CONFERENCE-WORKSHOP REPORT

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1.1 Introduction

Market mechanisms are increasingly being employed to provide alternative and innovative support for conservation, environmental management and poverty alleviation. Markets can potentially provide local people and communities the chance to transform their natural capital into financial flows, whilst diversifying their income base and reducing vulnerability to natural and other calamities. However, without secure property rights, suitable skills, institutional frameworks, education, financial investments to develop products and services, access to information and distribution channels, and efficient coordination, local people and communities will find it extremely difficult to use markets as a force for poverty alleviation and conservation.

Environmental services are typically classified into four broad categories: watershed protection; carbon sequestration; biodiversity conservation; and landscape/seascape beauty. It is recognized that in some instances, these services are bundled or provided jointly by a single ecosystem. Watershed protection services are the most common among the environmental services. These include, among others, water flow regulation, water quality maintenance, erosion and sedimentation control, and flood control. Carbon sequestration services of forest ecosystems play an important role in global climate regulation by sequestering and storing carbon emitted into the atmosphere by industry and other sectors. Environmental services provided by biodiversity consist principally of the maintenance of both global and local ecosystem functions, such as pollination, pest control, humus formation, and decomposition, among others. For landscape and seascape beauty services, the main service provided to society is nature-based tourism (often referred to as ecotourism).

Several questions continue to be asked about markets or, more specifically, payments for environmental services (PES). What is the nature of environmental services (ES)? Is it possible to sell ES? By whom and to whom? Could selling these services really benefit the rural poor and provide for conservation goals at the same time? What have been the Philippine experiences in PES? So far, what lessons can be drawn from these initiatives to further develop incentives for conservation and poverty alleviation as well as help national and local governments raise revenues for financing ecosystem protection?

1.2 Objectives

The *National Conference-Workshop on Payments for Environmental Services: Developing Incentives for Conservation and Poverty Alleviation* was organized and conducted on 1-2 March 2005 to respond to the above questions through the following objectives:

- Present state-of-the-art on PES in the Philippines
- Draw on lessons in developing direct incentives and payment mechanisms for conservation and poverty reduction
- Identify the key elements for developing a National PES Program for the Philippines

- Strengthen linkages with the donor community that will provide guidance on how it can participate in PES projects in a productive manner.

1.3 Organizers

The conference-workshop was put together by the organizations listed below. An Organizing Committee composed of representatives from each organization was mobilized to conceptualize, plan, and conduct the workshop. The lead organizers that provided financial and human resources for the conference-workshop were:

WWF Philippines (Edgardo E. Tongson, Vice President for Programmes; Jose E. Padilla, Consultant)

ICRAF, The World Agroforestry Center (Rodel D. Lasco, Philippine Program Coordinator)

The co-organizers that provided human resources and other in-kind support were:

REECS Resources, Environment and Economics Center for Studies (Ma. Eugenia C. Bennagen, Vice President)

UPLB College of Forestry and Natural Resources (Florencia B. Pulhin)

UP-CIDS Center for Integrative and Development Studies (Perry Ong, Convenor, Biodiversity Conservation Program)

CARE Philippines (Ted Bonpin, Philippine Country Director)

1.4 Format

The conference-workshop was highlighted by the keynote speech of Undersecretary Ramon Paje of the Department of Environmental and Natural Resources (DENR).[1] It had four sessions and followed a sequence, starting with concepts (Session 1), case studies (Session 2), perspectives of the private sector (Session 3), and finally the workshops (Session 4). A total of 15 presentations were made in Sessions 1 through 3. The group workshops, which were aimed at getting responses from the participants on specific questions, were conducted in Session 4. The participants were divided, according to environmental service, into four working groups and were guided with the following questions:

- What are the opportunities, issues, and challenges for PES work in the Philippines?
- What are the strategies for addressing the issues and challenges?
- What are the criteria in selecting potential PES sites in the Philippines?
- Based on the criteria, which are the priority potential PES sites in the Philippines?

1.5 Organization of the Proceedings

Part II presents the summary and synthesis of conference-workshop presentations and discussions. Part III contains the full papers presented by the relevant session. Two papers circulated but not presented in the conference are provided in Part IV. The conference program and list of participants are provided in the Attachments.

[1] A summary of Undersecretary Paje's keynote speech is provided in **Attachment A**

2. Summary and Synthesis: Paper Presentations and Discussions[2]

2.1 International Experiences on PES[3]

The United States has the largest PES scheme through national and local programs such as the Conservation Reserve Program, the Nature Conservancy Program and the Local Land Trusts Program. These programs essentially involve the purchase or long-term easements of private lands for purposes of biodiversity conservation and habitat preservation by the government (Federal and State) as buyer. Service providers/sellers are owners of cropland and marginal pasture lands. Some of the instruments being used are conservation easements, restoration cost share agreements, yearly rental payments and incentive payments for specific services such as tree planting or building fences.

In France, one of the more popular PES schemes is between a private water bottling company, Perrier Vittel S.A., and upstream dairy farmers and forest landholders. The former contracted the latter to improve water quality in the Rhin-Meuse watershed, their source of mineral water, by reducing nitrates and pesticides and by restoring natural water purification. Payments are in the form of purchases of agricultural land from forest landholders around Vittel springs while participating farmers are compensated for their services through periodic cash payments as well as provision of free technical assistance and infrastructure.

There are various PES efforts being implemented in Latin America, mainly funded by the World Bank (WB) and the Global Environmental Facility (GEF). Costa Rica pioneered a PES scheme for biodiversity conservation services in 1989 that involved a private pharmaceutical company and the government allocating bioprospecting rights at a fee. Subsequently, the Costa Rican government created and tasked an agency, the Fondo Nacional de Financiamiento Forestal (FONAFICO), to serve as a clearing house. The sellers are private landowners who are contracted to implement conservation activities, such as reforestation and other forest management, in exchange for cash payments from buyers such as hydroelectric companies, among others, that have conservation interests.

In Colombia, the PES scheme involved farmers in the Guabas River who negotiated with upstream landowners to adopt improved land-use practices for the maintenance of dry-season riverflows. User fees are collected from downstream farmers as payments for watershed protection services provided by the upstream farmers. A similar scheme is being implemented in Ecuador. In Mexico, a national fund was created to purchase carbon credits generated by indigenous communities engaged in carbon sequestration projects. The carbon credits are sold in the international carbon market under the Kyoto Protocol.

In the Asian region, a hydroelectric power plant agreed to pay upstream farmers in Guangdong Province to reforest denuded areas to protect its water source. Cash payment is pegged on the generation of electricity per kilowatt-hour. In India, a non-cash payment scheme was implemented where a government research and training institute provided technical and infrastructure assistance to upstream farmers. Farmers agreed to improve their land-use practices to stop degradation of an ecotourism lake.

The International Center for Research on Agro Forestry (ICRAF) has initiated a regional program that aims to reward poor upland farmers for

[2] The contents of this report are based on the PowerPoint presentations, authored papers, and discussions during the conference-workshop. Additional information has been provided as necessary.

[3] This discussion of PES international experiences is not comprehensive and is intended only to provide examples of several PES models. The reader is referred to the papers of Francisco (this volume) and Padilla and Tolosa (this volume) for a comprehensive review of literature on PES.

providing environmental services to society. The program called "Rewarding the Upland Poor for Environmental Services" (RUPES) is being implemented in Indonesia, Nepal, the Philippines and other countries. The basic objective of RUPES is to enhance livelihood and reduce poverty amongst the upland poor while promoting environmental conservation at the local and global levels. The Philippine action research sites are discussed below. Some of the reports prepared for RUPES are published in this volume.

2.2 State-of-the-Art of PES in the Philippines

The conference-workshop aimed to take stock of the Philippine experiences in PES and other similar mechanisms, vis-à-vis policy, field, and research, that involve trading of environmental services, either explicitly or implicitly. Due to time constraints, only selected actual experiences were presented and are summarized below. A few experiences (not presented) are also summarized to provide other models from which lessons can be drawn in the formulation of a national PES program.

2.2.1 Policy/institutional level

A number of key policy enactments, both at the executive and legislative branches of government, closely approximate the broad objectives of PES; these are ecosystem conservation and protection, revenue generation, and poverty alleviation. Boquiren (this volume) assessed the policy and institutional framework but focused primarily on forest ecosystems. Her review included the National Integrated Protected Area System Act (NIPAS, RA 7586), the Department of Energy Act (DOE, RA 7638) and the Electric Power Industry Reform Act (EPIRA, RA 9136, 2001), Executive Order 318 (2004) on Promoting Sustainable Forest Management in the Philippines, and EO 247 (1995) on Prescribing Guidelines and Establishing a Regulatory Framework for the Prospecting of Biological and Genetic Resources. The proposed revised guidelines of EO 247 were also included in the review.

The NIPAS Act provides for the establishment of Integrated Protected Area Funds (IPAF) in each protected area throughout the country. Sources of funding are user fees, grants, donations, etc. used to manage the protected areas. Most of the user fees collected so far are from ecotourism-based environmental services. The DOE, through EPIRA, requires energy producers to pay a specific amount per kilowatt-hour of electricity sales to a fund, managed by the DOE, called the Reforestation, Watershed Management, Health and/or Environment Enhancement Fund (RWMHEEF) to benefit host communities. These programs, however, do not explicitly require the channeling of funds directly to the service providers nor do they require that direct beneficiaries pay for the environmental services.

More explicit is EO 318 on Promoting Sustainable Forest Management in the Philippines, which provides for proper valuation and pricing of forestry resources and collection of fees for use of environmental services of forests and watersheds. It also provides for a plough-back mechanism that ensures service providers are properly compensated.

In biodiversity conservation, EO 247 (1995) stipulates regulatory framework and guidelines for prospecting biological and genetic resources. Its implementing rules and regulations (DAO 96-20), issued in June 1996, were recently revised through a joint administrative order of the DENR, the Department of Agriculture (DA), the Philippine Council for Sustainable Development (PCSD) and the National Commission of Indigenous Peoples (NCIP). The Joint DENR-DA-PCSD-NCIP Administrative Order No. 1, issued in January 2005, now provides the policy framework for benefit-sharing between resource users and providers of biodiversity conservation, and specifies the amounts of bioprospecting and

other fees as well as the percentage that will be channeled to the service providers.

Other relevant policy issuances that support PES implementation include EO 263 on Adopting the Community-based Forestry Management and its Revised Implementing Rules and Regulations, RA 7160, An Act Providing for a Local Government Code; and RA 8371, An Act to Recognize, Protect and Promote the Rights of Indigenous Cultural Communities. (See Boquiren, this volume.)

2.2.2 Field level

Local PES experiences (or cases) presented at the conference-workshop are summarized below based on the following common elements: what is the environmental asset, what is the ES involved, who are the sellers/providers, who are the buyers, and the compensation mechanism adopted. Each case is then assessed briefly whether (a) the transaction is voluntary; (b) ES is well defined, particularly with regard to the four general categories mentioned earlier; (c) the ES is bought by an ES buyer; (d) the ES is produced by an ES provider; and (e) the conditions for the ES provision are secured.

Unlike command-and-control measures where payments or other forms of assistance are part of government or donor programs, PES are generally voluntary transactions between ES buyers and sellers who come together to trade an environmental service, usually through intermediaries or brokers. The ES should be well-defined vis-à-vis the service being traded, which, if possible, should be measurable based on the amount of, say, carbon sequestered or quantity of additional stream flow during the dry season, although it can also be in non-measurable terms using such indicators as cleaner water, increased biodiversity, or less severe floods. The payments for the ES originate from the ES buyer and go to the ES provider, either directly or through a broker or intermediary. The last criterion for securing the provision of the ES by the ES provider refers to the requirement to make payments contingent on the provision of the service and is thus central to the sustainability of any PES scheme (Wunder 2005).[4]

Watershed Protection Services

The RUPES Experience

The RUPES program is a regional activity of ICRAF that aims to enhance the livelihoods and reduce poverty of upland poor communities in Asia while supporting environmental conservation. The program, which initially includes Nepal, Indonesia, and the Philippines, will develop payment mechanisms to compensate upland service providers of watershed protection, carbon sequestration, biodiversity conservation and landscape beauty in selected action research sites (Leimona, this volume). It has two sites in the Philippines — one in the Kalahan Forest Reserve in Nueva Vizcaya Province and the other in Bakun, Benguet Province — three in Indonesia and one in Nepal.

The Kalahan RUPES site is looking at carbon sequestration and watershed protection services provided by the Ikalahan people, an indigenous group settled within the Kalahan Forest Reserve. Preliminary activities to establish the link between land uses and environmental services, quantify the services, and identify service beneficiaries and other partners are ongoing. The compensation mechanism will be formulated at the later phase of the project.

The Bakun site has been recently identified as the second RUPES site in the Philippines. The service providers are the Bago-Kankanaey indigenous people for watershed protection of two hydroelectric power plants that draw water from the Bakun watershed. Current activities

[4] Wunder, S., **Payments For Environmental Services: Some Nuts and Bolts**, CIFOR Occasional Paper No. 42, Center for International Forestry Research, 2005.

include agro-forestry and reforestation projects, provision of agricultural support activities, and the formulation of their Ancestral Domain Sustainable Development and Protection Plan.

It is too early to make an assessment of the RUPES experience based on the above-mentioned criteria, since the two sites are still laying the groundwork to test the applicability of RUPES mechanisms.

The Maasin Watershed Experience

The Maasin Watershed experience (Salas, this volume) demonstrates a very early attempt to apply a framework that we now call PES to rehabilitate the major source of domestic water for Iloilo City in the Visayas Region amid growing concern over its fast degradation. This case study also demonstrates the importance of the key stakeholders' active role in efforts to protect watershed and forest resources. The Maasin Watershed has an area of 6,378ha located in the municipality of Maasin in Iloilo province.

Until 1995, the Metro Iloilo Water District (MIWD) made payments to the local government of Maasin for use in watershed protection. Shortly thereafter, the payments were transferred to the DENR. The MIWD suspended these payments after two years as the funds were not being used for watershed rehabilitation. Thereafter, with the fast degradation of the watershed, a multisectoral body, the Iloilo Watershed Management Council (IWMC), was created to oversee watershed rehabilitation. There are new attempts by the IWMC to get the service providers and beneficiaries together to implement a PES in the watershed through the efforts of an environmental non-government organization, the Kahublagan Sang Panimalay Foundation.

The Maasin Watershed experience can be regarded as a voluntary transaction among the MIWD, the local government, and the environment agency for the provision of watershed protection services. However, the failure to channel payments made by MIWD directly to the service providers (i.e., the communities protecting the watershed) may have likewise failed to sustain the scheme.

The Balian Watershed Experience [5]

The Balian Watershed is located in the municipality of Pangil, Laguna Province, and was declared a protected area in early 1990s. Uncontrolled forest exploitation in the past resulted in a dwindling water supply that was first felt by the communities in late 1980s. New sources of water were identified through a local ordinance, but the land surrounding these new water sources was under private ownership. Downstream residents mobilized themselves and negotiated with the landowners for the latter to plant trees and, in return, the former would protect these private lands from illegal encroachment through regular patrol and monitoring activities. The other upland dwellers were also mobilized to undertake forest protection and agro-forestry activities and were rewarded with permits to prune tree branches for fuelwood.

The Balian watershed experience is a voluntary scheme that allows service providers and beneficiaries to come together on their own to protect the community's water sources. While the "transaction" involved non-cash payments, the provision of watershed protection services was secured since payments were clearly dependent on the performance of private landowners to undertake tree planting in exchange for protection from illegal encroachers. (See Francisco, this volume.)

The Mt. Kanlaon Natural Park/La Tondeña Distillery Experience

The Mt. Kanlaon Natural Park is located in the Negros Island and was proclaimed a natural park in 2001 under the NIPAS. Portions of the park

[5] This case study and the subsequent one on Mt. Kanlaon Natural Park were not presented at the conference-workshop, but are included in this volume to provide additional information on PES approaches implemented in the country.

serve as headwater catchments of three major river systems in the island. A local bottling water company, the Kanlaon Spring Water Plant operated by La Tondeña Distillery, Inc., draws its water supply from one of the watersheds inside the park. It engaged the local communities in reforestation and forest rehabilitation, and trained farmers in agro-forestry as payment for the watershed protection services the farmers provide.

This experience is another case of non-cash rewards that involve the provision of technical assistance as compensation for watershed protection services provided by the upstream communities. The scheme is voluntary since the private bottling water company and the communities entered into the transaction on their own. (See Francisco, this volume.)

Carbon Sequestration

The Laguna Lake Development Authority Experience

Lasco, Pulhin and Banaticla (this volume) show the potential for carbon sequestration projects in the Philippines. There are two Philippine projects that plan to avail themselves of international carbon financing.

One of these projects is the Tanay Streambank Project of the Municipality of Tanay (MOT) and the Laguna Lake Development Authority (LLDA), which plans to reforest 70ha of private and public lands and establish 25ha of agro-forestry farms in public lands. These two activities are targeted to sequester up to 20,000 tons of carbon from the atmosphere over a 20-year period. The other is the Sierra Madre Project of Conservation International (CI), which targets protection of 5,000ha of natural forests and the establishment of agro-forestry farms on 2,000ha of current brushland areas using a community-based approach. In addition, it plans to restore 5,500ha of grassland areas to original hardwood forests using a mix of fast-growing and native species. Both LLDA/MOT and CI are the sellers while the Tanay watershed farmers are the service providers.

The Community Development Carbon Fund (CDCF) is one of several carbon funds administered by the World Bank. CDCF's objective is to buy emission reduction credits. The proceeds will then be used to implement small-scale projects in rural areas of developing countries. The WB, through its CDCF, is the buyer of carbon sequestration services provided by the Laguna Lake basin farmers. There is no identified buyer yet of the CI's planned carbon sequestration project.

Carbon sequestration projects meet the basic PES criteria mentioned above. The experience so far indicates that they are voluntary transactions among interested buyers (WB Carbon Fund), sellers (LLDA and CI), and implementers (watershed farmers). The guidelines ensure that payments are contingent on the provision of carbon sequestration services being bought, although it is too early to assess the performance of the two projects discussed.

Marine Bioprospecting

The Bataan National Park Experience

The Philippine experience with bioprospecting is still limited. An ongoing international program on bioprospecting, the United States National Institute of Health—International Cooperative Biodiversity Groups (USNIH-ICBG), has provided the opportunity for the University of the Philippines Marine Science Institute (UPMSI) and the Michigan State University to explore a bioprospecting venture involving pharmaceutical drug development. The site is the Bataan National Park in Morong, Bataan, and the prospective providers are the Ayta, the indigenous peoples residing at the Kanawan Reservation inside the Park. The ICBG has obtained the Free and Prior Informed Consent (FPIC) certificate that will allow it to collect samples from within the Park,

as provided by the Indigenous Peoples Rights Act (RA 8371). Payments to the Ayta for their role as service providers will be in the form of non-cash assistance, including educational assistance for high school students, skills training, technology transfer, medical missions, assistance in securing their Certificate of Ancestral Domain Title and others.

This Philippine experience with bioprospecting cannot be considered strictly voluntary since the Ayta indigenous peoples as providers are involved in the "transaction" as participants under a national legal framework (EO 247 and Joint DENR-DA-PCSD-NCIP Administrative Order 1-2005). It is also too early to assess the viability of the bioprospecting scheme.

Landscape/Seascape Beauty

The Tubbataha Reef Experience

The Tubbataha Reef National Marine Park (TRNMP) is a 33,200ha Philippine Protected Area located in the Sulu Sea – a World Heritage Site. The TRNMP provides seascape beauty and marine biodiversity as bundled environmental services to society at large. Buyers of seascape beauty are the recreational scuba divers as well as the global community, including such foreign donors as the GEF, Packard Foundation, Japan International Cooperation Agency, and other local and international conservation organizations that provide financial as well as non-financial support to the TRNMP. One of the local buyers of the bundled services provided by TRNMP is the Philippine Navy whose interest is to install a monitoring outpost for counter-terrorism activities and to protect the country's oil and gas interests in the Sulu Sea.

The TRNMP is a protected area proclaimed under the NIPAS Act and is administered by the Tubbataha Protected Area Management Board (TPAMB), a multisectoral body chaired by the Governor of Palawan Province and vice-chaired by the DENR Regional Executive Director. A protected area bill (HB 3772) is now pending in the Lower House of Congress. The bill draws features from the Local Government Code (RA 7160) and the Strategic Environmental Plan Law (RA 7611) by decentralizing decision-making at the provincial level and allowing local retention and management of funds collected through user fees. The Tubbataha Management Office (TMO), headed by the park superintendent, oversees the daily park administration and field operations. In effect, then, the TPAMB functions as the provider of the environmental services provided by the marine park. Other service providers include the fisherfolk and the local government for giving up access and jurisdiction over the area and thus bearing the opportunity cost of park establishment. Payments from user fees are channeled to these institutions. Brokering was handled by WWF-Philippines, who assisted in developing a user-fee system and brought together all key stakeholders in the park.

The Tubbataha Reef PES is one of several schemes being implemented in the country under the NIPAS framework and may not therefore be considered voluntary, since payments made by the service beneficiaries are mandated by law. Nevertheless, the environmental service, i.e., seascape beauty, is well-defined and so are the service providers and beneficiaries. Service provision may be considered secured, since payments from the beneficiaries are expected to stop when the tourist site becomes degraded.

2.2.3 Private Sector Initiatives

The Ten Knots Group/El Nido Resorts Initiative (TKG/ENR)

The TKG/ENR, through a private company, the Asian Conservation Company (ACC), is a combined business and environmental conservation venture to address sustainable financing for biodiversity conservation. It operates within the El

Nido Marine Reserve, a protected area located in northern Palawan Island and a popular recreational destination of foreign tourists. The environmental services involved in this venture are landscape and seascape beauty and biodiversity.

Being in a protected area, the activities of the TKG/ENR are regulated by the NIPAS Act that allows the collection of donations, user fees, and other charges for use in the management of the reserve, similar to the TPAMB (above). Some of these management activities include protection of threatened marine life, such as dugongs, cetaceans and marine turtles, as well as monitoring of illegal fishing and illegal logging activities within the reserve. Through the implementation of these activities, the El Nido Protected Area Management Board and its park rangers function as providers of environmental services; the TKG/ENR serves as the buyer. Two types of payments are made: (a) internal payments to cover operational costs of TKG/ENR; and (b) external payments that are mandatory (i.e., Environmental Guarantee Fund and the IPAF) and voluntary (i.e., annual donations). TKG/ENR is authorized to collect users' fees that are subsequently deposited into the IPAF.

The TKG/ENR operates under a partly voluntary and partly command-and-control framework, since some of the payments made by the service users are mandated by law while others are made voluntarily.

The Zamboanga City Water District Initiative[6]

As early as the mid-1970s, the Zamboanga City Water District (ZCWD) had jurisdiction over the management of the Pasonanca watershed that was its source of water. In 1987, the watershed was proclaimed Pasonanca Water Reserve and subsequently became Pasonanca National Park in 1999 pursuant to the NIPAS Act. As such, the DENR now manages the watershed. A Memorandum of Agreement (MOA) between the ZCWD and the DENR was made, which stipulates that ZCWD pay users' fees to the DENR as provided by the NIPAS law and DENR for rehabilitation and maintenance of the watershed. Unfortunately, the MOA was repealed due to DENR's unilateral action to change the agreement. The agreement would have saved the ZCWD a lot of money, But even without an agreement, the ZCWD has committed itself to maintain the watershed by undertaking conservation programs.

The mechanism that was proposed by the ZCWD-DENR MOA would have approximated the PES approach except that the transfer of the funds to those who would maintain the watershed was not defined. There are current efforts to re-draft the MOA to ensure the sustainability of the mechanism.

The Clean Development Mechanism

The Clean Development Mechanism (CDM) is one of several market mechanisms under the Kyoto Protocol. The CDM provides an opportunity for Non-Annex I countries to achieve sustainable development through investment and technology transfers, among others, by hosting CDM projects jointly with Annex I countries. These projects qualify for CDM: renewable energy, energy efficiency improvement, methane recovery, fossil fuel switching and land use, land use change, and forestry.

The CDM provides an opportunity to apply the PES approach to sustainable resource management. Buyers of the service (emissions reduction) are Annex I countries (mainly developed countries) while sellers are companies in the Non-Annex I countries (mainly developing countries) willing to undertake CDM projects. Payments for the Certified Emissions Reductions (CERs) credits would be used to implement the CDM projects in the host country. In the Philippines, there are several CDM

[6] Water districts in the Philippines are considered quasi-private entities.

candidates in various stages of the CDM process, including projects involving landfill gas, biomass, wind, wastewater, etc. The Payatas Landfill Gas to Energy Project of the Philippine National Oil Corporation (PNOC) is in the validation stage and is the most advanced.

2.2.4 Research level

Various research supports the design and implementation of PES in the Philippines. A report prepared for the conference-workshop (but not presented) tracks the literature on PES, both international and Philippine (see Padilla & Tolosa, this volume). One of the papers annotated in the report provides a comprehensive survey of the research on pro-poor markets for environmental services in the Philippines (Rosales 2003). The survey revealed that most of the PES-related research done in the Philippines focused on the economic valuation of environmental services, specifically, landscape and seascape beauty.

A recent Philippine study explored the potential of implementing PES in two sites, the Peñablanca Protected Landscape in Cagayan Province and the Kalahan Forest Reserve in Nueva Vizcaya Province (see Bennagen, this volume). It designed and proposed an institutional structure for each site that, if implemented, would have the potential to support and protect the hydrological services provided by the watersheds. It stressed the need to look at the science, the economics, and the institutional aspects when designing PES schemes.

2.3 Issues and Lessons for Developing Incentives for Conservation and Poverty Alleviation

One of the objectives of the conference-workshop was to draw on lessons in developing direct incentives and payment mechanisms for conservation and poverty alleviation. In this context, payments take on a general meaning, referring to cash payments and non-cash rewards in terms of technical assistance, a conservation/ developmental project, or property rights, among others. This section discusses some of the key issues raised by the presenters and participants in the paper presentations and open-forum discussions from which lessons for PES development are drawn.

2.3.1 Development of an Overall Policy Framework

The conference participants expressed divergent views on the need for legislation to implement PES. During the open forum, Francisco (this volume) argued that based on some of the field-level experiences with PES, a major constraint in its implementation was the lack of supporting legal basis. The presenter thus strongly advocated crafting new legislation or amending existing laws at the national and/or local level that would clearly mandate concerned institutions to collect payments for the production of environmental services. On the other hand, Boquiren (this volume) argued that the needed policy reforms for PES adoption might not necessarily require major new laws or revision of existing laws and other legal issuances. Instead, Boquiren suggested that refinement of existing policies would be sufficient to harness environmental resources and their link to productivity and sustainability. During the discussion on the issue, support was elicited from the participants for the formulation of an overarching piece of legislation on natural resources pricing and taxation. The RUPES program stressed the need for national laws and policies to facilitate PES implementation. The discussion also made it apparent that there could be no serious impediment to the pilot implementation of PES on the ground where there is strong support from all key stakeholders, even with the absence of legislation.

2.3.2 Operational Issues on PES Implementation

There are important factors that may limit or hinder on-the-ground implementation of PES scheme. These are: (a) high transaction costs, (b) unclear property rights, and (c) weak institutions. High transaction costs arise from the following: the need to involve many stakeholders with different interests; costly information requirements (i.e., scientific data on the links between land use and environmental services, willingness to pay surveys, etc.); and drawn-out stakeholder consultations and negotiations. Since PES is a transaction between buyers and sellers, property rights over the environmental services have to be well defined. However, since in the Philippines most of the uplands and forests are public lands, buyers may not be willing to transact with the service providers if property rights are unclear. With regard to institutions, the Maasin Watershed, Tubbataha Reef and Pasonanca Park experiences demonstrated that institutions can contribute to the success or failure of PES schemes. In particular, national and local government agencies have important roles in promoting and supporting PES, but these must be clarified at the outset. Transparency and good governance are critical to ensure the sustainability of PES schemes as evidenced by the two above-mentioned experiences.

2.3.3 Valuation of Water and Water-related Services

Valuation of raw water is an important concern in establishing payments for watershed services. Raw water can be valued in various ways, whether it is used in the production or consumption process (Bautista, this volume). As a production input, a unit of raw water generates a value equal to the marginal revenue product, which is the contribution to sales revenue of using an additional unit of water in the production of a final good. As a consumption good, the value of raw water is the consumers' willingness to pay to acquire it. Another way to value raw water is to estimate its opportunity cost given alternative uses. A final method of deriving the positive value of raw water, particularly ground water, is to look at the foregone future consumption over present consumption. All these methods become relevant in attempts to set up watershed arrangements that would involve the institution of users' fees or charges within a PES framework.

2.3.4 PES as Mechanism for Poverty Alleviation in Resource-Dependent Communities

One of the concerns in PES, in the literature and in various forums, is its role in poverty alleviation. There is the concern that PES mechanisms could isolate small farmers who may not be able to participate in the PES markets for lack of resources, particularly since the transaction costs in PES development can be high. They may also lack secure property rights, which is an institutional requisite for PES. Also, poor service beneficiaries may be faced with higher tariffs for domestic or irrigation water and similar environmental services. It is important, therefore, that the benefits and costs of PES mechanisms are properly evaluated to ensure that the poor are not worse off than before, and should in fact be better off with PES. Social equity is one of the main challenges addressed by the RUPES program. It is equally important to help ensure that the reward mechanisms developed in the different RUPES sites will go directly to poor service providers, including poorer sectors displaced as a result of maintaining or enhancing ecosystem goods provisioning (Beria, this volume). The channeling of payments directly to service beneficiaries is one of the bottlenecks in PES implementation as shown in the various Philippine experiences, specifically in Maasin Watershed.

2.3.5 Are PES Payments a Tax or a Fee?

The issue on whether a PES payment is a tax or a fee was raised during the open forum. Tongson (this volume) made the distinction in that a tax is a statutory requirement by local government units (LGU) to collect as stipulated in the Local Government Code whereby the taxpayer does not expect the money to benefit him directly, while a fee is charged to defray the cost of providing a specific service. The Tubbataha Reef experience showed that payments made by service beneficiaries were contingent on the condition that services were provided and payments stopped once the condition was not followed. PES payments could be considered fees and not taxes after all.

2.3.6 Opportunities for PES Carbon Sequestration and Biodiversity Conservation

The presentations revealed that most of the existing PES schemes in the country involve the provision of watershed protection and landscape and seascape beauty. However, the conference also showed that PES for carbon sequestration and biodiversity conservation has potential for implementation. The potential for such projects as carbon sequestration services is great, with several land areas suited for reforestation. More opportunities are in the offing for developing countries once the Kyoto Protocol comes into force, including the opportunity to participate in carbon sequestration projects under the CDM framework. A clear policy signal from government with respect to these projects is still lacking, however. This must be overcome if the Philippines is to move forward in this field. For biodiversity conservation, issuing the revised rules and regulations under EO 247 would likewise provide opportunities for bioprospecting as demonstrated by the marine bioprospecting project of the UPMSI. The institution of PES covering other biodiversity conservation services such as pollination, pest control, ecosystem structure and stability, soil quality/humus formation, and others offers opportunities in pushing forward biodiversity conservation initiatives in the country (Ong, no paper submitted).

2.3.7 Promotion of Private-Public Initiatives

The Ten Knots Group/El Nido Resorts project of the ACC is a venture that shows great potential in promoting private-public partnership in PES (Perez, this volume). It proves that a profit-oriented company can work hand-in-hand with the government in environmental conservation and mutually benefit under a PES framework. The experience of the ZCWD (a quasi-private company) in its initial attempt to implement a PES scheme in the Pasonanca Nature Park provides some lessons on private-public partnership concerning transparency and good governance (Roxas, no paper submitted).

2.3.8 PES is not a Cure-all to the Country's Resource Degradation and Poverty Problems

By itself, the PES should not be taken as the solution to all the country's environmental problems, but as a complement to a set of policies and programs that address these problems, both market-based and regulatory or command-and-control instruments. The lessons drawn from PES and PES-like experiences in the Philippines and elsewhere indicate that PES can work in some areas but not in others. It is thus important to assess the replicability of existing models, particularly those from other countries. It is likewise valuable to identify and re-examine existing environmental and natural resource policies that are in conflict with each other and may even create disincentives to improve resource management.

3. Summary and Conclusions: Workshop on Developing a National PES Program for the Philippines

This section presents the set of criteria generated by the workshop groups for identifying potential PES sites in the country. Some of the criteria identified are specific to an environmental service, while others apply to more than one environmental service. The other criteria and potential sites are provided in the individual workshop group outputs.

3.1 Selection Criteria

The following criteria were identified by more than one workshop group as important in PES site selection:

- Readiness of communities/receptive communities
- Strong LGU support
- Data availability
- Peace and order
- Security of tenure of service providers
- Presence of buyers for the environmental service
- Presence of intermediaries/brokers
- Presence of multiple benefits both socioeconomic and environmental

The other criteria mentioned by the different workshop groups include availability of internal financing, stable ecosystem, existing agreements between LGUs and other stakeholders, doable projects, and Kyoto compliance (for carbon sequestration projects).

3.2 Potential PES Sites

These potential sites were identified by more than one workshop group:

- Mabini-Tingloy, Batangas (eco-tourism, watershed protection)
- Samar Island National Park (eco-tourism, biodiversity conservation & watershed protection)
- Cordillera region (biodiversity conservation, watershed protection)
- Sites with hydropower/geothermal plants (carbon sequestration, watershed protection)

The following sites were also identified, among others:

- Laguna Lake Watershed (carbon sequestration)
- Upper Agno River (carbon sequestration)
- Sibuyan Island (ecotourism)
- Peñablanca Protected Landscape & Seascape, Cagayan (ecotourism)
- Donsol, Sorsogon (ecotourism)
- Taal Lake (biodiversity)
- Apo Reef (biodiversity)
- Morong, Bataan (biodiversity)
- Abasi-Malapat Watershed (watershed protection)
- Palangue Watershed (watershed protection)
- Cordillera region (watershed protection)

3.3 Key Elements for a National PES Program

Conference presentations, discussions and workshops identified the key elements, in broad terms, for the formulation of a national PES program in the Philippines. These elements have been discussed in previous sections and are summarized briefly in the following discussion.

3.3.1 Legislated Policy Framework

A national PES program will require an overarching policy framework that provides a clear mandate to the national and local governments to implement PES on the ground. While there are several legislative and executive issuances that address the PES objectives — namely, ecosystem conservation, revenue generation and poverty alleviation — the legislation of a PES policy framework and program could provide the support necessary to facilitate its implementation on the ground. The policy framework should include plough-back mechanisms that ensure payments are properly channeled to service providers and that guidelines for proper valuation of environmental services are followed.

3.3.2 Secured Property Rights

Since the PES approach to resource management involves buyers and sellers of environmental services, the rights over the environmental services being traded need to be well-defined to ensure compliance to the agreement by both parties. Conflicting land claims among mining companies, indigenous peoples, and park managers result from incongruous policies and poor governance. Lack of clear property rights over lands occupied by service providers would be a disincentive to the buyers to engage in any transaction, as there is no assurance that the services would be provided.

3.3.3 Supportive Public Institutions

International and Philippine experiences on PES discussed above demonstrate the important role of public institutions as one of the key stakeholders in PES. Instituting PES in the public domain, where DENR, DAR, NCIP and the LGUs have overlapping jurisdictions, remains a key challenge. Without resolving and clarifying institutional issues, providing secure property rights to accountable groups that will be responsible for ecosystem service provisioning in the public domain will remain elusive. As intermediaries in a PES program, national and local institutions—the national environmental agency and LGUs—can contribute to lower transaction costs, otherwise incurred by service providers and beneficiaries, by facilitating the processes and paying for the costs themselves. It is essential that these public institutions exercise transparency and good governance in their involvement of PES programs.

3.3.4 Strong Public-Private Partnership

The role played by the private sector in PES, mainly as buyers of environmental services, is equally important as that of public institutions. Public-private ventures similar to the Ten Knots Group should be promoted, but it is important that mechanisms are developed to channel the funds generated to service providers.

3.3.5 Adequate Data Management

PES requires large amounts of information for effective implementation, some of which is costly and time-consuming to generate. For instance, in developing PES for watershed protection, it is important to establish the relationship between land use and water availability and quality. In most cases, there is no data on land-use impacts on water resources, and generating this data can be costly and difficult due to its complexity. This could also be true for other environmental services, such as biodiversity conservation and carbon sequestration.

3.3.6 Effective IEC and Advocacy Program

The PES is a relatively new approach to resource management and involves many stakeholders. Hence, it requires an aggressive information, education and communication (IEC) campaign

and an advocacy program to make certain that all stakeholders are provided with an adequate understanding of PES and its objectives as well as their roles and responsibilities as stakeholders.

3.3.7 Innovative Approaches from NGOs and Research Organizations

Most of the PES mechanisms that exist or have been tried were established through the initiatives of non-government organizations (NGOs) and research organizations. It is crucial, therefore, to recognize the catalysing role of international and local NGOs as well as research organizations in implementing PES in the country. The PES-related efforts, particularly of WWF and ICRAF, are paving the way for the eventual formulation of a policy framework on PES in the country.

4. Present and Future Directions of PES in the Philippines

In lieu of meeting with the donor community, the organizers outlined what their respective organizations are working on and planning to work on with respect to PES. These are summarized below.

4.1 WWF

WWF-Philippines has pioneered environmental payments through ecotourism programs it helped establish in TRNMP and in diving destinations in Mabini-Tingloy municipalities in the province of Batangas. These payments now contribute to the sustainable financing of conservation activities in these sites. In Sibuyan Island, Romblon Province, WWF-Philippines is collaborating with the local government and a hydro-power producer in setting up water funds in two adjacent watersheds in the municipality of San Fernando. These payments will fund watershed management activities implemented by the *Sibuyan Mangyan Tagabukid* that was granted an ancestral domain title over the watershed.

To influence national policy supporting PES, WWF-Philippines and its partners organized a national conference on "Payments for Environmental Services" to introduce concepts and existing cases of PES as applied to watersheds, landscape and seascape beauty, biodiversity conservation, and carbon payments. To promote and replicate the WWF experience with environmental payments through user fees, WWF-Philippines published a guide book on setting up user-fee systems. Globally, it is collaborating with the WWF network that has partnered with CARE organization to disseminate PES through their respective sites. WWF-Philippines also sits on the International Steering Committee that advises the World Agroforestry Center in implementing the program entitled "Rewarding Upland Poor for Environmental Services" in Asia. WWF-Philippines is committed to introducing PES in its sites to promote pro-poor conservation and the equitable allocation of costs and benefits from conservation.

4.2 ICRAF

ICRAF (The World Agroforestry Centre) shall continue to spearhead cutting-edge research on PES, especially for the upland poor. In the region, ICRAF, through its partnership with the International Fund for Agriculture and Development (IFAD) as the major donor, takes an active role in leading a consortium of partners engaged and interested in developing pro-poor environmental service-transfer mechanisms adapted to the Southeast Asian context — the RUPES project. They include such organizations as the Center for International Forestry Research (CIFOR), the World Conservation Union (IUCN), Winrock International, Conservation International, WWF, the Ford Foundation, the Nature Conservancy, as well as national partners from each country in Southeast Asia and other investors. The consortium has supported the RUPES project in determining

six action research sites across Asia, two of which are in the Philippines.

In the Philippines, ICRAF is supporting the two RUPES sites in Bakun, Benguet, and Kalahan, Nueva Vizcaya. In Bakun, ICRAF and the people's organization, Bakun Indigenous Tribes Organization (BITO), are working together to support and build the capacity of communities, institutions and government agencies to implement fair and equitable mechanisms for environmental service payments. There are two hydroelectric power plants operating in the Bakun watershed now. While these companies pay taxes to the national and local governments, it is not clear how much of this is directly benefiting or getting back to the communities that provide watershed protection services. In Kalahan, ICRAF is assisting the Kalahan Educational Foundation to quantify the environmental services provided by the forest reserve in terms of water resources and carbon sequestration.

ICRAF-Philippines also leads research and development efforts to quantify carbon sequestration of Philippine forests. It is also investigating how to take advantage of carbon financing, such as CDM, for the upland poor.

In the future, ICRAF will build on the strengths of its current programs to further pursue research and development on PES for upland communities.

4.3 REECS

REECS is at the forefront of PES in the Philippines. It recently embarked on a PES program called the *Bayad Kalikasan* (BK). The BK program is an effort to help promote sustainable management of Philippine forests and coastal resources by undertaking PES-related research, producing bulletins and other information materials on PES, and by conducting workshops and other forums. The *BK Policy and Research Notes* is a regular bulletin that provides the public information and developments in the field of PES in the Philippines and elsewhere. REECS is currently implementing two research projects on the economic value of conserving and protecting the Philippine eagle and whale sharks in Donsol, Sorsogon Province. It recently completed research on the design of PES schemes in Cagayan and Nueva Vizcaya provinces.

REECS plans to actively pursue PES in the immediate future. It will develop training modules to introduce the PES concept and objectives to the LGUs and non-governmental organizations, and subsequently pilot test PES at the local level. It is ready to assist Congress and DENR in the formulation of a national PES policy framework. It is now developing a proposal jointly with CARE-Philippines to obtain GEF funds to implement PES in several Philippine priority sites with high biodiversity value.

4.4 CARE

Guided by its mission to eradicate poverty and advocate for social justice, CARE-Philippines promotes pro-poor environmental conservation with social equity in its natural resource program. CARE-Philippines, together with WWF-International and the International Institute for Environment and Development, has passed a proposal to establish payments for environmental services at ten sites in six core countries. It is also developing a proposal with three CARE country offices to obtain GEF funds from UNEP for establishing innovative and pro-poor conservation financing schemes at the local, national and global levels in selected protected areas in Africa and Asia. CARE-Philippines is actively working with REECS on this proposal.