figures for tourist visitors to the Philippines show the top two overall spending markets were Korea and the United States while the highest per capita spending was from American and Australian tourists. The top five visitor markets for the Philippines from January – May 2015 were from: 1) South Korea; 2) USA; 3) Japan; 4) China; and 5) Australia. For the month of May 2015, markets with substantial growth of inbound visitors included India, with 7,030 arrivals (up 32.52 percent), so there is significant overlap with the Aspirational consumer segment outlined above.¹⁷

In addition, other research on ‘green’ travelers in the US suggests that eco-travelers participate in leisure travel more frequently than other travelers making them a valuable commodity for the sector overall. More than 88 percent of 951 respondents said they had taken at least two vacations away from home during the last year, and 32 percent took 5-8 vacations during that time – far more than the national average.¹⁸

Destination Marketing

Defining the unique aspects of a destination and using those to communicate a strong sense of place, which appeals to sophisticated travelers is an important strategy for selling an ecotourism destination in a competitive tourism marketplace. The Philippines has a number of strong advantages that can be built upon including Palawan garnering the 2014 *Condé Nast Traveler* “Readers Choice” award for “Best Island in the World.”¹⁹

Creating Moments of Travel Inspiration to Sell Experiences through Instagram

Humans interpret the world through visual cues and images, which are often more effective in communicating emotions, experiences, information and ideas than words simply because our brains process images faster than text. A Massachusetts Institute of Technology study in 2014 revealed that it takes as little as 13 milliseconds for humans to process a dozen images.²¹ This explains the

“Place branding is critical to helping destinations in the developing world put themselves on the map and compete for visitors’ and investors’ attention – and dollars.”

– Tom Buncle, Yellow Railroad Destination Branding Consultants

For tourists interested in nature-based experiences communications should build on and redefine the “Only in the Philippines” tagline already in use to brand the nation as a biodiversity hotspot with high rates of endemic species, which represent wildlife that can only be seen in the Philippines. A revival of the “Only in the Philippines” poster series using flagship species like the Palawan Peacock Pheasant and targeted to birders globally could help raise awareness of this valuable attribute, which helps to set the Philippines apart from other places.²⁰

popularity of social media platforms, like Instagram, which now has over 300 million active users.²² For brands, like those in the travel industry, Instagram is also demonstrating up to 50 times higher levels of engagement when compared to other social media platforms.²³ As a result, Instagram has been dubbed “The Weapon of Mass Seduction” for the travel and hospitality industry and as the tool of choice for destination marketing.²⁴

Here are some quick pro tips for using Instagram in your destination marketing (more tips from social media professionals are included in the Resources section):

- Put some thought into hashtags. This is how new ‘influencers’ in the travel sector will find you and share their own memorable travel moments captured in your destination with their followers.

Instagram suggests that you be: specific, relevant and observant when creating and using hashtags.²⁵

- Help users generate valuable and evocative content for you to inspire travelers and create an identity around your destination by using creative hashtags, through contests, and by creating compelling photo and 15-second video opportunities worthy of capturing and sharing.
- Engage travel industry Influencers on Instagram and invite them to the Philippines to tell the story of their travel experience.
- Analyze and learn from the content Instagrammers are creating while visiting your destinations and use these insights to improve services, experiences and tailor your marketing.

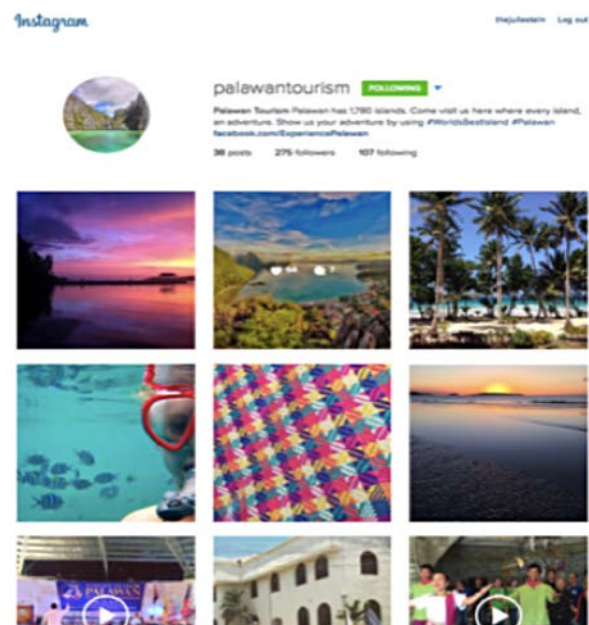
The Power of TripAdvisor

Part of the global trend towards empowered consumers who access and share information about the companies and brands they choose is a phenomenon in the travel industry called TripAdvisor. TripAdvisor is now considered the world's largest travel site.²⁶ It is an especially important tool for tourists who may be booking an expensive trip from far away and in essence provides word-of-mouth recommendations. A study by Cornell University's Center for Hospitality Research found that TripAdvisor user reviews are among the final and potentially pivotal criteria in a tourist's online hotel selection process. In addition, the percentage of consumers consulting reviews at TripAdvisor prior to booking a hotel room has steadily increased over time, as has the number of reviews they are reading prior to making their hotel choice. Increases in hotel ratings can translate into the ability to charge more for a room per night as well as higher occupancy rates.²⁷ In addition, the green travel trend is gaining momentum among

Hashtags and Instagram

Some popular Philippines destination hashtags and number of posts as of June 2015:

#philippines (6,215,968 posts)
 #itsmorefuninthephilippines (1,164,440 posts)
 #onlyinthephilippines (133,676 posts)
 #palawan (501,502 posts)
 #worldsbestisland (1086 posts)
 #palawanderer (950 posts)



TripAdvisor members. In their 2012 survey of more than 700 U.S. travelers, 71 percent said they plan to make more eco-friendly choices in the next 12 months compared to 65 percent that did so in the past 12 months.²⁸ TripAdvisor offers best practice tips, insights, free webinars and other tools to assist businesses and destinations in leveraging this powerful online community.²⁹

Recommendations

Including cultural ecosystem services such as ecotourism in PES mechanisms enables the Philippines to market their unique biodiversity, and increase resources needed to invest in conservation practices to be climate change adaptive and disaster resilient. The example of the Mangrove Paddle Boat ecotourism enterprise illustrates how conservation of old growth mangroves can generate income from tourism, while providing valuable ecosystem services in storm surge protection, wild fisheries productivity and habitat for endangered wildlife that are endemic to the Philippines.

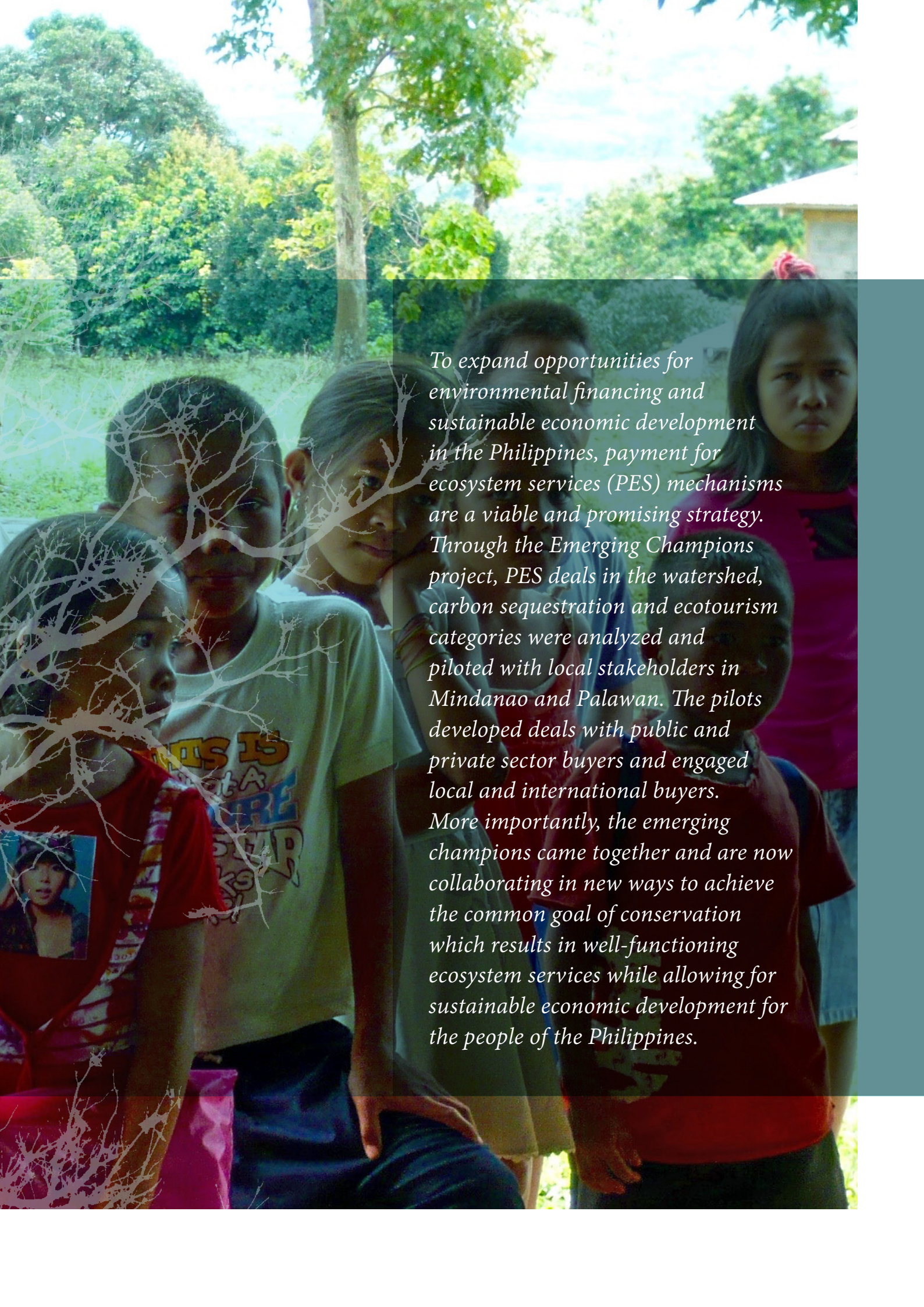
Ecotourism PES is especially suited to using social media for marketing products, attracting buyers and promoting best practices. These efforts include use of certifications and global best practice standards to position the Philippines ecotourism in local and international markets. The Philippines has a vibrant tourism industry, but needs to give greater focus to conservation and sustainability issue if this sector is to be preserved and grow. To expand ecotourism PES in the Philippines it is recommended that government, the tourism sector and local communities:

1. Understand the market segmentation within ecotourism for the Philippines and develop specialized tour options for ridge to reef nature-based tourism (see Figure 1), wildlife viewing tourism (marine and terrestrial) and birdwatching.
2. Develop low impact/high value ecotourism products for globally unique Philippine locations, for example bird watching tours to see endemic species only found on Palawan. Restricting access to conserve can be positioned as exclusive with premium price; attracting tourists willing to pay for an experience that is not mass marketed.
3. Engage tourists as partners in conservation through pre-trip educational opportunities on local biodiversity issues and low impact tourism choices, through on-the-ground volunteer tourism opportunities, and through direct monetary contributions.
4. Empower and enable tourists to tell the stories of their travel experiences in an evocative way on Instagram or to 5 star rate the experience on TripAdvisor.
5. Encourage adopting and exceeding as many of the Global Sustainable Tourism Council (GSTC) Criteria for Hotels and Lodges and Destinations as possible. Consider hosting a GSTC Destination Training.³⁰
6. Engage in international, regional, and local ecotourism and sustainable tourism networks including The International Ecotourism Society (TIES); Asian Ecotourism Network; and Society for Sustainable Tourism and Development, Inc. (SSTOI) operating in Coron, Negros, and Boracay.
7. Encourage active and meaningful partnerships between the private sector and local NGOs, local communities, or protected area authorities and empower private sector champions to promote your destination. For example, the Palawan Council for Sustainable Development, Department of Tourism and various private sector tour associations could work with the Wild Bird Club of the Philippines and Birdingpal.com to match local birding expert guides with foreign tourists.
8. Engage academia and students to assist in monitoring efforts as well as developing tourism and hospitality industry skills for the youth.
9. Ensure indigenous communities clearly see the link between, and reap the benefits of, protecting biodiversity for tourism.



Section 6

Conclusion

A photograph of a group of children in a rural setting. In the foreground, a young boy in a white t-shirt with a graphic is looking towards the camera. Behind him, several other children are visible, some looking at the camera and others looking away. The background is filled with lush green trees and foliage. A semi-transparent dark blue box with white text is overlaid on the right side of the image. The text is in an italicized serif font.

To expand opportunities for environmental financing and sustainable economic development in the Philippines, payment for ecosystem services (PES) mechanisms are a viable and promising strategy. Through the Emerging Champions project, PES deals in the watershed, carbon sequestration and ecotourism categories were analyzed and piloted with local stakeholders in Mindanao and Palawan. The pilots developed deals with public and private sector buyers and engaged local and international buyers. More importantly, the emerging champions came together and are now collaborating in new ways to achieve the common goal of conservation which results in well-functioning ecosystem services while allowing for sustainable economic development for the people of the Philippines.

The Emerging Champions Project was able to launch and advance PES in Mindanao and Palawan by focusing on three major principals:

- 1. Engage broad range of stakeholders in PES development and follow design and implementation steps (see Figure 6).
- 2. Emphasize and invest in PES marketing.
- 3. Take a Portfolio Approach to PES both in type of PES and variety of buyers (see Figure 7).

Figure 6. Steps in Designing and Implementing PES Schemes



Figure 7. PES Portfolio Recommended for the Philippines



The PES deals, which moved forward in the Emerging Champions project, did so because they had a marketable ecosystem service and effectively identified the prospective buyers and sellers. In order to sell the PES concept and a specific ecosystem service, the following PES marketing steps need to happen:

- Identify a service of value to at least one buyer.
 - Establish a cause and effect relationship where buyers can be confident that what is purchased will deliver the benefits required. Some technical research might be required to establish links to increase service provision. The more realistic the scientific basis for a potential PES scheme and perception that the buyer would be worse off if service is impaired or gone, the easier it is to attract buyers.
- Find a range of possible buyers and sellers for the service.
- Define the prospects for trade between the buyer and seller.
- A provision of ecosystem services is threatened, but the adoption of specific land-use/management practices has the potential to address the supply constraints.
- A trusted intermediary is available to assist both parties in developing the negotiation and provide expertise in the PES design.
- Clear criteria are established and ensure compliance of the contractual agreement by both parties.
- Land tenure and usage rights are clear.
- There is cross-sectorial support between existing policies and laws and PES requirements.

Relief International – EnterpriseWorks Worldwide/Philippines thanks all the Emerging Champion project partners for contributing their expertise, resources, and willingness to share lessons and cooperate as the project piloted PES in the Philippines. Our hope is that the lessons and guidance shared in “Making Environment Financing Work” will enable other groups to expand and replicate PES throughout the Philippines.

PES deals are most likely to flourish when the marketing information emphasizes:

- There is clear demand for at least one ecosystem service and it should be financially feasible to one or more buyers.

Visit our website at www.ri.org or contact us at info@ri.org

Section 7

Resources

General Information

- The Ecosystem Services Partnership
<http://www.fsd.nl/esp>
- Ecosystem Market Place
<http://www.ecosystemmarketplace.com/>
- Duke Nicholas Institute for Environmental Policy Solutions <http://nicholasinstitute.duke.edu/ecosystem>
- Millennium Ecosystem Assessment
<http://www.millenniumassessment.org/>
- Katoomba Group
<http://www.katoombagroup.org/>

Carbon

- Center for Capacity Building
<http://www.ccb.ucar.edu/>
- Plan Vivo System
<http://www.co2offsetresearch.org/policy/PlanVivo.html>
http://www.geos.ed.ac.uk/abs/MiomboConference/AM_WMa.pdf
- EcoSecurities <http://www.ecosecurities.com>

Water

- World Resources Institute's NutrientNet
<http://www.nutrientnet.org>
- The National Capital Project- a consortium of Stanford University, World Wildlife Fund and the Nature Conservancy <http://www.naturalcapitalproject.org/>

Biodiversity

- Business and Biodiversity Offset Program
<http://www.forest-trends.org/biodiversityoffsetprogram/>

Payment for Ecosystem Services (PES)

- The Economics of Ecosystems and Biodiversity (TEEB) website is a useful resource on PES: <http://www.teebweb.org>
- Forest Trends Ecosystem Marketplace: <http://www.ecosystemmarketplace.com>

Sustainable Tourism

- Global Sustainable Tourism Council's Criteria for Hotels and Lodges available for download as a pdf from <http://www.gstcouncil.org/en/gstc-criteria/criteria-for-hotels-and-tour-operators.html>
- Global Sustainable Tourism Council's Criteria for Destinations available for download as a pdf from <http://www.gstcouncil.org/en/gstc-criteria/criteria-for-destinations.html>
- Global Sustainable Tourism Council's On Site Sustainability Training Program: <http://www.gstcouncil.org/en/programs/gstc-training-program.html>
- The Guide to Sustainable Tourism, www.BlueandGreenTomorrow.com, January 2013 available from <http://blueandgreentomorrow.com/wp-content/uploads/2013/02/BGT-Guide-to-Sustainable-Tourism-10MB1.pdf>

Certification

- Green Tourism Certification Manual, Asian Productivity Organization (2009) available from: <http://www.apo-tokyo.org/publications/wp-content/uploads/sites/5/gp-18-gtcm.pdf>
- The Integration of Biodiversity in CSR Processes in the Tourism Industry: Biodiversity Criteria for Tourism. Recommendations for Standards, Labels and Awards. Ecotrans, 2014 available from <http://www.business-biodiversity.eu/global/download/%7BDYNNBBCFUWF-1217201414757-QFOHBOEUVI%7D.pdf>
- The International Ecotourism Society has a number of good publications including "A Simple Users Guide to Certification for Sustainable Tourism and Ecotourism" available here: <http://www.ecotourism.org/certification-and-standards>
- Blue Flag Certification: <http://www.blueflag.org>
- Wildlife Friendly® Tourism Certification: <http://wildlifefriendly.org>
- General best practice guidelines for certification programs are available from the ISEAL Alliance: <http://www.isealliance.org>

Biodiversity and Tourism

- Secretariat of the Convention on Biodiversity (2015) *Tourism Supporting Biodiversity: A Manual on Applying the CBD Guidelines on Biodiversity and Tourism Development*, Montreal, available from <https://www.cbd.int/tourism/doc/tourism-manual-2015-en.pdf>
- Green Economy and Trade: Trends, Challenges and Opportunities. UNEP (2013), Chapter 7, Tourism, available from <http://www.unep.org/greeneconomy/Portals/88/GETReport/pdf/Chapitre%207%20Tourism.pdf>
- Wildlife Watching and Tourism: A Study on the Benefits and Risks of a Fast Growing Tourism Activity and its Impacts on Species. UNEP/CMS Secretariat, Bonn, Germany (2006) available from http://www.cms.int/sites/default/files/document/ScC14_Inf_08_Wildlife_Watching_E_0.pdf
- A “Practical Guide to Good Practice for Tropical Forest-Based Tours” was developed by Conservation International and partners as a tool to help tropical forest-based tour operators improve their environmental and social performance. It includes practical suggestions for improving performance, including interactions with wildlife, and has examples from other tour operators around the world, and a self-evaluation checklist to help operators identify areas of improvement. Available from: http://www.rainforest-alliance.org/sites/default/files/publication/pdf/good_practice.pdf
- Kim, Seong-il, Mihee Kang and Dian Sukmajaya (eds.) 2013. *Opportunities and challenges of ecotourism in ASEAN countries*. Seoul, Jungmin Publishing Co. 278pp.
- National Ecotourism Strategy and Action Plan for the Philippines: 2013-2022, (2014) Department of Tourism.

Illegal Wildlife Trade

- “Shop Carefully” Video produced by the TRAFFIC East Asia office in Taipei to encourage responsible buying of souvenir items: <https://www.youtube.com/watch?v=zrEeJ5b8hrI>
- For additional resources on the illegal wildlife trade: <http://www.traffic.org/trade/>

Wildlife Watching

Birders and Birdwatching

- The Birding Tours Self-Assessment Checklist: A Practical Guide for Good Environmental and Social Practice was written for the country of Guyana but is an excellent reference for both tourists and the tourism sector in other important bird biodiversity hotspots. Available for download from <http://www.jubileeonline.ca/experience/birding-tours-self-assessment-checklist>
- The Wild Bird Club of the Philippines: <http://birdwatch.ph/index.html>
- Birding Pal is a service that helps match Birders with local Bird Guides: <http://birdingpal.org/Philippines.htm>
- The Royal Society for the Protection of Birds (RSPB) Birdwatcher's Code: <http://www.rspb.org.uk/discoverandenjoynature/discoverandlearn/funfactsandarticles/watchingbirds/code/index.aspx>
- Birdlife Australia's Ethical Birding Guidelines available from: <http://birdlife.org.au/documents/POL-Ethical-Birding-Guidelines.pdf>

Codes of Conduct for Dugong (and Manatee) Tourism that could be Adapted for Dugongs in the Philippines

- Birtles et al (2004) *Code of Practice for the Sustainable Management of Dugong and Marine Turtle Tours in Australia* available via <http://www.dugongturtletourism.org>

- Codes of Conduct and Guidelines Relating to Dugong and Turtle Tourism, Appendix 5, Towards Sustainable Dugong & Turtle Tourism Project, www.dugongturtletourism.org, James Cook University and Natural Heritage Trust
- Manatees in Belize: Guidelines for Protection available from http://www.coastalzonebelize.org/wp-content/uploads/2010/04/manatee_protection.pdf
- Florida Manatees: Guidelines for Boating, Diving and Snorkeling around Manatees, Florida Fish and Wildlife Conservation Commission, available from http://myfwc.com/media/415226/Manatee_FLTreasure_bklt.pdf

Recommended Best Practice Standards for Sea Turtles for the Tourism Sector

- Choi, Ga-Young and Karen L. Eckert. 2009. Manual of Best Practices for Safeguarding Sea Turtle Nesting Beaches. Wider Caribbean Sea Turtle Conservation Network (WIDECAST) Technical Report No. 9. Ballwin, Missouri. 86 pp. Available from: http://www.widecast.org/Resources/Docs/Choi_and_Eckert_2009_Safeguarding_Sea_Turtle_Nesting_Beaches.pdf
- For recommended Codes of Conduct for Sea Turtle watching ecotourism (written for Australia but with wider applicability) see <http://www.dugongturtletourism.org>
- Where are your Turtle Manners? Infographic, Marine Wildlife Watch Philippines and Save Philippine Seas, available from <http://www.mwwphilippines.org/downloads/turtle-manners.pdf>

Resources on Sea Turtle Care & Medicine:

- Philippine Aquatic Wildlife Rescue and Response Series: Marine Turtles, available from <http://www.mwwphilippines.org/downloads/rm-marineturtles.pdf>
- Wider Caribbean Sea Turtle Conservation Network (WIDECAST): <http://www.widecast.org/What/Regional/Medicine.html>

Aspirational Consumers

- For more on BBMG / Globescan's research on Aspirational Consumers see <http://theaspirationals.com> and for a summary of their 2014 Aspirational Consumer Index: http://bbmg.com/wp-content/uploads/2014/07/BBMG_GlobeScan_TheAspirationals.pdf

Destination Marketing

- Engage Sciences blog on travel brand user-generated content: <http://www.engagesciences.com/travel-brand-content-marketers/>
- Find Substance presentation on storytelling strategies for adventure brands: <http://findsubstance.com/blog/2015/01/stories-sell-content-strategy-adventure-brands-presentation/>

Instagram Tools and Tips

- Instagram offers free tips on their blog: <http://blog.instagram.com/tagged/Instagram-Tips>
- The Travel Market Report showcases some great examples of travel brands using Instagram to connect with consumers: <http://www.travelmarketreport.com/articles/Here-Are-Travel-Brands-Doing-Instagram-Right>
- More great Instagram destination marketing examples from Tourism and Marketing Expert Frederic Gonzalo: <http://fredericgonzalo.com/en/2014/02/23/4-creative-uses-of-instagram-in-destination-marketing/>
- On Instagram and the value of engaging Influencers in the travel industry: <http://www.adweek.com/socialtimes/if-youre-not-paying-attention-to-your-influencers-youre-burning-money/624251>

TripAdvisor Tools and Tips

- TripAdvisor offers free tools, insights and webinars: <http://www.tripadvisor.com/TripAdvisorInsights>

Section 8

Endnotes

Section 2 – Overview of Payment for Ecosystem Services (PES)

- 1 See The Economics of Ecosystem's and Biodiversity (TEEB) website for a useful schematic: <http://www.teebweb.org/resources/ecosystem-services/>. The Payment for Ecosystem Services (PES) framework, as adopted by the Millennium Ecosystem Assessment process of the United Nations, is a widely used tool to better understand and monetize the relationship between ecosystems and society and categorizes Ecosystem Services into four interlinked categories.

Section 3 – Watershed PES

- 1 Data from “Ecosystem Marketplace State of Watershed Investment 2014” report.

Section 4 – Forest Carbon PES

- 1 From 2011 – 2015 *Emerging Champions for Biodiversity Conservation and Improved Ecosystem Services* project (*Emerging Champions* project) introduced and advanced the understanding and practice of Payment for Ecosystem Services (PES) in the Philippines. RI-EWW/P, through *Emerging Champions*, worked in conjunction with the Bagobuk Marketing Association and a broad spectrum of local stakeholders in Cagayan de Oro, Bukidnon, Butuan, and Palawan, including government, Community Based Forest Management (CBFM) groups, the private sector, local NGOs, academe and People's Organizations. *Emerging Champions* was implemented with European Union funding and co-funding from USAID's *Biodiversity Conservation through Management of Natural Resources* (BCMNR) project.
- 2 Ecosystem Marketplace (2015). *Ahead of the Curve: State of the Voluntary Carbon Markets 2015*. Washington: Ecosystem Marketplace (an initiative of Forest Trends). Allowance should be made for a considerable margin of error and time lags in the reporting of some data, especially volume-weighted price data. Voluntary markets are not characterized by a high level of price discovery (transparency), which is supposed to be one of the defining features of any market. Credit transactions are negotiated

directly between buyers and sellers, and even though most voluntary transactions and project details are now visible in online registries such as the Markit environmental registry, transaction prices are not shown.

- 3 The Gold Standard, one of the original mainstream voluntary carbon standards, has even gone as far as developing a new water certification standard.
- 4 Relief International-EnterpriseWorks Worldwide/Philippines (2015). *Activity Report: Baseline Forest Carbon Stock Measurement in a Community Based Forest Management Area (CBFMA)*. (Output of the *Emerging Champions* project).

Section 5 – Ecotourism Cultural PES

- 1 See UNWTO press releases <http://media.unwto.org/en/press-release/2013-01-28/international-tourism-continue-robust-growth-2013> and <http://media.unwto.org/en/press-release/2012-12-12/international-tourism-hits-one-billion>
- 2 See UNWTO Tourism Highlights 2015 available from <http://skift.com/wp-content/uploads/2015/06/wttc-june-2015-report.pdf> and UNWTO's Tourism Towards 2030: Global Overview available from http://media.unwto.org/sites/all/files/pdf/unwto_2030_ga_2011_korea.pdf
- 3 See Green Economy and Trade: Trends, Challenges and Opportunities, Chapter Seven, Tourism, UNEP 2013 available from <http://www.unep.org/greeneconomy/Portals/88/GETReport/pdf/Chapitre%207%20Tourism.pdf>
- 4 Ecotourism is defined by The International Ecotourism Society (TIES) as “responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education. See <http://www.ecotourism.org/what-is-ecotourism>
- 5 See Green Economy and Trade: Trends, Challenges and Opportunities, Chapter Seven, Tourism, UNEP 2013 available from <http://www.unep.org/greeneconomy/Portals/88/GETReport/pdf/Chapitre%207%20Tourism.pdf>
- 6 Positive and negative impacts on biodiversity adapted from Tourism Supporting Biodiversity: A Manual on Applying the CBD Guidelines on Biodiversity and Tourism Development available from <https://www.cbd.int/tourism/doc/tourism-manual-2015-en.pdf>
- 7 See The Integration of Biodiversity in CSR Processes in the Tourism Industry. Biodiversity Criteria for Tourism: Recommendations for Standards, Labels and Awards

- available from <http://www.business-biodiversity.eu/global/download/%7BDYNNBFCUWF-1217201414757-QFOHBOEUVI%7D.pdf>
- 8 See Biodiversity Hotspots for Conservation Priorities, N. Myers, Mittermeier, R.A., Mittermeier, C., da Fonseca, G.A..B., Kent, J. NATURE | VOL 403 | 24 February 2000. Available from <http://www.nature.com/nature/journal/v403/n6772/pdf/403853a0.pdf>
 - 9 To learn more about the GSTC Criteria development process please access <http://www.gstcouncil.org/en/gstc-criteria/criteria-for-hotels-and-tour-operators.html>
 - 10 The GSTC Criteria and Indicators for Hotels and Lodges, and for Destinations are available as pdf downloads from these links respectively: http://www.gstcouncil.org/images/pdf/HTO-CRITERIA_and_INDICATORS_6-9-14.pdf and http://www.gstcouncil.org/images/Dest-_CRITERIA_and_INDICATORS_6-9-14.pdf
 - 11 See <http://www.blueflag.org> for their criteria on Beaches, Marinas, Boats and Whale Watching Boats
 - 12 See <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=2683&ArticleID=9130&l=en> and http://www.unep.org/greeneconomy/Portals/88/documents/ger/ger_final_dec_2011/Tourism%20in%20the%20green_economy%20unwto_unep.pdf
 - 13 Ross Sinclair, personal communication and see <http://www.samveasna.org>
 - 14 Learn more about The Coron Initiative at <https://thecoroninitiative.wordpress.com>
 - 15 Available from <http://www.gstcouncil.org/en/gstc-criteria/sustainable-tourism-gstc-criteria.html>
 - 16 BBMG and Globescan 2014 Aspiration Consumer Index. See <http://theaspirational.com/shift>
 - 17 Statistics Prepared by Tourism Research and Statistics Division (TRSD), Office of Tourism Planning, Research and Information Management (OTPRIM), Tourism Development Planning (TDP), Tourism Development, Department of Tourism and available from: <http://www.tourism.gov.ph/Pages/IndustryPerformance.aspx>
 - 18 See CMIGreen Traveler Study 2010-11 available from http://cmigreen.com/wp-content/uploads/2012/02/cmigreen2010_11.pdf
 - 19 See <http://www.cntraveler.com/galleries/2014-10-20/top-30-islands-in-the-world-readers-choice-awards-2014>
 - 20 The Palawan Peacock Pheasant once featured on a bilingual environmental awareness poster in the "Only in the Philippines" series. See <http://www.birdlife.org/datazone/species/factsheet/22679398>
 - 21 See <http://newsoffice.mit.edu/2014/in-the-blink-of-an-eye-0116>
 - 22 See <http://blog.instagram.com/post/104847837897/141210-300million>
 - 23 See <http://www.socialbakers.com/blog/2321-instagram-blows-away-twitter-on-brand-engagement-by-almost-50x>
 - 24 See <http://fredericgonzalo.com/en/2014/02/23/4-creative-uses-of-instagram-in-destination-marketing/>
 - 25 See <http://blog.instagram.com/post/17674993957/instagram-tips-using-hashtags>
 - 26 See http://www.tripadvisor.com/PressCenter-c4-Fact_Sheet.html
 - 27 See Dr. Chris Anderson's The Impact of Social Media on Lodging Performance available from <https://www.hotelschool.cornell.edu/research/chr/pubs/reports/abstract-16421.html>
 - 28 See TripAdvisor press release <http://www.multivu.com/mnr/49260-tripadvisor-eco-friendly-travel-survey-voluntourism-go-green>
 - 29 See TripAdvisor for Business microsite: <https://www.tripadvisor.com/Owners>
 - 30 For additional information on GSTC Destination Trainings see <http://www.gstcouncil.org/en/programs/gstc-training-program.html>

Annex 2 – Species Fact Sheets

Dugongs & Tourism in the Philippines

- 1 See Marsh, H. (2002). Dugong: Status Report and Action Plan for Countries and Territories. Early Warning and Assessment Report Series. UNEP. Available from <http://www.unep.org/NairobiConvention/docs/dugong.pdf>
- 2 Ibid and see <http://www.rappler.com/nation/46330-dugong-dead-busuanga-palawan>
- 3 This checklist was adopted from a variety of best practice codes of conduct listed in the Resources section of this document. For a comprehensive list of Code of Practice for Dugong Tourism please see Birtles et al (2004): http://www.dugongturtletourism.org/docs/CodeOfPractice_www.pdf and <http://www.dugongturtletourism.org/docs/Appendix5CodesOfPractice.pdf>
- 4 See Rodger, K., Smith, A., Davis, C., Newsome, D., and Patterson P. (2010). A Framework to Guide the Sustainability of Wildlife Tourism Operations: Examples of marine wildlife tourism in Western Australia, available

from <http://www.crctourism.com.au/wms/upload/resources/100035%20Rodgers%20Sust%20Wildlife%20Framework%20WEB.pdf>

- 5 Appendix I lists species that are the most endangered among CITES-listed animals and plants They are threatened with extinction and CITES prohibits international trade in specimens of these species except when the purpose of the import is not commercial
- 6 See Marsh, H. 2008. Dugong dugon. The IUCN Red List of Threatened Species. Version 2015.2. <www.iucnredlist.org>. Downloaded on 09 July 2015.
- 7 See Marsh, H. (2002). Dugong: Status Report and Action Plan for Countries and Territories. Early Warning and Assessment Resport Series. UNEP. Available from <http://www.unep.org/NairobiConvention/docs/dugong.pdf>
- 8 Ibid
- 9 Ibid
- 10 Ibid

Sea Turtles & Tourism in the Philippines

- 1 See <http://iucn-mtsg.org/about-turtles/hazards/>
- 2 The Philippines hosts a higher population of sea turtles than its neighboring countries, resulting in foreign turtle poachers in Philippine waters. See <http://news.mongabay.com/2014/0515-hance-sea-turtles-poaching-philippines.html>
- 3 For recent incidents see <http://cnnphilippines.com/regional/2015/05/27/Palawan-pawikan-sea-turtles-seized.html> and <http://news.mongabay.com/2014/0515-hance-sea-turtles-poaching-philippines.html>
- 4 See <http://www.philstar.com/nation/2015/06/17/1466932/authorities-rescue-525-sea-turtles-palawan-resort> and <https://www.change.org/p/denr-pawb-director-theresa-mundita-lim-release-the-pawikan-in-turtle-island-guimaras>
- 5 Adapted from Choi, Ga-Young and Karen L. Eckert. 2009. Manual of Best Practices for Safeguarding Sea Turtle Nesting Beaches. Wider Caribbean Sea Turtle Conservation Network (WIDECAST) Technical Report No. 9. Ballwin, Missouri. 86 pp. For the full range of recommendations please see: http://www.widecast.org/Resources/Docs/Choi_and_Eckert_2009_Safeguarding_Sea_Turtle_Nesting_Beaches.pdf
- 6 For a sample Policy Statement please see p. 9 of the Choi and Eckert linked in the footnote above.

- 7 See <http://www.conservation.org/global/philippines/news/Pages/SeaTurtleBabyBoom.aspx>

Palawan Peacock Pheasant & Tourism in the Philippines

- 1 See <http://www.birdlife.org/datazone/speciesfactsheet.php?id=281>
- 2 See BirdLife International 2013. Polyplectron napoleonis. The IUCN Red List of Threatened Species. Version 2015.2. <www.iucnredlist.org>. Downloaded on 03 July 2015.
- 3 See <http://news.mongabay.com/2008/0917-palawan.html> and Mallari, N.A.D., Collar N.J., McGowan, J.K. and S.J. Marsden. 2013. Science-Driven Management of Protected Areas: A Philippine Case Study. Environmental Management (2013) 51:1236–1246
- 4 See <https://lnt.org/learn/7-principles>
- 5 CITES Appendix I lists species that are the most endangered among CITES-listed animals and plants which are threatened with extinction. CITES prohibits international trade in specimens of these species except when the purpose of the import is not commercial.
- 6 See <http://www.iucnredlist.org/details/22679398/0>
- 7 See <http://www.birdlife.org/datazone/ebafactsheet.php?id=154> . Also see <http://www.palawan.gov.ph/environment.php> and <http://whc.unesco.org/en/list/652>
- 8 See <http://whc.unesco.org/en/list/652>
- 9 See <http://www.birdlife.org/datazone/speciesfactsheet.php?id=281> and <http://www.arkive.org/palawan-peacock-pheasant/polyplectron-napoleonis/image-G74423.html>
- 10 See <http://www.arkive.org/palawan-peacock-pheasant/polyplectron-napoleonis/image-G74423.html>
- 11 See Mallari, NAD, et al, Population densities of understorey birds across a habitat gradient in Palawan, Philippines: Implications for conservation. Oryx, 45(2), 234–242 available from: http://people.ds.cam.ac.uk/cns26/njc/Papers/Palawan_understorey_densities.pdf

Section 9

Annexes

ANNEX 1 – ORDINANCE NO. 15-17

An Ordinance Enacting a System for Payment for Ecosystem Services to Ensure that the Benefits Provided by the Watersheds of the Municipality of Libona can be Enjoyed in Perpetuity

Introduced by: Councilor Eterio P. Tanquis,
Chairperson, Committee on Environmental Concerns and Zoning

Section 1. Title. This Ordinance shall be known and cited as the Payments for Ecosystem Services Act of the Municipality of Libona.

Section 2. Declaration of Objectives. – It is hereby declared the objectives of the Municipal Government:

A. General Objective.

To place the municipal watersheds under a regime of judicious governance and responsible stake-holdership to ensure a continuous flow of watershed ecosystem goods and services essential in sustaining a vigorous and inclusive local economy and stable ecology.

B. Specific Objectives:

- a. To secure for the Municipality and all its inhabitants a continuous supply of safe and clean water for domestic, industrial and agricultural use;
- b. To enhance the integrity of the vegetation covering the slopes of Mt. Kitanglad comprising the Municipal watersheds resilient enough to extreme and frequent weather disturbances and other perturbations spawned by climate change;
- c. To institute a sustainable funding mechanism in support of local watershed rehabilitation and protection program;
- d. To maintain equity and inclusivity among all residents of the Municipality whether upland or downstream; and
- e. To lend support to Mt. Kitanglad Range Natural Park (MKRNP) in the execution of its program of activities pertaining to areas within the administrative confines of the Municipality.

Section 3. Definition of Terms.

Groundwater - water found below the ground surface that supplies wells and springs or water held underground in soil or permeable rock, often feeding springs and wells.

Commercial Users - those establishments engaged in profit-oriented enterprises. This definition, however, does not apply to sari-sari stores.

Industrial Users - establishments engaged in industrial production of goods or provision of public services such as factories and hydro-electric power plants.

Agricultural Users - those that are engaged in land cultivation and other forms of agricultural practices.

Watersheds - the area of land that includes a particular river or lake and all the gullies and water pathways that flow into it. In this ordinance, this refers to those watersheds emanating from the ridges and upper reaches of Mt. Kitanglad that define the topographic divides of Agusan, Cugman, Sigmatan and Bubonawan rivers whose drainage areas or a part thereof lie within the political jurisdiction of the Municipality of Libona.

Agro-Industrial Use – relating to production for both industrial and agricultural purposes such as livestock and large plantation crops.

Interim – a period of time between events: used or accepted for a limited time and not permanent.

MKRNP – Mount Kitanglad Range Natural Park.

PAMB – Protected Area Management Board of MKRNP.

Section 4. Watershed Rehabilitation and Protection Charges and Other Obligations. In order to attain the above-stated objectives of this ordinance, a watershed rehabilitation and protection charge shall henceforth be levied on all water users in the Municipality.

- A. **Charges.** Commercial, Industrial, Agro-industrial and Agricultural groundwater users shall be charged PhP250.00 a month. The schedule of payment shall be during the date of yearly renewal of business and other kinds of permits. Payment may also be made monthly at the municipal treasurer's office at the discretion of the user.
- B. **Obligations.** Over and above the payment of watershed charges, commercial, industrial, agricultural including residential users of the Municipality are strongly encouraged to volunteer in rehabilitating the barren areas or degraded patches of the municipal watersheds and/or protect the watersheds from encroachment, timber poaching, fire and other forms of destructive activities through regular foot patrol and surveillance under the DENR deputation arrangement. Other voluntary services are in the form of material or in-kind services that will contribute to watershed rehabilitation and protection. The Municipal Environment and Natural Resources Office (MENRO) shall prepare the planting guidelines, location, patrol sectors, and schedules for those who volunteer to do or provide support to forest rehabilitation and forest protection activities.

Section 5. Watershed Trust Fund. All charges collected under this ordinance shall be deposited in a trust fund to be called the Watershed Trust Fund, which shall be used for the protection and rehabilitation of the municipal watersheds. All collections for the charges shall be transferred to the Watershed Trust Fund of the Municipality every first Monday of the month.

In compliance with Sec. 309 (b) of the Local Government Code, this trust fund shall only be used for the specific purpose for which it was created.

Section 5. Administration of the Fund. – There is hereby created a Trust Fund Executive Committee headed by the Municipal Mayor, which shall have four members, namely the Protected Area Superintendent of MKRNP, the Chairman of the Sanggunian Committee on Environment and the MENRO. and a member of an accredited NGO with a track record in conservation work in Protected Areas (PA).

The committee shall have the following functions and responsibilities:

- A. Provide overall management and supervisory function in the operationalization, fiscal management and execution of all activities related to the implementation of this ordinance.

- B. Set the guidelines for the review and approval of proposals for watershed rehabilitation submitted by qualified parties who may wish to avail of the trust fund.
- C. Conduct regular monitoring of financial and physical accomplishments related to the implementation of this ordinance.
- D. The SB Environment Committee Chair shall perform an oversight function and have access to all records, information, meetings and events undertaken under this ordinance.
- E. The MENRO shall serve as the secretariat of the committee.
- F. Perform such other administrative and supervisory functions to ensure transparency and accountability in the use of the trust funds.

The Executive Trust Fund Committee shall use the resources of their own offices for operations and shall only be allowed to charge actual food transportation expenses from the Fund. As secretariat and focal person in the implementation of this ordinance, the Municipal ENRO and its delegated personnel may use not more than 15 percent of the Trust Fund for administrative supervisory and monitoring expenses.

Section 6. Mechanics in Trust Fund Disbursement. The detailed mechanism in the disbursement of the trust funds shall be crafted by a Technical Working Group (TWG) to be created through an Executive Order signed by the Municipal Mayor immediately after the approval of this ordinance. The TWG shall be chaired by the SB on Environment and co-chaired by the MENRO. The chiefs of planning, treasurer's office, assessors and MAO and a representative of an NGO whose advocacy is related to natural resources management shall comprise the core members of the TWG. The Mayor, however, may appoint any officer who possesses related or specialized expertise to join the TWG as member or resource person.

A. Harmonized Action Plan Targets. The Technical Working Group (TWG) shall prepare a detailed action plan for the purpose of actualizing the objectives of this ordinance. This plan shall harmonize the targets of the municipal watershed management plan and that program of activities of the MKRNP General Management Plan intended to watershed areas situated within the jurisdiction of the Municipality. The TWG shall prepare specific annual targets based on the above plans identifying the qualified parties, allowable activities and procedures and guidelines in the availment and disbursements of such funds.

Only targets identified in the harmonized action plan and duly approved by the Executive Trust Fund Committee shall be eligible for funding.

B. Who may provide Ecosystem Services. The Technical Working Group (TWG) shall also identify all the activities to be undertaken related to watershed rehabilitation and protection for approval by the executive committee. It shall also set the criteria and guidelines in the identification and selection of contractors or parties who shall be engaged by the Municipality in the provision of services related to fund management, monitoring, watershed rehabilitation, forest protection, and plantation establishment.

The activities identified should have specific targets and corresponding unit cost as basis for payment of the services rendered as well as for monitoring and verification purposes.

Section 7. Fund Manager. For purposes of transparency and objectivity, the Trust Fund Committee may contract the services of a private group or foundation to serve as fund manager with track record on procedures in monitoring and validation in the payment of accomplishments by project contractors. The Technical Working Group shall draft the qualification standards and selection criteria for use by the Executive committee in the selection of the Fund Manager.

Section 8. Effect of non-payment. Any Commercial, Industrial, Agro-industrial and Agricultural groundwater users who failed to pay the watershed protection charge within six months after the due date as reflected in the renewal dates of Municipal permits, shall suffer a fine of PhP1,000.00 and PhP5,000.00 for failure to pay in six months to one year. Non-payment for more than one year will result to non-renewal of municipal permits and the annotation of the liability in the Assessor's Office as an obligation of the real property owner, chargeable together with the real property tax.

Section 9. The Municipal Government will institutionalize schemes designed to reward incentives to residents and industrial or agricultural water users who render voluntary services or undertake initiatives that contribute to the rehabilitation and protection of the Municipal watersheds. The TWG shall draft the policy for this purpose for the consideration of the local council and/or the chief executive.

Section 10. Mandatory Review. Within two years from the passage of this Ordinance, the Sangguniang Bayan shall conduct a review of its effectiveness in achieving the purposes for which it was enacted and shall require the Trust Fund Executive Committee to provide all the information on its operations including permits, financial reports and studies that reflect the status of the implementation of plans and activities related to this ordinance.

Section 11. Separability Clause. – Should any provision of this Ordinance be declared unconstitutional or invalid, any provision thereof not affected thereby shall remain valid and enforceable.

Section 12. Repealing Clause. – Any ordinance whose provisions are inconsistent to this Ordinance are hereby repealed.

Section 13. Effectivity. – This ordinance shall take effect immediately after compliance with the posting and publication requirement pursuant to section 59 of Republic Act No. 7160, otherwise known as the Local Government Code of 1991.

Annex 2 – Species Fact Sheets

Dugongs & Tourism in the Philippines

Why Dugongs are Vulnerable

Because of their slow reproductive rate and dependence on seagrass beds and coastal waters, Dugongs are vulnerable to human activities. In the Philippines, there are signs of seagrass degradation from natural disasters, aquaculture, deforestation, siltation, destructive fishing methods, reclamation, development, dredging and recreation. With 70 percent of Filipinos living along coastal waters, there is intense development pressure. This is impacting Dugong access to critical seagrass feeding sites.¹

Major threats to the Dugong in the Philippines include: human settlement; water transport; subsistence food harvesting; subsistence medicinal harvest; netting and fish corrals; dynamite fishing; agri-pollution, siltation and sedimentation from deforestation; a slow growth rate; and ironically, ecotourism.² The expansion of the Philippines' ecotourism has produced Dugong-watching cruises and/or swim and dive with Dugong tours. While this is an opportunity for conservation, tourism operators and tourists have to follow best conservation and viewing practices in order not to not be a threat to the longterm survival of Dugongs.

What You Can Do to Conserve Dugongs

For Tourists:

- ▶ Choose a tour operator that follows appropriate guidelines and actively supports the appreciation, research and conservation of Dugongs and



other marine wildlife and habitat through their operations.

- ▶ Educate yourself about the life history and conservation threats to Dugongs before your trip.
- ▶ When Dugong watching, look but do not touch.
- ▶ Do not chase, herd or intercept a Dugong while in the water nor in a boat.
- ▶ Never separate a mother and her calf.
- ▶ Do not allow your wildlife watching experience to change the normal behavior of the animal and abandon activities immediately if the animal appears stressed or tries to swim away.
- ▶ Never approach a Dugong closer than 40 meters.
- ▶ Never approach a Dugong closer than 100 meters at a speed of greater than 5 knots.
- ▶ Do not feed Dugongs or put trash or any other objects in the water.
- ▶ Avoid disturbing a feeding Dugong.³

Tour Operator Guidelines: It is recommended that any tour operations that offer wildlife watching or opportunities to 'swim with' or 'dive with' marine wildlife undergo regulation and licensing.

This process includes an environmental impact assessment by the appropriate authorities so that cumulative impacts on species can be assessed and monitored. Operators should comply with the principles of sustainable ecotourism and meet international standards for best practice. Particularly relevant for Dugong viewing operations, research has shown that vessel approach speed can have significant negative effects on Dugongs. Please remind your boat captain to slow down to a speed below two knots or slower.⁴

Conservation Status & Geographic Range

The Dugong (*Dugong dugon*) is listed by the IUCN Red List as Vulnerable as well as being listed on Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Appendix I.⁵ The total global population size and trend is unknown at this time. Dugongs inhabit the coastal and island waters of 37 countries between East Africa and Vanuatu between latitudes of about 27° North and South of the equator but are regionally extinct in some areas.⁶ Dugongs were the first marine mammal in the Philippines to be legally protected, which resulted in the prohibition of taking, catching, selling, purchasing, possessing, transporting or exporting of dugongs but due to difficulties in monitoring and enforcement illegal activities are ongoing.⁷

Until the 1970s Dugongs were considered common throughout the Philippine Archipelago in waters around coastal islands. Population numbers for the species are anecdotal but Dugong populations

still exist in Southern Mindanao and the Sulu Archipelago, with the island of Palawan now considered as the last stronghold for the Dugong in the country.⁸

Habitat, Life History & Ecology

Dugongs are the only wholly herbivorous marine-based mammal and can live up to 70 years. They have a low reproductive rate not bearing their first calf until they are at least ten and up to 17 years old.⁹ Major concentrations of Dugongs tend to occur in wide shallow protected bays and in mangrove channels. These areas also tend to be where seagrass beds occur. Dugongs are also observed in deeper water further offshore in areas where the continental shelf is wide, shallow and protected.¹⁰ Also called Sea Cows, they play a role in maintaining the health of seagrass beds that are important for other species like marine turtles.

Sea Turtles & Tourism in the Philippines

Why Sea Turtles are Vulnerable

The International Union for Conservation of Nature Species Survival Commission (IUCN SSC) Marine Turtle Specialist Group has identified: 1) fisheries impacts; 2) direct take; 3) coastal development; 4) pollution and pathogens; and 5) global warming as the five primary threats, which if unabated, will result in decline, local extinction and/or prevent recovery of sea turtles.¹ In the Philippines, turtle hunting and collection of eggs and meat for food and trade (turtle meat is a diet staple in Philippine coastal areas), illegal fishing for consumption by local people and poaching by foreign fishermen,² unsustainable fishing methods (such as dynamite and cyanide fishing), civil conflict and weak law enforcement are all contributing to a decline in the sea turtle population.³ In addition, sea turtles, which are referred to locally as 'pawikans,' are poached for their shells, which are made into combs, guitars and other decorations for tourist consumption. Beach development and lighting often interfere with turtle nesting, and there are recent incidents of hotels holding turtles captive as entertainment or for photo opportunities for their guests.⁴

What You Can Do to Help Conserve Sea Turtles

Best practice guidelines for Sea Turtles follow for tourists, hotels and lodges.⁵

For Tourists:

- Do not patronize businesses that sell products made from sea turtles and other wildlife.



- Look for hotels and tour operators that are incorporating the guidance below into their operations.

For Hotels and Lodges:

- If you are a hotel or lodge owner/manager please consider adopting and implementing a Sea Turtle Policy Statement.⁶
- Know whether (and when) sea turtles nest on beaches near your property.
- Be aware of laws and policies protecting sea turtles and their eggs.
- Do not construct permanent buildings, pools, etc. on the sandy beach platform.
- Commit to reducing 'light pollution' that can be fatal to nesting females and their young.
- Remove furniture and recreational equipment (kayaks, small sailboats) from the beach nightly and stack and arrange furniture off-beach.
- Use a permanent umbrella holder or sleeve and never thrust an umbrella (or other penetrating object) into a nesting beach.
- Commit to reducing the impact of recreational boating on sensitive marine ecosystems and enforce a slow speed or no-wake zone offshore the nesting beach.

- Regularly train/evaluate staff in sea turtle protocols.
- Collaborate with local sea turtle experts, communicate relevant information to your guests, staff and contractors, and take steps to promote the survival of turtles both on your beach and off shore.

Conservation Status & Geographic Range

Five of the world's seven species of sea turtles can be found in Philippine waters:

- Green Turtle (*Chelonia mydas*) Endangered / Pop. Trend: Decreasing
- Hawksbill (*Eretmochelys imbricate*) Critically Endangered / Pop. Trend: Decreasing
- Leatherback (*Dermochelys coriacea*) Vulnerable / Pop. Trend: Decreasing
- Loggerhead (*Caretta caretta*) Endangered / Pop. Trend: Data unavail.
- Olive Ridley (*Lepidochelys olivacea*) Vulnerable / Pop. Trend: Decreasing

All marine turtles are listed as Appendix I in the CITES, meaning that commercial trade is illegal for all marine turtles. Of the five species of marine turtles found in the Philippines only Green, Hawksbill and Olive Ridley turtles nest in the Philippines, with Loggerhead's and Leatherback's using Philippine waters to forage. The six Turtle, or Tawi Tawi, Islands lie south of Palawan and comprise the Turtle Islands Heritage Protected Area (TIHPA), jointly managed by Malaysia and the Philippines, creating the first transboundary protected area on sea turtles in the world. Turtle stocks from this transboundary area represent the single largest

population of Green Turtles in all of Southeast Asia, and are therefore critical to ensuring the long-term survival of the population.⁷ The Tubbataha Reefs Natural Park, a UNESCO World Heritage site, which is ranked among the best tourism dive locations in the world, is a pristine atoll coral reef with a large population of marine turtles and is an important turtle mating and nesting site.

Habitat and Ecology

Marine turtles are keystone species helping to maintain functional healthy coral reef and seagrass ecosystems that serve as breeding grounds for many fish and crustaceans. Protecting marine turtles in places such as the Turtle Islands is also important to the overall health of the Coral Triangle, an area of waters bordered by Indonesia, Malaysia and West Papua with exceptionally high biodiversity.

Palawan Peacock Pheasant & Tourism in the Philippines

Why Palawan Peacocks are Vulnerable

Palawan Peacock Pheasant populations are rapidly declining as a result of habitat destruction and loss, hunting and the illegal wildlife trade. Lowland forests on Palawan have been largely cleared and are highly fragmented, and illegal logging continues in the coastal forests that remain. Direct exploitation of the Palawan Peacock Pheasant has been a concern in the past, with large numbers being hunted for food and trapped for live trade to zoos and collectors, but this had diminished by the late 1980s. However the bird continues to be hunted for food and live trade.¹ Hunting pressure, agricultural encroachment near the park edge and harvest of non-timber forest products are also concerns in areas surrounding the Puerto Princesa Subterranean River National Park.² In addition, scientists warn that because all of Palawan's endangered species inhabit lowland forest, which has been largely converted to agriculture and mining, and it is primarily the areas above a thousand meters, such as highland rainforest, that have government protection, Palawan is risking losing many species.³

What You Can Do to Conserve the Palawan Peacock Pheasant

Ecotourism can have both positive and negative impacts on wildlife and ecosystems. Wildlife watching must be monitored and well managed to ensure it leads to improvements in habitat protection, conservation, generates benefits for local people, and leads to a deeper understanding and appreciation for the species and its functional role



in the ecosystem. Tourists should start by selecting responsible ecotourism guides that:

- ▶ Are actively involved in conservation of wildlife and habitat through their business.
- ▶ Assist clients in understanding what threats have resulted in endangered status of species and direct actions they can take to help.
- ▶ Provide information to their clients on the local culture, conservation issues and wildlife that enhance appreciation, understanding and respect for the places visited and a way to contribute to solutions.

In addition:

- ▶ Educate yourself about the ecology of the area you are visiting and the natural history of the wildlife. Avoid viewing wildlife during mating and nesting season.
- ▶ Avoid disturbing birds and other wildlife – paying special attention to ground nesting birds like the Palawan Peacock Pheasant – the birds' interests should always come first. A good rule of thumb is to consider whether your presence has changed the behavior of the wildlife in any way.

- To avoid stressing wildlife keep your voice low, move slowly and keep a respectful distance from any wildlife you see. Don't approach, surround or chase animals you may observe on the trail or remove vegetation in order to obtain a photograph.
- Never remove animals or birds from burrows, dens, caves, nests or tree cavities; or come between an animal or bird parent and its young.
- When hiking in wilderness or conservation areas, stay on the trail to avoid impacts to habitat and don't trample delicate vegetation.
- Pack out your waste.
- Follow Leave No Trace guidelines™.⁴
- Know the laws and the rules for the country you are visiting and follow them.
- Think about the interests of wildlife and local people before passing on news of a rare bird, especially during the breeding season.
- Don't indirectly harm wildlife – your souvenir purchase matters. Do not support merchants whose shops sell souvenirs made of wildlife parts.
- Report any illegal wildlife trade activities to the Philippines' Department of Environment and Natural Resources (DENR).

Conservation Status & Geographic Range

The Palawan Peacock Pheasant (*Polyplectron napoleonis*) is classified by the IUCN Red List as Vulnerable, CITES Appendix 1,⁵ and is endemic to the Philippines where it appears on Palawan Island. The latest conservative estimates put the population at fewer than 50,000 mature individuals and declining.⁶

The Palawan Peacock Pheasant is one of 232 species endemic to Palawan, an island province, which has been designated an Important and Endemic Bird and Biodiversity Area (IBA).⁷ Palawan was officially made a game reserve in 1983, making all hunting

illegal, and was inscribed as a UNESCO Man and Biosphere Reserve in 1990. However, in the face of a rapidly developing tourism sector, high population growth, urbanization, and weak enforcement of existing laws there are a number of serious challenges facing fragile ecosystems and vulnerable species like the Palawan Peacock Pheasant.

Historically inhabiting the island's coastal lowland forest, due to extensive and rapid deforestation, it is now thought that the Palawan Peacock Pheasant is increasingly restricted to the island's mountains. It occurs in two protected areas on the island, El Nido Marine Reserve and the Puerto Princesa Subterranean River National Park (the latter, a UNESCO World Heritage Site).⁸ In the mid-1990s, this stunning bird was featured on a bilingual environmental awareness poster in the "Only in the Philippines" series, which encouraged people to take pride in and protect species endemic to the country.⁹

Habitat and Ecology

The Palawan Peacock Pheasant lives in small groups or pairs feeding on a diet of seeds, grains, nuts, fruit, leaves, roots, insects, worms and slugs, and is a ground nester living on the floor of primary and secondary forest up to around 800 meters above sea level.¹⁰ While there is much that is still not known about the bird's behavior, surveys in Puerto Princesa Subterranean River National Park found evidence that the species shows a strong preference for old growth forest over advanced secondary growth and the species' population density is positively correlated with the density of large trees.¹¹

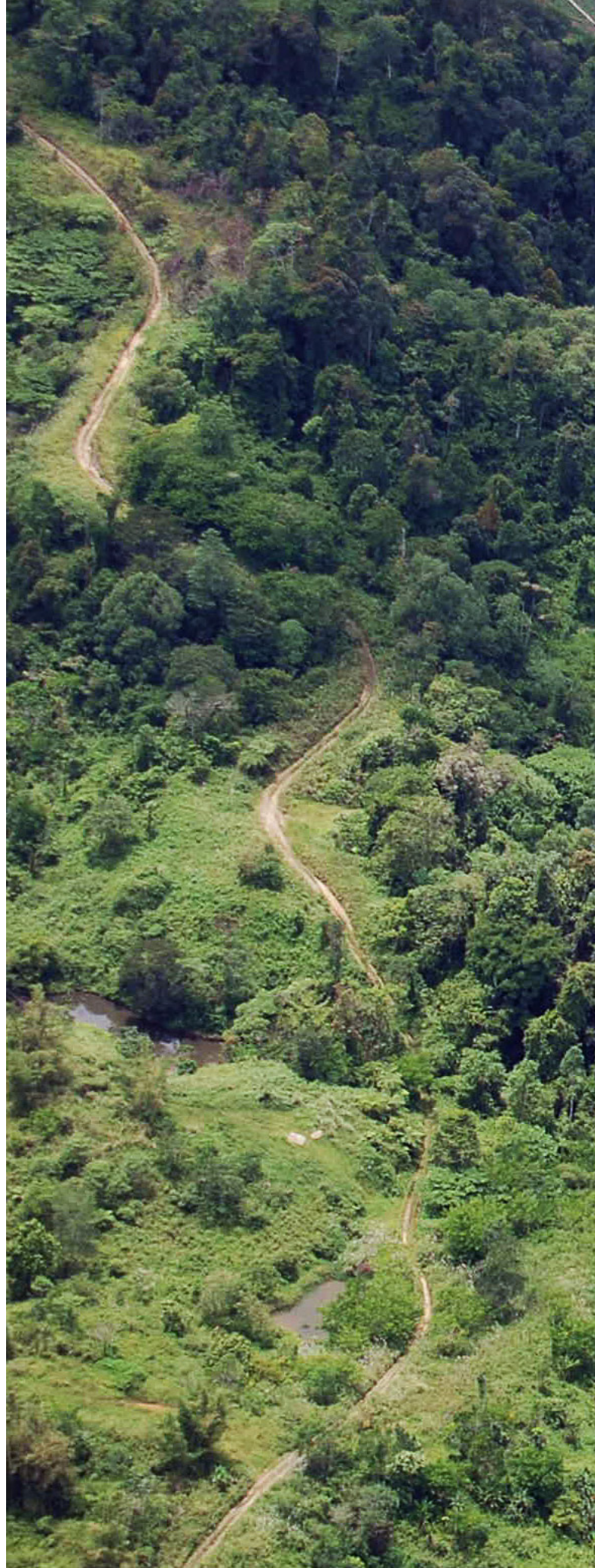
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