

Rewards for Environmental Services in the Philippines Uplands: Constraints and Opportunities for Institutional Reform

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Developing Mechanisms for
Rewarding the Upland Poor in Asia for Environmental Services They Provide

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EXECUTIVE SUMMARY

This study examined the policy context and institutional arrangements guiding the payment of rewards and incentives for environmental services (ES) in the Philippines. While environmental services have been traditionally enjoyed for free, competing demands and a growing scarcity now require greater mediation to ensure protection alongside equitable benefit sharing.

The review covered three general legislations that provide the over-all policy framework on natural resources use, access and control, 13 that define institutional arrangements within the environment sector, and a minimum of 15 specific issuances, either officially adopted or still in draft form, which deal with on-the-ground implementation or enforcement.

The country's policy framework in regard to environmental services is strong yet unrestrained, receptive though largely still reactive, extensive despite considerable gaps and a number of institutional constraints. The review revealed the responsiveness of the state and ES players to the changing demands on natural resource management regimes, such that we see the policies evolving from the purely administrative and technical, to those that had to respond to the competing imperatives of production and sustainable development, conservation and human welfare, centralized governance and multi-stakeholder participation, short-term and inter-generational goals, and sensitivity to global imperatives and local realities.

Functions within the environmental sector have been streamlined, most institutional arrangements for the use of environmental resources have been laid down and enforced in the last three decades, and the contestations for greater efficiency and responsiveness to various stakeholders keep the policy context constantly and vigorously re-examined not merely by the state but as demanded by a very actively engaged civil society and the business sector. Today, policy discussions address not only the concern for greater participation of a wider range of stakeholders, but also greater control over resource access and utilization, albeit either in competition with or in the light of the need for better protection.

Specifically where environmental services are concerned, the provisions of sectoral laws reveal that the institutional constraints and policy gaps pertaining to social equity and social welfare issues as translated in benefit sharing and payment of rewards are not insurmountable.

The study identified a healthy community of stakeholders in environmental services. Institutional players in ES include the Philippine State as primary stakeholder, local economic interest groups, external economic interest groups, internal state mediators, external state mediators, civil society mediators, and the donor community.

The pressure to look into conditions that would guarantee more equitable sharing of costs and benefits through the development of new markets for environmental is a long-recognized concern in the environment sector. The institutional analysis revealed that there are sufficient laws to guide the provision of environmental services, their harnessing, the protection of source areas, and the extension of benefits to communities in the source areas (ultimately the providers, if they maintain good conservation techniques, but also free riders or source of destruction).

However, the entire agenda of rewards for environmental services has to be adopted at the practical, problem-solving level so that it can be pushed beyond the rhetorical plane in which it has been relegated because of competing policies and environment-related programs, the opportune investment climate for privatization of common resources in the light of global imperatives, and civil society demands.

The identified policy gaps (at the implementation level) and institutional constraints, as the study shows, can be addressed by an agenda that promotes (a) policy enhancement and re-appreciation to recognize the requisites of commons management and benefit sharing, not an all-out reformulation process; (b) capacity and capability building in ES negotiation, valuation, and protection; and (c) research and advocacy on ES management and benefit sharing.

LIST OF ACRONYMS

ADMP	Ancestral Domain Management Plan
ADSDPP	Ancestral Domain Sustainable Development and Protection Plan
AICBGR	Inter-Agency on the Collection of Biological and Genetic Resources
BFAR	Bureau of Fisheries and Aquatic Resources
CADC/CALC	Certificate of Ancestral Domain Claim/ Certificate of Ancestral Land Claim
CADT/CALT	Certificate of Ancestral Domain Title/ Certificate of Ancestral Land Title
CAR	Cordillera Administrative Region
CBFM	Community Based Forest Management
CBFMA	Community Based Forest Management Agreement
CBU	Capital Build Up
CDA	Cooperative Development Authority
CDM	Clean Development Mechanism
CENRO	Community Environment and Natural Resources Officer
CEPF	Critical Ecosystem Partnership Fund
CI	Conservation International
COMPACT	Community Management of Protected Areas Conservation
CPPAP	Conservation of Priority Protected Areas Program
CRA	Commercial Research Agreement
CRM/ CBRM	Community Resource Management/Community- Based Resources Management
CRMF	Community Resource Management Framework
DA	Department of Agriculture
DANIDA	Government of Denmark
DAO	DENR Administrative Order
DBM	Department of Budget and Management
DENR	Department of Environment and Natural Resources
DFA	Department of Foreign Affairs
DILG	Department of Interior and Local Government
DLF	Development and Livelihood Fund
DOE	Department of Energy
DOH	Department of Health
DOST	Department of Science and Technology
DOTC	Department of Transportation and Communications
DPWH	Department of Public Works and Highways
DTI-BOT	Department of Trade and Investments – Bureau of Trade
DU	Distribution Utility
EC	European Commission
EF	Electrification Fund
EIAB	Energy Industry Administration Bureau
EIS	Environmental Impact Statement
ELAC	Environmental Legal Assistance Center
EMB	Environmental Management Bureau
ENR	Environment and Natural Resources
ENRAP	Environmental and Natural Resources Accounting Project
EO	Executive Order
EPIRA	Electric Power Industry Reform Act
ER	Energy Regulation
ERC	Energy Regulatory Commission
ERMP	Environmental Resource Management Project
ES	Environmental Service
FLA	Forest Lease Agreement
FMB/FMS	Forest Management Bureau/Services
FPE	Foundation for the Philippine Environment
FSMS	Forest Stocks Monitoring System
GEF	Global Environmental Facility
GRP	Government of the Republic of the Philippines

IACBGR	Inter-Agency on the Collection of Biological and Genetic Resources
IACCC	Inter-Agency Committee on Climate Change
ICC	Indigenous Cultural Community
IFMA	Integrated Forest Management Agreement
IP/ICC	Indigenous People/Indigenous Cultural Communities
IPAF	Integrated Protected Area Fund
IPAS	Integrated Protected Areas System
IPP	Independent Power Producers
IPRA	Indigenous Peoples' Rights Act
IRR	Implementing Rules and Regulations
ITTO	International Tropical Timber Organization
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
KKP	Kabang Kalikasan ng Pilipinas (World Wildlife Fund)
LGC	Local Government Code
LGU	Local Government Unit
LK	Lingap Kalikasan
LSBs	Local Special Bodies
MAO	Municipal Agricultural Officer
MC	Memorandum Circular
MERALCO	Manila Electric Company
MES	Markets for Environment Services
MFPC	Municipal Forest Protection Committee
MFR	Makiling Forest Reserve
MKRNP	Mt. Kitanglad Range Natural Park
MMPL	Mt. Matutum Protected Landscape
NATRIPAL	Nagkakaisang Tribu ng Palawan
NCIP	National Commission on Indigenous People
NEA	National Electrification Administration
NEDA	National Economic Development Authority
NGO	Non-Government Organization
NIPA	NGOs for Integrated Protected Area, Inc.
NIPAS	National Integrated Protected Areas System
NP	National Park
NPC	National Power Corporation
NPS-SPUG	National Power Corporation – Small Power Utilities Group
NWRB	National Water Resources Board
PA	Protected Area
PAMB	Protected Area Management Board
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PASu	Protected Areas Superintendent
PAWB	Protected Areas and Wildlife Bureau
PBPF	Paglilingkod Batas Pangkapatiran Foundation, Inc.
PCSD	Philippine Council for Sustainable Development
PCSD	Palawan Council for Sustainable Development
PCU	Project Coordination Unit
PD	Presidential Decree
PENRO	Provincial Environment and Natural Resources Officer
PEO	Provincial Engineering Officer
PICART	Palawan Center for Appropriate Technology
PIOUs	Private Independent-Owned Utilities
PL	Protected Landscapes
PNNI	Palawan NGOs Network, Inc.
PNOC	Philippine National Oil Company
PO	People's Organization
PPDO	Provincial Planning and Development Office
PPSRNP	Puerto Princesa Subterranean National Park

PRRM	Philippine Rural Reconstruction Movement
PTA	Philippine Tourism Authority
RA	Republic Act
REC	Regional Electric Cooperative
REecs	Resources Environment and Economics Center for Studies, Inc.
RUP	Resource Use Plans
RUPES	Rewarding Upland Poor for the Environmental Services they Provide
RWMHEEF	Reforestation Watershed Management Health and/or Environment Fund
SAGUDA	Sagipin ang Gubat ng Dagat
SEARICE	Southeast Asia Research
SEC	Securities and Exchange Commission
SEP	Strategic Environmental Plan
SGP	Small Grants Program
SIBAT	Sibol ng Agham at Teknolohiya
SIFMA	Socialized Integrated Forest Management Agreement
SMICZM	Southern Mindanao Integrated Coastal Zone Management
SOCSARGEN	South Cotabato - Sarangani - General Santos
TK	Tanggol Kalikasan
UNDP	United Nations Development Program
UNF	United Nations Foundation
USAID	United States Agency for International Development
WB	World Bank
WFR	Watershed Forest Reserve
WTP	Willingness to Pay

1 INTRODUCTION

1.1 Background

Many upland and mountain communities in Asia manage landscapes that provide environmental services (ES) to outside beneficiaries, but without sharing in the benefits of those services. The services can include clean and abundant water supplies from watersheds, biodiversity protection, stocks of carbon that alleviate global warming and landscape beauty and amenity. Long enjoyed for free, current situations of scarcity amidst competing use rights and management practices have increasingly required the government to take the lead role in the development of efficient and equitable markets for these services and, relatedly, the protection and conservation of their sources.

Present institutional arrangements neither efficiently nor equitably function to make upland communities in the Philippines share in the benefits, rewards, incentives and the like from environmental services that they provide. It is toward improving the current institutional setting and policy framework for benefit sharing from environmental services that this study intends to contribute.

The provision of environmental services involves issues of access and utilization of common resources that often create tensions across varied levels of governance in the Philippine setting. The Local Government Code assures lower levels of governance a greater role in the utilization as well as enjoyment of benefits from natural resources found within their administrative bounds. Meanwhile, the Philippine Constitution sets the supremacy of national law over all resources of the public domain, at the same time that the Indigenous Peoples Rights Act recognizes all ancestral domains as the private but community property of indigenous peoples who have claims on these.

Amidst the differing premises within the national legal system, the policies, which regulate the management of commons, are unfortunately not always clearly defined. Worse, contentious issues in resource control and benefit sharing become difficult to resolve, often resulting in adversarial positions by a wide range of stakeholders. Critical watersheds, forest resources, mineral lands, and river systems, to name a few, are increasingly being identified by competing entities as objects

either of industrial expansion or protection – all in the name of development. Yet, the process of resolving how the benefits from these common resources can be more equitably shared without neglecting inter-generational needs and sustainability remains tedious, long drawn, and sensitive.

For heuristic simplicity, environmental services are differentiated into those with direct use values (such as the provision of wood for cooking or housing and non-timber forest products), indirect use values (as in water retention by forests to support downstream agriculture or for energy generation) and those with non-use values (for instance, willingness to pay or support conservation of an endangered species, as in corporate-sponsored green labelling for products). The study covers only the last two domains, viz., watershed protection, biodiversity conservation, ecotourism, and carbon sequestration. Markets for these services are increasingly being developed in the country today, some more aggressively than the others, with the social arena progressively becoming livelier and more contentious with the expanding search for greater control over these resources by civil society sectors, government and business groups.

1.2 Study Objectives

Rewarding Upland Poor for Environmental Services They Provide (RUPES) is a program to develop appropriate mechanisms for rewarding the poor upland communities for the environmental services that they provide. In 2004, the Philippine Technical Committee, which provides advice and guidance to the RUPES, commissioned a study to examine the national level policies and institutions in the Philippines that can help and/or hinder the efficient and equitable implementation of environmental transfer agreements. The overall objective of this study was to understand and help shape social, political, legal and economic environments to become more supportive of rewards that are linked to environmental services provided by upland communities. The first part of the study was to undertake an institutional mapping of organizations and agencies that engage in providing ES rewards to upland communities. Various players in ES provision from source to client communities were identified based on a review of official reports, project documents, and interviews with key officials and field staff of involved agencies.

The second objective was to analyze the existing supportive institutional environments, frameworks, mechanisms and processes related to the provision of environmental services. The institutional settings in which there are mechanisms and processes for accessing ES benefits are examined to ascertain which ones are effective or with potentials for increasing the human welfare of upland communities. Relatedly, the study also examines the constraints and opportunities in said institutional environments as drawn from a review of several field experiences. The intention is to suggest ways to improve the structure of benefit sharing in environmental services, in which initiatives such as those of RUPES can particularly contribute to, by way of providing technical inputs to ES players.

The study does not address the full dimensions and range of institutional issues and policy conflicts in relation to the status of each subsector of the environment that provides environmental services, or of ES markets and impacts, nor does it examine the valuation methods adopted in existing arrangements in ES payments. Rather, the interest is only in emphasizing the aspects of institutional mechanisms and policy instruments which tend to result in constraints and problems in benefit sharing or enjoyment of ES rewards, incentives, and payments. The intent is to suggest elements of institutional and policy reform that can increase the rewards to upland communities who, from the current policy framework, carry the burden of protecting and sustainably managing the critical ecological resources despite their disadvantaged and underserved situations.

Lastly, the study proposes recommendations for national-level discussions toward a policy reformulation process that those engaged in the design, planning and implementation of ES transfer mechanisms in the Philippines can subsequently engage in.

1.3 Methodology

1.3.1 Analytical Framework

Emerging conservation approaches that respond holistically to the goals of species and habitat protection along with human development face social acceptability and sustainability issues when short-run benefits to household welfare are threatened. Where market opportunities for labour and forest resources are insufficient or missing, poorly designed alternative economic

activities cannot be expected to advance the conservation agenda. Households in such settings merely tend to resort to agricultural expansion or more severe forest extraction.

Experiences in community-based natural resource management projects (for biodiversity conservation, sustainable agriculture, and the like) have demonstrated that local participation in environmental protection initiatives improves as household welfare increases, but only in direct relationship with rewards or incentives they receive for environmental goods and services. Correspondingly, household welfare can decrease when access to forest resources is reduced as a result of strengthened enforcement mechanisms, but can also increase as conservation payments are creatively and appropriately provided for. Examples of these experiences are tackled in this study.

For conservation to advance, therefore, institutional innovations such as those proposed by the RUPES project are extremely expedient. It is important to examine the institutional factors that can help shape social, political, legal and economic environments supportive of rewards for environmental services provided by forests through the nurturing efforts of committed upland communities. Is it toward realizing this general objective that the proposed study is designed.

In accordance with the third objective, the paper also took off from a suggested framework for monitoring and evaluating the efficacy of markets for environmental services that REECS (2003) suggested in an earlier study, in three respects¹:

Environmental – are the existing approaches in the use and marketing of ecological services effective at protecting/providing the desired quantity and quality of environmental services, without adverse environmental impacts?

Economic – are they more cost-effective than previous/alternative instruments? Do they create positive incentives for continuous environmental improvement? Do they create alternative/improved livelihood opportunities for the resident community members, especially for the poor?

¹ Developing Pro-Poor Markets for Environmental Services in the Philippines (Final Report), Resources, Environment and Economics Center for Studies, Inc., February 2003.

Social – are the costs and benefits of ecological services shared equitably? Are the processes of design and implementation of ecological services inclusive, transparent and flexible, to allow learning and adaptation while fostering support from key stakeholder groups?

In defining benefits and institutional settings in which these are negotiated, more specific questions were explored in the analysis, pertinent to the issue of use rights and corresponding accountabilities over the management of environmental services. The study in its analysis had to address the following issues:

Who are the providers of environmental services and what are their claims to rights over these? Across various stakeholders and players, to what extent do property rights determine how the rewards for environmental services are shared? Do these rewards approximate the opportunity cost of communities and households as providers of environmental services in a sustainable manner? What property rights incentives will “trigger” LGU and community investments to protect their forests and sustainably manage their areas? Under what supportive institutional settings can providers contribute to the development of markets for environmental services?

1.3.2 Research Process

To achieve the study objectives, information were obtained from available secondary materials such as project reports, policy statements, and previous studies, as well as primary data from interviews, consultative assessments and workshops. The interviews, electronic exchanges, and consultation workshops were conducted with key officials and representatives of implementing agencies, various stakeholder groups and experts from relevant disciplines. A full set of data sources, interviews and consultations is listed in Appendices 5 and 6.

Data sets from direct involvement of this researcher in recent project planning and evaluation exercises with the following agencies were likewise valuable for the study as these opportunities have iteratively provided the occasion for sustained institutional and policy assessments. These opportunities made it possible to comprehensively review project experiences at both the macro and micro level, this time from the perspective of the benefits that accrue to ES providers.

Information types sought from these sources

included the following:

For Objective No. 1:

- What policies and institutional arrangements guide, or seek to guide, payment of rewards for environmental services?
- Who/what agencies and organizations are engaged in various schemes that could be considered payments for environmental services?

For Objectives No. 2 and 3:

- What are the elements of the policy and institutional environment that promote, constrain, and provide opportunities for granting incentives to conservation by upland communities?
 - What markets are present and to what extent do these represent judicious sharing of benefits across stakeholders?
 - What mechanisms and processes effectively provide rewards and incentives to stakeholders?
 - Are the notions of property rights over environmental services well defined and consistent with the concern for the sustainable provision of the environmental services?
- What substantive and procedural elements in the policy context can be improved?
 - What arrangements and mechanisms can be recommended to address the institutional constraints?

Examples of existing mechanisms for granting rewards for environmental services which were analysed are the user fees and utilization of the Integrated Protected Area System Fund; permitting and licensing fees in the use of water for generating/improving hydropower as well as for domestic and industrial water supply; permitting fees to and revenues from the use of biological resources; and benefit sharing arrangements in national wealth across varied levels of governance. One effective institutional mechanism between the grassroots level and the national level is Community Based Forest Management (CBFM) and is described in this study.

The research results (of both the institutional mapping and the examination of institutional and policy environments as well as mechanisms and drafts of policy reform instruments) were presented to peer reviews and validation with various stakeholder groups, through the consultation workshops as well as electronically.

1.4 Organization of the Report

There are four parts in the report. Section I gives a brief introduction of the study, with a short discussion of the background, objectives and the methodologies employed for data gathering and analysis, including the analytical framework.

Section II lists down the various institutional players that provide and reward environmental services as a result of the institutional mapping.

Section III tackles the policy context and institutional mechanisms for rewarding environmental services. It is in this part where the current issues and problems are examined, based on insights from actual cases.

Section IV provides the conclusions of the study, and a proposed recommendations for advancing a payment/reward for ES initiative through national-level discussions. The intent is to suggest a policy reformulation process. The mechanisms for this policy reformulation process are outlined.

2 POLICIES AND INSTITUTIONAL PLAYERS IN REWARDING ENVIRONMENTAL SERVICES IN THE PHILIPPINES

2.1 Distribution of forestlands and the uplands

The Philippine uplands that host the remaining forestlands comprise 50% of the country's total land area of 30 million hectares. The actual forest cover now is about 5 million hectares, or 18% of the country's total land area (FMB, 2000).

Forestlands are categorized further into:

- a. Allocations to address public goods and services under protected areas and watersheds (or the proclaimed "set asides") that are designed for general management of resources to supply environmental services for the national, common good (26%);
- b. Allocations to other government agencies (2%);
- c. Allocations to LGUs such as communal forests, watershed, and co-managed areas for local environmental services (13%);
- d. Allocations to communities as CBFMs well as CADCs/CADTs which are intended to provide benefits to the upland communities (34%);
- e. Allocations to the private sector in the form of IFMAs, SIFMA, FLA and other special forestland use agreements which provide revenues and direct benefits to employees (11%); and
- f. Unallocated public lands (7%) (Guiang, 2003).

Of these, environmental services examined in the study are located in most of the categories, i.e., categories (a), (c), (d), and (f). Excluded in the analysis are categories (e) where markets are most developed, and (b) which, while insignificant in size, is largely for the use of government agencies.

Vast areas of forestlands are rapidly being converted from highly productive uses into unsustainable ones, with human population creeping into the forest zones more rapidly in the past fifty years, from 5.9 million in 1948, to an estimated 24.7 million in 2000 or 2.8 % annual increase (RMPFD 2003). There has been a proliferation of unplanned and unsystematic farming along with unsustainable and extractive

production methods of timber, minerals, and forest products, which have led to further pressure on the already fragile upland ecosystems. On top of the associated problems of resource degradation and poverty are public policy directions, which in the last 30 years have created competing demands on the resource area and human population.

2.2 Policies Related to Environmental Service Sectors

This review of the policy context and institutional arrangements guiding the payment of rewards and incentives for environmental services covered three general legislations, 13 pertaining to institutional arrangements within the environment sector, and a minimum of 15 supplemental policy issuances, which deal with on-the-ground implementation or enforcement (see list in Appendix I). Among the last set are ten of the most recent versions of draft policies to amend the earlier issuances.

2.2.1 General Legislation

The Philippine Constitution (1987) sets the basic framework for institutional settings that safeguard individual and collective rights of citizens. First, it makes the fundamental distinction of property regimes between public and private lands, with most uplands classified as public lands where principally "the exploration, development and utilization of natural resources shall be under the full control and supervision of the State². Hence, effectively, private ownership and other entitlements such as access to and control over resources emanate from the State.

Second, the Constitution guarantees the primacy and centrality of ecological security and health among the many rights of the people. From the perspective of communities especially in the uplands, this is taken to mean as the right of the people to life, liberty and property from undue intervention, which may be caused by destructive development activities.

Third, also secured by the Constitution is the right of resource-dependent people such as farmers, forest and upland dwellers, and others, to continuously use the resources in accordance with existing laws. Fourth, the basic law of the land also promotes the right of the different

² 1987 Constitution, Article 12, Section 2.

sectors of society to public information, to participate in government programs, policy reform and implementation and to propose, amend, reject or enact laws through peoples' initiatives and referendum.

In addition to the Philippine Constitution, Republic Act (RA 7160) or the Local Government Code (LGC) is the major state policy aimed at decentralizing governance through devolved structures and processes. This legislation was formulated in 1991 to correct the situation where the executive function had been too centralized in the national government for planning, financing, and implementing even local projects, such that there had virtually been little or no participation from local groups in governance except only as pressure groups outside the local and national government structure.

The LGC defines the arena of local participation in the form of sectoral representation in the Sanggunian (local legislative body) and membership in the local special bodies (LSBs). The LGC gives authority to local government units (LGUs) as comprehensive managers of all natural resources within their jurisdiction. It is in the LSBs where sectoral representation can be realized to ensure inputs to planning and local policy development related to the following:

- Provision of basic services (education, health, infrastructure)
- Utilization of Internal Revenue Allotment (20% social development fund)
- Utilization of share in the national wealth
- Access to commons/natural resource management
- Revenue raising/resource generation

The pitfalls of a centrally directed governance system are what the Indigenous Peoples' Rights Act (IPRA or Republic Act 8371 of 1997) strives to correct. By recognizing prior or vested land rights, traditional use rights, and persisting cultural elements, IPRA benefits the indigenous peoples who have been marginalized in decision-making processes in the last four centuries under the colonial and post-colonial state, by recognizing their jurisdiction over the management of all natural resources within the ancestral domain. Yet, there are emergent issues brought about by the IPRA in terms of conflicts between (a) common "state" resources as defined by national law, on one hand, and local commons, on the other, in line with the customary system,

and (b) between a national but largely acculturated community operating in accordance with state law, and persisting local cultural systems founded on self-governance. The ramifications of the contestation between national law and customary law on land rights centers not merely on how benefits from the utilization of natural resources are distributed, but extends even to the kind of development that the communities envisage.

The basic principles in these three general laws are translated into policy issuances that define the institutional arrangements for the use and management of natural resources.

2.2.2 Other Sectoral Laws and Supplemental Policy Issuances

The streamlining of laws for the environmental sector was the indicated trend in policy issuances in the 1970s, while the particular substantive and operational concerns of the sub-sectors became the foci of institutional reform beginning in the mid-80s. The forestry sector was among the first to enjoy major changes with the passage of PD 705 or the Forestry Reform Code Of The Philippines (19 May 1975), thus revising PD 389 that had been in effect for many decades.

The Environmental Policy (RA 1151) provided the general policy framework early in the 1970s particularly for pursuing ecological health for all citizens. Meanwhile, the Environmental Code (RA 1152) set the specific mandates of each sub sector pertaining to the management of environmental resources. The Code requires that quality standards are ensured, and defines the regulatory and enforcement functions of each sub sector.

Most institutional arrangements for the use of environmental resources were laid down over the next three decades in accordance with these laws: for forest production, protection, mining, watershed, energy development, land management, and the like. A decade after the Environmental Policy and Environment Code, what was then the Department of Energy, Environment and Natural Resource (DEENR) was reorganized into two departments with separate concerns (Executive Order No. 192, 10 June 1987). The thrusts of the energy sector were further defined by the Department of Energy Act (RA 7638) of 1992, its operations detailed through ER 1-94.

Meanwhile, concern over the worsening state of the environment found expression in the clamor for the carving out of critical areas for protection from the largely production framework which had dominated the forestry sector. Hence, early in the '90s, RA 7586 sought the establishment and management of the National Integrated Protected Areas System (1 June 1992). By the '90s, therefore, with devolution and decentralization set into motion by the Local Government Code, IPRA and the NIPAS Act signaled the shift toward institutional reform that would grant greater civil society roles in environmental governance, as reflected in the provisions of multi-stakeholder structures like the Protected Area Management Board, the Forest Multi-Sectoral Protection Council, and active LGU role in environmental legislation and management of natural resources. A model for LGU initiative in crafting its own ecological governance framework in the spirit of the LGC and the global challenge to pursue sustainable development is Republic Act No. 7611 which mandated the adoption of the Strategic Environmental Plan of Palawan to be implemented through a Palawan Council for Sustainable Development (19 June 1992). To date, the experiment has yet to address the policy harmonization issues posed by national laws, particularly as basis for the sustained authority of a national line agency like the DENR over natural resource regimes under the jurisdiction of the LGU structure and a special body created by and under the office of the President of the Republic.

As a result of these policy initiatives for the rest of the '90s to the present, laws became imbued with contestations not merely about greater participation of a wider range of stakeholders, but also greater control over resource access and utilization, albeit either in competition with or in the light of the need for better protection.

The Electric Power Industry Reform Act (EPIRA) or RA 9136 of 2001 made it possible for the private sector to take the lead in addressing the ominous energy crisis of the country. The Build-Operate-Transfer Scheme to attract foreign investors was an added incentive provided by the government. In the same light of attracting the business sector to invest in the country's economic development, the Mining Act (RA 7942) allowed foreign companies to invest in the country intensively and extensively, thus opening up areas, even those covered by the IPRA or NIPAS, to mining explorations.

Executive Order 263 (1995) enshrined community-based forestry management as the

national strategy for the development of forest resources in the country in a manner that gives legal basis for the participation of local communities in the attainment of sustainable development. Its implementing rules and regulations, Department Administrative Order No. 96-29, integrated the forestry programs and projects of the DENR under a general umbrella called the Community-Based Forest Management Program. The combined program/projects include: Integrated Social Forestry program (ISFP), Upland Development Program (UDP), Forest Land Management Program (FLMP), Community Forestry Program (CFP), Low Income Upland Communities Projects (LIUCP), Regional Resources Management Project (RRMP), Integrated Rainforest Management Project (IRMP), Forest Sector Project (FSP), Coastal Environmental Program (CEP), and Recognition of Ancestral Domain Claims.

In response to the private sector's increasing role in the exploitation of natural resources PD 1586 (Establishing An Environmental Impact Statement System, Including Other Environmental Management Related Measures And For Other Purposes) was passed in 1978. However its enforcement was confined for a long time to investments for development projects in the industrial sector. With an emergent civil society-led conservation community in the 1990s, the spirit of PD 1586 was applied to community rights and social justice issues whose resource areas are threatened by capital-intensive projects.

Memorandum 288 (Formulating the Philippine Agenda 21) recognized the civil society lobbying for a national commitment to be made to the world agenda set by the Rio de Janeiro in the mid-90s. Executive Order 247 (18 May 1995) was the resulting regulatory framework on bioprospecting for scientific and commercial use while assuring the traditional use as right of indigenous peoples, by prescribing a process for seeking prior informed consent by local communities. RA 9147 (Wildlife Act) set the conditions for the conservation and protection of wildlife resources and habitats.

Another recent policy initiative has been the formulation of a National Biosafety Framework of the Philippines resulting in a working draft after an 18-month project funded by the United Nations Environment Program/Global Environment Facility (UNEP/GEF) and implemented by the Department of Environment and Natural Resources through the Protected Areas and Wildlife Bureau (PAWB). The main

objective of the project is to evaluate/review existing policies, laws and administrative issuances related to modern biotechnology and biosafety, in order to produce one integrated framework so as to provide clarity, transparency and predictability to biosafety decision-making in the Philippines. The framework can effectively serve as an interim mechanism for implementing the Cartagena Protocol on Biosafety; its substantive provisions are likewise incorporated into this framework, again to the extent that these are consistent with Philippine law.

While these are definitely directions toward a desired improved policy context, these initiatives in the environmental sector and the critical situation that the country is facing have undeniably created a considerable degree of confusion or disharmony in the institutional setting, which the draft revisions of earlier administrative orders and issuances now seek to amend.

2.3 Policies for Rewarding Providers of Environmental Services

Social equity and social welfare issues, as translated in benefit sharing and payment of rewards for providing environmental services, is increasingly gaining greater attention. For instance, as a response to the policy reform initiated by the DILG to expand the power of local government units, the DOE issued ER I-94 on Direct Livelihood Fund and RWMHEEF and, with the DILG, circular 95-01 on the sharing of national wealth, taxes, royalties, fees or charges. Several issuances were made by the DENR to clarify the implementation scheme for the Community Based Forestry Management Program, until the issuance of Resource Use Permits was finally suspended in 2003 in order to give way to a nationwide review of the entire strategy.

Conditions that would guarantee more equitable sharing of costs and benefits through the development of new markets for environmental services is being further investigated as a critical agenda of institutional reform.

A very recent addition is RA 9275 (Clean Water Act) which provides for the protection, preservation and revival of the quality of the fresh, brackish and marine water along the framework for sustainable development, by setting disincentives to water pollutants through fines. Enacted in February 2004, the IRR has yet to be

formulated. Sec. 3 defines the coverage of the law as to apply to water quality management in all water bodies for the abatement and control of pollution from land-based sources, with the water quality standards and regulations and the civil liability and penal provisions under the act to “be enforced irrespective of sources of pollution.”

In an attempt to link the goals of sustainable development and forest productivity, the latest policy issuance, Executive Order 318 (Promoting Sustainable Forest Management in the Philippines, signed 9 June 2004), provides an integrative framework for all policies and programs affecting the sector in the light of environmental concerns.

The Executive Order reiterates the following:

- Prohibition of logging or any commercial (exploitation of forestry resources in old growth forests, proclaimed watersheds and other areas covered by the National Integrated Protected Areas System (NIPAS) to ensure the perpetual existence of all native plants and animals
- Adoption of a watershed-based integrated ecosystems management approach characterized to be a holistic, scientific, rights-based, technology-based and community-based manner and observing the principles of multiple-use, decentralization and devolution and active participation of local government units (LGUs), synergism of economic, ecological, social and cultural objectives, and the rational utilization of all resources found therein
- Delineation, classification and demarcation of forestlands either for production or protection
- Holistic, sustainable and integrated development of forestry resources
- Use of the CBFM as primary strategy in all forest conservation and development and related activities, including joint ventures, production sharing and co production;
- Provision of incentives for enhancing private investment economic contribution and global competitiveness of forest-based industries
- Proper valuation and pricing of forestry resources

The examination of policies that have bearing on the provision of environmental services, viewed from a sequential perspective, surfaces the changing yet competing demands that the environment sector has faced. It is interesting to note that refinements in the procedural and

substantive areas of environmental management are increasingly being more appreciated as transdiscipline concerns, proceeding from the purely administrative and technical, to the all-sided approaches that balance production with sustainable development, conservation with increasing human welfare, centralized governance with multi-stakeholder participation, short-term with inter-generational goals, national with global imperatives and local realities.

2.4 Institutional Players

In as much as there are a number of policies and legislative instruments that can impact on the market for environmental services, there is also a wide range of institutional stakeholders involved.

The cases reviewed in this study reveal a wide range of players as ES providers and potential markets in the country today. The various types of organizations and agencies are summarized in Table 1.

2.4.1 Watershed management for water supply

The agency assigned by the State to have priority mandate over watershed management concerns is the DENR while the NWRB approves water rights over the country's water resources for various uses. Meanwhile, the National Irrigation Authority supervises domestic water use for agriculture. From the state's perspective, however, the management of watersheds can be undertaken only in partnership with local

Table 1. Summary Table on Institutional Players in the ES Sectors

Environmental services Case studies	Gov't organizations (players with official mandate over the sector)	Donor community, private sector, civil society
Watershed management for water supply Baggao in Cagayan; Quirino; N. Vizcaya Tuba in Benguet SOCSARGEN	<ul style="list-style-type: none"> • Department of Environment and Natural Resources (DENR) • National Irrigation Authority • National Water Resources Board • NCIP where applicable • LGUs 	<ul style="list-style-type: none"> • Water supply companies • Water District/ Local Water Utilities and Water Authority • CBFMA holders • Assisting NGOs • Sponsoring multilateral/bilateral agency project: ITTO, JBIC, Aus-Aid • Business sector: Dole Philippines
Watershed management for hydroelectricity Bakun, Benguet ER sites of DOE	<ul style="list-style-type: none"> • Department of Energy • Energy Regulatory Commission • National Power Corporation • NCIP where applicable • LGUs 	<ul style="list-style-type: none"> • Independent power producers • DUs/Franchises (distribution utilities) • RECs (Regional Electric Cooperatives) • MERALCO (Manila Electric Company) • PIOUs (private independent-owned utilities) • PO/CADT holders • Assisting NGOs • Sponsoring multilateral/bilateral agencies: ILO, JBIC
Biodiversity Conservation Palawan	<ul style="list-style-type: none"> • PAWD-DENR • DOST, PCMARD, PCCARD • DA, BFAR • LGUs 	<ul style="list-style-type: none"> • PAMB • NGOs, academic community • POs/CADC or CADT holders • Sponsoring multilateral/bilateral agencies: UNDP-GEF-SGP, World Bank for CPPAP, EC, DANIDA, The Royal Netherlands Embassy, etc.
Ecotourism Mt. Kitanglad Mt. Pulag, Benguet	<ul style="list-style-type: none"> • Department of Tourism • DENR (for Protected Areas) • NCIP where applicable • LGUs 	<ul style="list-style-type: none"> • Tourism service providers • PAMB-DENR • POs/CADC or CADT holders • Sponsoring multilateral/bilateral agencies: UNDP-GEF-SGP, World Bank for CPPAP
Carbon sequestration	<ul style="list-style-type: none"> • DENR • Department of Finance • Development Bank of the Philippines • NCIP where applicable 	<ul style="list-style-type: none"> • Klima c/o Manila Observatory • Mirant Corp. • Potential for CBFMA holders, assisted POs of environmental NGOs
Other environmental services	<ul style="list-style-type: none"> • Department of Telecommunications • Department of Agriculture • LGU 	<ul style="list-style-type: none"> • Telecommunication companies • Farming communities

communities. By virtue of their location and their resource areas, such communities, therefore, are socially perceived as the de facto ES providers. They are required or are expected in many forestry programs to perform the primary role of managing the uplands and watersheds. These communities are also technically considered the primary providers and immediate users of environmental services in areas under CADC/CADT (as affirmed by the NCIP), in the light of responsibilities lodged with them as CADC/CADT holders.

Because ground and surface water is increasingly becoming scarce and degraded, the market for water has grown robustly in the last decade. Water supply companies are the external interest (business) groups that seek permits to tap water for commercial, industrial and domestic use sometimes in what primarily were source areas for only domestic and agricultural use. In acting as such, these entities perform the role of ES buyers. Meanwhile, water district/ local water utilities – largely government or quasi-government corporations- perform a wider range of roles in the Philippine setting. They constitute the juridical entities that can buy and sell water, or even serve as intermediaries in the ES market by granting concessions to ES providers to ensure the generation of water.

Particularly for forest areas below 5000 hectares, the LGU is now allowed by the DENR to take on the responsibility of watershed management by virtue of two joint memo circulars of the DENR and DILG. These are:

- Joint DENR-DILG MC 98-01 provides the legal basis for the co-management of certain watershed areas between the DENR and the LGUs, for up to an area not exceeding 5,000 hectares.
- Joint DENR-DILG MC 2003-01 strengthens the co-management scheme by making both agencies responsible for the identification and establishment of communal forests, community watersheds and reforestation areas.

The circular for co-management allows the LGU to be the ES intermediary, to administer and manage watersheds or portions thereof, with the DENR providing technical assistance while the LGU is expected to comply with the legal standards. What circular 2003-01 offers is a step forward in redirecting benefits to local communities since forest lands can be devolved

to the LGU based on approved forest land use plan (FLUP) developed through a transparent, accountable and participatory process. If undertaken within the framework of CBFM as the LGU experiences in the Sierra Madre region and Maasin in Iloilo have shown, the LGU can indeed be a very critical agency in ensuring better benefits to flow back to upland communities for the environmental service they play in watershed management.

2.4.2 *Watershed management for hydroelectricity generation*

For hydropower, the Department of Energy links up with the National Power Corporation and Energy Regulatory Council in delivering the targets of the sector. External ES user groups such as DUs/Franchises (distribution utilities with franchises covering specific areas in the country), RECs (Regional Electric Cooperatives), MERALCO (Manila Electric Company), PIOUs (private independent-owned utilities), and IPPs (Independent Power Producers) tap the water resources of local communities through LGUs and, where there are CADCs or CADTs, the CADC/CADT holders who are organized as a PO (as in the case of Bakun in Benguet). Meanwhile, as in watershed management for water supply purposes, LGUs and POs can also be the ES resource provider and at the same time establish LGU-owned or PO-owned utilities, with assistance from local NGOs for technical support and the donor community for funding. UNDP-GEF for more than a decade has led in this modality of democratizing access to energy through community-based watershed management and renewable energy projects. Market establishment, meanwhile, is the current thrust of JICA and JBIC as well as ADB and World Bank interests throughout the country in watershed management programs for hydropower generation.

Energy projects in Protected Areas go through a review process of a joint committee (the Committee on Energy Projects in NIPAS Areas or CEPNA) of both the DENR and DOE. The DENR incorporates the energy plan into the Park plan, for approval by the Office of the President through a Proclamation, on which basis the DOE is thereafter responsible for securing the Environmental Clearance Certificate (Joint DENR-DOE AO 2002-01 Procedures for the Establishment of Energy Projects in Protected Areas, May 13, 2002).

2.4.3 Biodiversity Conservation

There are a large number of institutional players involved in the protection of biodiversity in protected areas. PAWB-DENR is the mandated agency representing the State. Multilateral and bilateral donor agencies have facilitated civil society groups to take a lead role in mediating role in building up the conservation community in the country. In Palawan alone, conservation initiatives over the past 10 years have been pursued by Local Government Units, the DENR, and an impressive number of community-based groups and NGOs with financial and technical assistance from the USAID, WB, UNDP-GEF-SGP, ADB, AUSAID and the EC as major donors. Other sources of international support include the Peace Corps, UNDP- UNF-COMPACT, Helvetas-Bread for the World, CIDA, OXFAM, Katolische Zentralstelle fur Entwicklung, Anherser Busch, Conservation International, WWF Philippines, SEARICE and Bird Life International. Assistance to conservation efforts has taken the form of funding for planning, research, livelihood assistance, and advocacy, or technical support. Locally, the respective LGUs at the provincial and municipal/city level have consistently carried the environmental agenda among their top priority by providing the necessary counterpart to these initiatives.

Among the Manila-based NGOs, the Philippine Rural Reconstruction Movement, Foundation for Philippine Environment (FPE), Sibol Ng Agham At Teknolohiya (SIBAT, Inc.), Philippine Action for Intercultural Development and Anthrowatch have assisted local communities in more area-specific and short-termed projects.

Local or Palawan NGOs have been involved in the conservation efforts of these agencies include Sagipin ang Gubat at Dagat (SAGUDA), Palawan NGO Network, Inc. (PNNI), Budyong Rural Development Foundation, Inc. (BRDFI), Palawan Center for Appropriate Rural Technology (PCART), Environmental Legal Assistance Center (ELAC) and Palawan NGO Network, Inc., HARIBON Palawan, and Tanggapang Panligal ng Katutubong Pilipino (PANLIPI Palawan). Largely as a result of the UNDP-UNF COMPACT, local associations of fisherfolk, farmers and indigenous peoples have increasingly been assisted to pursue alternative livelihood projects to reduce the burden on critical biodiversity resources within and around the PPSRNP. Among the local organizations are the Sabang Sea Ferry Service Cooperative (SSFSC), Sabang Vendors

Association (SVA), Sabang Tourism Network Multi-Purpose Cooperative (STNMPC), Samahan ng Inang Kalikasan, Inc. (SIK), Cabayugan Underground River Multi-Purpose Cooperative (CURMPC), Barangay Tagabinet Fisherman's Association (BTFA).

Of late, only Shell-Philippines Exploration, Inc seems to be the only external interest group from the private sector, although the local NGOs and POs as well as CADC/CADT holders maintain market ties with traders to sell biodiversity products.

Elsewhere in the country, large and multi-year conservation programs have helped break the ground in establishing the NIPAS. The World Bank - funded Conservation for Priority Protected Areas Project (CPPAP) was managed jointly for seven years by the DENR-PAWB and the NGOs for Integrated Protected Areas, Inc. (NIPA), at a cost of US\$20M from the GEF through WB and GOP counterpart. Sites included the following: Batanes Protected Landscape and Seascape, Batanes, Region II; Northern Sierra Madre Natural Park, Isabela, Region II; Subic-Bataan National Park, Zambales and Bataan, Region III; Apo Reef Natural Park, Occidental Mindoro, Region IVB; Mt. Kanlaon Natural Park, Negros Oriental and Occidental, Regions VI and VII; Turtle Island Wildlife Sanctuary, Tawi-tawi, Region IX; Mt. Kitanglad Natural Park, Bukidnon, Region X; Mt. Apo Natural Park, Davao Del Sur and Cotobato, Regions XI, XII; Agusan Marsh Wildlife Sanctuary, Agusan del Sur, Region XIII; and Siargao Island Protected Landscape and Seascape, Surigao del Norte, Region XIII.

Subsequently, the EC-assisted National Integrated Protected Areas Programme (NIPAP) with a funding support of US\$12.7 million was set up in seven IPAS sites over a 6-year investment period (1995-2001). The NIPAP provided support for a clear resource management planning through actual delineation and demarcation of protected areas and buffer zone boundaries, and promoted locally identified alternative economic activities.

The NIPAP sites cover, among others, the northern Palawan area (El Nido, Coron and Malampaya Sound) of the Palawan corridor, and Mt. Pulag National Park in the Cordillera Administrative Region. The investment components include: resource mapping using GIS and integrated database including socio-economic surveys, delineation and demarcation of protected area boundaries.

The EC also funded the Sustainable Utilization of Non-Timber Forest Products in St. Paul's Subterranean National Park, involving the organization of local communities into associations for sustainable management of biological resources in the area. This project involved three indigenous communities located in the northeastern and northern boundaries of the national park, covering the villages of San Rafael and San Roxas.

An important instrument within the PA system is the Protected Area Management Board, a multi-sectoral policy-making body where stakeholder partnership and complementation is achieved. While there are as yet only minimal outcomes after almost two decades of methodology development in conservation, it can be said that its weakest area is still that of developing livelihood activities that can yield incomes comparable to, if not better than, the earning from destructive activities. There has also been a decade of valuation trials for biodiversity, but the market is still undeveloped.

2.4.4 Landscape Beauty and Ecotourism Services

The ES market for ecotourism in upland communities is developed in association with biodiversity conservation in protected areas as well as in CADC/CADT sites. Hence, the DENR and NCIP are the state agencies that work with the Department of Tourism.

Ecotourism is often the track taken by NGOs and POs in realizing rewards for conservation. Through user fees and payments for tourism services, environmental service providers earn supplemental or alternative income. The Integrated Protected Area Fund provides for the operational costs of maintaining protected areas and to establish minor improvements in tourism facilities, but almost little or none for tour guides, or even protected area forest guards. Tourism has the potential to provide replacements to the earnings from destructive activities, however valuation studies and careful planning and management need to be undertaken in protected area and non-protected area sites if the market for eco-tourism could be provide rewards to the service providers.

2.4.5 Carbon sequestration

The Philippines was active in the international negotiations under the UNFCCC leading up to

the Kyoto Protocol in 1997. In the early the 1990s, the Inter-Agency Committee on Climate Change (IACCC) was established and has scrutinized, reviewed and evaluated projects qualifying for Global Environment Facility (GEF) funds and the World Bank Carbon Fund. The IACCC consists of the DENR, DOST, DOE, DFA, DTI-BOT, DOTC, NEDA, DPWH, PAGASA, FMB, EMB, and the Philippine Network on Climate Change (NGO). The Philippine's Department of Environment and Natural Resources (DENR) has functioned as the secretariat for the IACCC. So far only renewable energy and waste treatment projects proposed by private project proponents have been considered by the IACCC. Until May 2004, there was considerable reluctance among the committee members to consider afforestation/reforestation projects, mainly because of uncertainties vis-à-vis the Clean Development Mechanisms (CDM) stipulations. The uncertainty has included doubts of whether there would be sufficient technical capacities to handle carbon sequestration issues such as additionality, leakage and permanence. That reluctance has been steadily decreasing because the technical capacity at the national level has been greatly enhanced and there has been an effort to create CDM projects to enhance sustainable development. It is acknowledged that smallholder afforestation/reforestation projects in particular have a much greater potential for supporting that goal.

The Dutch government has, through UNDP, Risø, Denmark, given a grant to the Philippines to work out the modalities for establishing a DNA and the procedures that should be involved in approving projects qualifying for selling Certified Emission Reduction (CER) under the CDM framework. It is envisaged that the DENR will continue to function as the secretariat for the DNA as well as being a leading member of the Committee. It is also envisaged that three technical committees will be established, one for each of the three groups of CDM projects. In April 2004, a project was prepared with the assistance of Dr. Rodel Lasco (Co-ordinator of World Agroforestry Centre, Philippines), for an afforestation/reforestation project on private land that will be submitted to the IACCC for review and evaluation. This will be the first trial of having afforestation/reforestation projects accepted as qualifying under the CDM rules. It is envisaged that a Designated National Authority (DNA) will be approved and start function by the end of year 2004.

It is going to be proposed by the IACCC that a marketing and promotion entity (possibly private) will be established to create links between buyers and potential sellers of CER in all three types of CDM projects. Future smallholder projects should be bundled to reach sufficient scale to negotiate with the DNA on the project concept and eventually the project design document (PDD) and to sell the CER through the future Promotion and Marketing Entity. All projects to be considered for approval as CDM projects must have an Environment Compliance Certificate

(ECC), issued by the DENR. The process of obtaining an ECC involves a public hearing where the local population can object to a proposed project (Mogens, 2004).

Klima c/o Manila Observatory has taken the lead in promoting the CDM agenda, and has held at least one regional training course with the civil society groups (in May, in the Visayas). As a private sector initiative, Mirant Corporation is known to have started a carbon sink project in Quezon since last year.

3 POLICY AND INSTITUTIONAL MECHANISMS FOR REWARDING ENVIRONMENTAL SERVICES –ISSUES AND CONCERNS

3.1 Watershed Protection

The Philippines has 125 declared watershed reserves as of 2001, covering 1,500,274 hectares out of 23 million hectares (77% of the country's total land area), which by slope or the presence of river basins can be classified as watersheds. Usually found at the community level are small watersheds which account for 22 million hectares or 22% of total drainage area, a fact that emphasizes the crucial role of LGUs and community residents in watershed management.

With poor management watersheds in the country may deteriorate rapidly because of human activities. Direct causes include erosive agricultural practices, inappropriate forestry practices, overgrazing, poor water resource management, unregulated land conversion, extractive and polluting industrial activities. Among the indirect causes are natural hazards; a monsoonal climate pattern in the country which accounts for more than 60% of total rainfall; high intensity rains, resulting in soil erosion and sedimentation; severe climate events such as the El Nino and La Nina; and frequent floods. Considering the rate of forest denudation and the resulting serious rates of erosion, it is not surprising to know that 13 of the country's more than 70 provinces suffer from moderate and severe erosion. This in turn has reduced the capacity of major reservoirs to as much as 20-30% in areas irrigated particularly during the dry season.

No person (except landowners in need of water for domestic or household use), business enterprise, government agency, or government-operated or controlled corporation can appropriate surface water or groundwater without a water permit, which is issued by the NWRB. For hydropower, industrial and commercial use, the NWRB has no set standards of beneficial use, although it examines and approves the applications for permits. However, the clearance for processing water permits for

these three water use sectors is done by the NPC, DENR and Water District, respectively.

Watershed protection generates benefits in the form of payments made for varying uses within the watershed, of which the following schemes are currently in place:

- User fees from those who access ground water
- User fees from those who visit forest protected areas and which form part of the Integrated Protected Area Fund
- User fees from power producers
- LGU share in the national wealth, and
- Incentives to LGUs and communities in the form of livelihood assistance, skills training, and similar human health projects

Specifically for energy projects, included among the benefits are the "Development and Livelihood Fund" (DLF) and the "Reforestation, Watershed Management, Health and/or Environment Enhancement Fund" (RWMHEEF) as required by the Department of Energy (ER 1-94).

3.1.1 Rights to surface and ground water for industry, agriculture (irrigation), domestic and other uses

Water is a critical environmental service whose market is regulated by the National Water Resource Board through the use rights and permits it grants. Watershed management, meanwhile, falls under the mandate of the Department of Environment and Natural Resources. If as much as 70% of the country's total land area belong to watersheds of varying sizes, it is only logical to expect the watershed management approach to be a critical component of the over-all wise use and protection of our entire environment.

In 1997, a total of 60,987 million cubic meters of water rights were granted to several types of water users with surface water accounting for about 97 percent. The volume of water rights, however, did not include water drawn illegally or without permits from privately owned wells. Irrigation accounted for most of the water rights, constituting about 92 percent of the total allowable volume although dependent primarily on surface water. The remaining 8 percent was divided among the municipality, industry, and other users.

Surface water is also the main legal water source of other water-use sectors. Municipalities obtained about half (53 percent) of its needs from

surface water and drew the remaining portions from wells and springs. Except Metro Manila, municipalities relied on ground waters while irrigation and other users relied on surface water. Among upland communities, surface water is invariably accessed still for free in small-scale community water supply project initiatives (as surface water) for which funding is a cooperative endeavor of the LGU and/or PO and often with support from external sources. In such initiatives, water use fees are collected largely for the maintenance of the water supply system, and not for watershed management. In most communities, ground water is accessed for a fee through private companies and water utility authorities, often neither for watershed management.

3.1.2 Energy sector

The Philippine Energy Plan laid down the government's key objectives for rural electrification to provide 100% rural electrification by 2006; and have 90% of household electrification by 2017.

The 2001 Electric Power Industry Reform Act (EPIRA), one of the most important energy restructuring policy instruments in the country, strengthened the objective to hasten the completion of rural electrification and the fair and non-discriminatory treatment of public and private sector entities in the process of restructuring the electric power industry. It also mandated for socially and environmentally compatible energy sources and infrastructure for rural electrification.

It is reported that the Philippine Energy Plan's target of 4,200 barangays for electrification has to far been implemented successfully so that the objective now is to cover the remaining 10,000 or so barangays set to come under fast-tracked electrification.

Three programs have been undertaken to date to step up the slow pace of electrification in the off-grid areas in order to achieve the objectives. These are the Accelerated Barangay Electrification Program (ABEP), O'ilaw Program, and the current Expanded Rural Electrification (ER) Program. Specifically, ABEP initiated while the O'ilaw and ER programs strengthened two main strategies for rural electrification, agency and multistakeholder integration, and the participation of the private sector. ABEP commenced in year 1999, the O'ilaw has a project time frame of years 2000 to 2003, while

ER which started in the period from 2003 to 2006, shall continue up to year 2017.

These three programs have ushered in an intensive phase of efforts at rural electrification – quite unprecedented in quantity of projects achieved and players involved over the past three years in the country's rural electrification history. O'ilaw in particular was launched in 2000 to more intensively integrate all renewable energy efforts of the DOE, NEA, NPC, and the PNOC-EDC. Its aggressive performance in over three years shows an average of 1,432 barangays provided electricity each year (2000 to 2002). So far, a total of 4,296 barangays have been energized through the program, resulting in at least 9.89% increase in barangay electrification level from 80.1% in 2000 to 89.99% in December 2003.

This ambitious target has implications on all sources of energy that can be developed and utilized in the country, which inextricably links to hydrologic resources that remain as the most promising source, especially for micro- and mini-hydro energy systems that are common in off-grid areas, usually the less accessible upland communities.

3.1.3 Legal Basis

The country's basic water resource policy framework is articulated specifically in the Provincial Water Utilities Act of 1973 (PD 198), the Water Code of the Philippines (PD 1067 of 31 December 1976), the Water Crisis Act of 7 June 1995, and the Clean Water Act (RA 9275 of February 4, 2004). These policies have sought to address the use and excessive withdrawal of groundwater; the need for conservation, protection, and management of watershed, surface water, and groundwater resources; the administrative requirements for setting, enforcing and monitoring standards of water quality, including the establishment of funding mechanisms for water and watershed management functions.

The Department of Energy (DOE) Act [RA 7638, 1992] and its Implementing Rules and Regulations (IRR) [ER 1-94] and the Electric Power Industry Reform Act (EPIRA) [RA 9136, 2001] provides the policy context for the use of water for energy. RA 7638 called for the creation of the DOE and rationalized the organization and functions of government agencies related to energy. The EPIRA, meanwhile, is the main policy instrument that recently restructured the energy picture in the country, in order to encourage utmost participation by the private (business) sector.

ES rewards and benefits are specifically provided for in Section 5 (1): the Department shall “devise ways and means of giving direct benefits to the province, city or municipality especially the community and people affected, and equitable preferential benefit to the region that hosts the energy resource and/or energy generating facility. This provision has been enforced under Energy Regulations No. 1-94 (effective since 24 May 1994), and in accordance with Chapter II, Section 289 to 294 of the Local Government Code which guarantees the benefits that host communities should receive from energy development projects. As the law is laid out, at least 80% of proceeds derived from the development and utilization of hydropower are to be applied solely to lower the cost of electricity in the LGU where such source of energy is located (Sec 294 of the LGC). Moreover, in times of energy shortage, the energy generating facility shall prioritize up to 25% of its contracted or available capacity shall be delivered by the appropriate electric utility to the resettlement site and people affected and thereafter to the host LGU or host region.

3.1.4 Rewards, incentives and payments for watershed management – Issues and Concerns

A number of cases illustrate how payments, benefits and incentives are enjoyed by watershed management projects. As previously mentioned, payments rely on user fees from those who access ground water; LGU share in national wealth; and other benefits like training, small-scale infrastructure and health services.

Specifically for the energy sector benefits accrue through the Development and Livelihood Fund (DLF) and the Reforestation, Watershed Management, Health and/or Environment Enhancement Fund (RWMHEEF). The Guidelines on the Review/Evaluation of DOE-IRR Project Proposals specify that project benefits should be radiate from the Host Barangay, to the Host Municipality/City, Host Province and Host Region. Benefits fall under several categories including power benefits, skills development, preference in employment, preference in procurement of local supplies and services and access to the above-mentioned funds. The valuation standard for the fund is set at one half of one centavo (P0.005) per kilowatt hour of total electricity sales of the facility, with the power producer and/or energy resource developer defined as primarily responsible for the implementation of such program. For a unified watershed management

effort, the resource developer is also expected to turn over the amount allocated for reforestation and watershed management to the watershed reservoir manager designated by law for the area. Use of such fund may be redirected to other priorities only on consultation with the LGU, NGO, community and other affected parties. The amount is derived from estimates placed at P150.00/day for the reforestation cost of P32,984.00/hectare (1985 Guidelines on the Review/Evaluation of DOE-IRR Project Proposals for RWHEE Fund). These terms are expected to apply except when the energy generating facility has an operating generation capacity of less than 10 megawatts. Types of projects considered for DLF and RWMHEEF include:

- Development projects: street lighting, farm-to-market road, multi-purpose pavement, farm produce collection and buying station, rice/corn milling, communal irrigation system, small water impounding projects, fish ports, seawalls, day care center, school building, public market, slaughter house, public drainage/sewerage system, bridge, flood control measures
- Livelihood projects: food production/processing, ice plant, livestock and poultry production, handicraft production, aquaculture, skills training for LGU-administered livelihood projects, vegetable seed farm, small-scale services livelihood projects
- Environment enhancement projects: fire truck, waste management equipment, construction/installation of waste treatment facility, sanitary landfill development, development of waste recovery warehouse, construction of concrete sanitary waste water collection facility
- Reforestation and watershed management projects: CBFM, agroforestry, conservation of mangroves, seedling nursery
- Health related projects: water supply system, municipal hospital, medical equipment/facilities, medicinal plant gardens

The case of Santo Tomas Watershed (Box 1), a DENR project, highlights the gains in the development of a market for watershed protection, but illustrates institutional issues that may impinge on the sustainability of the upland resource providers’ support for watershed management.

The Santo Tomas Watershed Rehabilitation Subproject was developed to overcome problems of constant landslides, fires due to forest clearings

for small-scale upland farming (kaingin), land conversion, timber poaching, sustainability issue. The environmental services provided in watershed are considered to be

- Rain basin for the City of Baguio and barangays of Pugo and Rosario in La Union and parts of Pangasinan
- Contributing to road stability of the Marcos Highway, a major road system linking Baguio to lowlands
- At the highest ridge, providing elevation services for telecommunications for several companies: Oceanic Wireless Network, Inc., Philippine Long Distance Telephone (PLDT), GMA 7, RPN 9, Liberty Broadcasting Corporation, Bureau of Telecommunications and Civic Communication Groups

Through the project, the community in the Sto. Tomas watershed is receiving benefits via supplemental income from trees (currently and still harvestable), employment during tree establishment activities, seed capital for their own IGB, agroforestry training and a share of the national wealth. However, it is not clear to the

community and the DENR Project Staff what benefits the LGU gets from the buyer of water (Baguio Water District - BWD) and how these are being utilized. Review of BWD documents yield a Memorandum of Understanding with the LGU signed in the mid-1990s. During the interviews, the LGU representative reported that it is only the Polbacion (the base of the municipal LGU) enjoying the share from national wealth and that the three other barangays that are also involved in watershed rehabilitation and management do not receive these benefits.

Issues also arise around the sustainability of the project, namely:

- The watershed rehabilitation project was undertaken on the basis of a loan
- At project end, hiring of laborers no longer needed. Meantime, the watershed area's productivity is not able to replace income from destructive activities. There are now destructive activities being reported as residents are returning to kaingin clearings and poaching
- Possible reduction in DENR Project staff monitoring when project ends.

Box 1: Santo Tomas Forest Reserve, Tuba, Benguet (Proclamation No. 581, s. 1940)

Project Background: Santo Tomas Watershed Rehabilitation Subproject (STWRS)

Began in 1998 as a JBIC loan-assisted project of the GRP thru the DENR

Land area: 2626 hectares of gently rolling to steep slopes ranging from 1350 to 2252 masl

Land uses: mossy and pine forests, open/grassland, commercial vegetable gardens, settlement

Project components and accomplishments:

- Community preparation and organizing assisted by Agri-Communities Development Center, Inc. (NGO)
- Comprehensive Site Development Contract awarding to TEAMCI (PO partner) after the following activities implemented by PO members with DENR technical assistance:
 - o 896.0 has. of second growth forest interplanted with coffee
 - o 414 has. of agroforestry sites planted with coffee and other fruit trees
 - o 567.5 has. of open and denuded areas planted with gmelina, alnus, mahogany, narra, Eucalyptus, teak and Benguet pine
 - o 730.5 has of pine forest under ANR with Benguet pine and alnus
 - o Napier grass introduced for soil and water conservation along eroded hillsides and creek embankments
 - o 75.0 km. of foot trail constructed/improved/maintained, 23.5 km. of fireline established
- Livelihood support activities: farm to market road, pump irrigation system, micro-macro financing for an initial income generating project of the PO (credit facility for agricultural production, commercial loans, loans for overseas workers, energy loans) resulting in expanded project (bulldozer for hire, owned by the PO)

Source: ERDS-DENR, Water Resources Assessment for Appropriate Conservation and Management of Sto. Tomas Watershed, n.d.; CENRO-DENR, SUSIMO Project, Briefing material; Results of Inter-agency consultation, 7 July 2004, UP Baguio

However, there are potentials for increasing rewards, benefits and incentives to the uplands. For instance the municipal LGU could improve the sharing of benefits from national wealth, and make transparent fund utilization of same share. The Baguio Water District could increase the LGU/project site share from the company's earnings and the Department of Public Works and Highways could share a portion of road users' tax or collected tollgate fees in return for the road stabilization function of the managed watershed.

Many watershed management/rehabilitation projects follow the same approach as in the Sto. Tomas experience. It would seem that the critical success factor has been the social preparation that has taken place in creating a functional and growing micro financing mechanism to support entrepreneurship (with external civil society (NGO) providing mediator support and funding success factor has been the social preparation that has taken place in creating a functional and growing micro financing mechanism to support

entrepreneurship (with external civil society (NGO) providing mediator support and funding from a donor agency). However, LGU involvement was and has not been secured in said project, and sustainability is critical since the external funding will be used up very soon.

The second case (Box 2) represents a "business-as-usual" approach, which assumes that involving the local stakeholders in a centrally planned project is sufficient to ensure success in watershed management projects. An examination of the Nueva Vizcaya and Quirino proposed project budget suggests that although local people were hired to carry out on- and off-farm activities as part of watershed management approach (under Barangay Development Unit), more funds were actually expended on capital for the Watershed Management Unit. Overall training constituted a very small portion of the budget (3.8%), less than the MOOE allocation for administrative personnel of the line agency and LGU.

Box 2: CBENRM project in Kayapa , Nueva Viscaya and Quirino (Ganano River Watershed)

Objectives:

1. To mobilize the community to take the focal role in the management and protection of watershed areas and in the attainment of higher productivity and greater socio-economic welfare
2. To develop grassroots organizations and institutions that will carry out CBENRM projects; and
3. To build organizational capabilities and skills on the effective management and protection of watershed and the pursuit of livelihood opportunities

Summary of project costs (in P000):

	NV	%	Quirino	%
Watershed Management	50,648	78.54	71,098	80.43
Barangay Development	35,468	55	42,988	48.63
Barangay Development Unit Mgmt.	5,625	8.7	9,000	10.18
Watershed Management Unit	9,555	14.81	19,110	21.62
Institutional Strengthening	13,837	21.56	17,298	19.57
Training Support	2,452	3.80	3,958	4.47
Equipment Support	5,225	8.10	6,040	6.83
MOOE	4,680	7.25	5,580	6.31
Agency incentive	710	1.10	950	1.07
PENRO Support Personnel	770	1.19	770	0.87
Total project cost	64,485	100.00	88,396	100.00

Duration: 7-year investment period

Direct investment for barangay development activities: community resources dev. (on-farm and off-farm livelihood activities), infra development (water supplies/sanitation, primary access roads, buildings/multipurpose, horses, tools, office equipment, communication), provision of vital equipment

Establishment and maintenance of Barangay Development and Watershed Management Units: cost of hiring personnel, capital outlay (equipment, vehicles), MOOE (for PENRO, CENRO, PPDO, PEO, MAO)

Source: WRDP, DENR

Good intentions to provide water sustainably and train local people to manage the watershed may not be sufficient, despite the fact that considerable achievements in quality of life improvements and watershed rehabilitation might be achieved. However, a normative approach to projects, which does not consider short-term benefits to providers, is even less ideal than one that neglects long-term benefits.

The Mt. Matutum Integrated Conservation and Development project (MICADEV) is located in a major watershed on the island of Mindanao covering over 14,000 ha and with 3,200 ha of forest cover (Box 3). The watershed supplies 25%

of the water requirement of the region, home to various species of plants and animals and was declared as Protected Landscape in March 1995. Approximately 2000 households live in the watershed and the case illustrates how, with the assistance of external NGOs, securing the role of the LGU and the formation of a multi-stakeholder management body are critical factors in developing the market for watershed protection. Resource mobilization from many significant contributors in the donor community has made it possible for the project to sustain its process-oriented institution building and social development goals.

Box 3: Mt. Matutum Integrated Conservation And Development (Micadev) Project

Goals:

- (1) to make Mt. Matutum into a premier watershed that is able to provide a better quality of life for the people of SOCSARGEN through genuine community participation, sustainable and equitable development.
- (2) to promote the general well-being of the people of SOCSARGEN through synergistic stakeholders' partnership in sustainable development, provision of adequate quality of water supply through protection and wise utilization of resources.

Project background: FPE-assisted project implemented by 4 assisting NGOs, with originally 8 PO partners

Preparatory Phase (1995-1996) – perimeter survey and ground delineation, biophysical resource assessment, socio-economic survey and MMPL indicative planning and development

Formation Stage (1996-1999) – emphasis on biodiversity conservation, sustainable agriculture, watershed management, and economic development.

Strengthening Stage (1999-2001) – focus on PO's capability building, organizational development, and installation of policies, systems and procedures

Objectives for current phase:

- (1) To undertake sixty-hectares reforestation and agroforestation and sustain the established reforestation and agroforestry areas by leveraging the project with other stakeholders
- (2) To further strengthen the 8 supported POs and DENROs through facilitation and capacity building
- (3) To develop and enhance the cultural heritage of indigenous people through the development of programs for indigenous knowledge skills and practices in consonance with the biodiversity conservation

Accomplishments (as of 2002):

- Formation of a Coalition of South Cotabato Development Organization (CSDO): umbrella organization of the 8 POs and NGO
- PAMB/MFPC support
- Lobby for congressional enactment as PA on going
- DENROs mobilization and Bantay Gubat organizationNursery establishment
- Reforestation and agroforestation
- Honey bee culture enhancement and other livelihood projects
- From the 8 POs at the start of the project, the POs serviced by MICADEV doubled (16) by year 2001, have been legally registered with either the SEC or CDA, with installed and functional leadership and operational systems
- The 16 POs have combined total assets of Php 47,998,858.00 and combined CBU generated in the amount of Php 3,164,498.00 (as of 2001)
- Generated substantial support (in total Php 228M) from various organizations, donors, and stakeholders including AusAid PACAP, Dole Philippines, EC-UDP, SMICZM of DENR.

Source: FPE Project Files

The Watershed Management Improvement Component (WMIC), a World Bank-Assisted program for the water sector, is a multi-agency project led by the National Irrigation Administration (Box 4). It is a component of the ongoing Water Resources Development Project and is an example of a positive direction, which the watershed management sector led by the DENR has taken, in cognizance of the need to mainstream the contribution that local communities can give in institutionalizing watershed management.

The policy context and institutional arrangements for watershed management as it relates to hydroelectricity generation are the relatively well developed yet there are gaps which cause stresses among the institutional players in the hydropower sector. Two experiences, both from the Cordillera Administrative Region, will illustrate how these gaps complicate the provision of ES and the enjoyment of rewards by upland communities, which maintain watershed resources for the energy sector. The review of project documents on the barangay energization program also provides numerous insights.

Box 4: Watershed Management Improvement Component (WMIC)

Goals:

- Formulate a national watershed management strategy and a long-term program of investment for sustainable management of watershed areas.
- Prepare and implement a comprehensive, integrated, community-based approach for improved watershed management in selected watersheds.

Philosophy: There should be a demand driven, community-based approach to watershed management involving two parallel components. Firstly, one where the demand is determined by national priorities and concerns and secondly, one in which the direct stakeholders can articulate their need and actively participate in the conservation, planning, management and sustainable utilization (for multiple purposes) of their local watershed resources. The aim of both is to provide the optimum social, cultural, economic and environmental benefits to the greatest number of people, particularly those living in, adjacent to, or downstream of, individual watershed areas, while maintaining the biological and cultural heritage of the Philippines.

Ongoing development activities including:

- Community organizing/strengthening
- Survey and delineation of watershed
- Physical development
- Infrastructure support
- Maintenance and protection
- Support services

Program Thrusts:

- Provision of Land Tenure Security through CBFMA, CADC or PACBRMA
- Formation and strengthening of Watershed Management Councils in the Project Sites
- Strengthening of the Community-based Forest Protection Teams / Committee
- Livelihood Entrepreneurship through Build-up Capital and Savings
- Formulation of Policy Guidelines as a result of the Pilot Implementation of the Philippine Strategy for Improved Watershed Resources Management
- Completion of Project backlogs

Expected impacts:

- Productive and protective functions of watersheds restored
- Empowered and self-reliant communities/POs/stakeholders as watershed managers
- Improved policy environment for natural resources management

Source: DENR, FMB

The experience of Tulgao in Balbalan, Kalinga (Box 5), is a project of the local PO which serves as provider, and who sells the energy to the rest of the community. NGO assistance in the design, establishment, monitoring, and technical training has been provided. Fund sourcing is largely also the input of the NGO, with links among external donors and state agencies assumed by the NGO.

Meanwhile, in Benguet the municipality of Bakun has been hosting hydro projects for almost ten years. These projects generate 11,000 kw of electricity about 33% of the 35,470 kw total capacity of all the Mini-hydros of HEDCOR in the province. In this municipality, there are two types of existing hydro projects. One is the series of mini-hydro schemes operated by HEDCOR (one of the corporations under the Aboitiz Group of Company) with three power plants (LFS, Lower Labay and Lon-oy) and the other hydro project is

mini-hydro schemes operated by HEDCOR (one of the corporations under the Aboitiz Group of Company) with three power plants (LFS, Lower Labay and Lon-oy) and the other hydro project is called the Bakun A/C Hydro. The Bakun A/C hydro (70 MW) is a run-off-river with tunnel type of hydro project. One of the country's first and largest Build-Operate Transfer projects, with the power plant located in Alilem, Ilokos Sur. It was originally proposed as three plants coded as Bakun A, B, C but it was fused into one and repackaged as Bakun A/C hydro based on the technical evaluation of foreign power consultants. Started to operate commercially in February 2001. The Bakun A/C hydro project is a joint venture of the Aboitiz Equity Ventures and the multi-national Pacific Hydro Ltd.

The projects are implemented with the concurrence of the LGU and CADT holder and

Box 5: Tulgao Minkagcro-hydro Power Project, Kalinga

Location: Barangay Tulgao East 107 Hh, Tulgao West 81 Hh, Dananano 124 Hh

Beneficiaries: Total 312 households

Project Holder: Episcopal Diocese of Northern Philippines (EDNP) for the EC Mountain Province Electric Cooperative Kalinga Electric Cooperative

Background: Micro-hydro supported by Kyosato Experimental Education Project with P2.6 million project cost, since Nov. 30 1999, capacity of 30 K, installation and training provided by SIBAT.

Use: for lighting, small radios and cassette players, two rice mills, 1 sugar cane press (these reduce hard labor for tasks traditionally done by women and children)

Payments: Current electricity tariff is P25/month for a 10W bulb with P5 per additional bulb. There is a graduated tariff for higher wattage bulbs and electric appliance beyond 10w. Tariff is set by the cooperative's Board, also to cover the honorarium of operators and collectors, expenses for repair and maintenance, and savings for other projects and repairs.

Evaluation points:

- Unified three barangays, which previously were involved in a prolonged conflict. The project became the opportunity to unify them for ample electricity and livelihood development, supported by the people's traditional cooperation. Highly organized labor for the MHP Project is community owned and operated.
- The Tulgao-Dananano Micro-Hydro Power Cooperative (TDMHPC) was organized by the EDMP, which has a Board of Directors and Project Committees with respective functions (finance generation, auditing, organizing, education, and training of member households). However, management is weak in terms of encouraging all to pay, and enforcing the disconnection policies for those who do not pay. Assembly and committee meetings are few and irregular
- Strong organized barangay committee but higher level of organization and social preparation is needed to meet the inter-community social requirements, while traditional cooperation is always helpful.
- Local fabrication and successful projectization of major technical components (turbine) contributed to research and development endeavors (designing), capability building initiative and technical competence of local technical service providers.
- Good and sufficient training, as well as good cooperation and timely maintenance. Installer and service provider must be able to monitor, provide advice when needed. However, links with watershed management is not indicated in the training activities of the PO.
- It is observed that payment rates are low (61% in Dananao, 29% in TulgaoWest, 32% in Tulgao East). This is attributed to factors such as the seriousness of poverty in the area, suspicions about the Anglican Church, which is mainly in control of the system, and lack of information on where the money goes.

Source: Interviews with SIBAT and review of project documents

are generating a number of benefits to the local community (Box 6) albeit with a questionable level of success. For both of these case the market development is largely the initiative of the company, with the local stakeholders on the receiving end while the watershed management roles have yet to be operationalized.

Other literature reviewed cites the Maasin case study (in REECS 2003) as demonstrating how LGUs can successfully take the lead in the creation of markets for watershed protection

through a multi-stakeholder engagement in took in the project. On the other hand, another study on Cagayan De Oro (Bautista 2002) emphasizes the need for methodological breakthrough in water valuation. He examines the components of water pricing to show that a more sustainable utilization of groundwater sources in a way that links up with the larger need for watershed management can in fact yield better rewards for the local community, than simply increasing user fees to fund increased extraction that will eventually have decreasing yields.

Box 6: Bakun Hydro Projects (Luzon Hydropower Corporation and the Northern Mini Hydropower Corporation)

Benefits Stipulated in the Bakun LGU MOA

- Assignment of responsibilities and provision of benefits arising from the operations of hydro projects in Bakun were embodied in two separate memorandum of agreement (MOA) between the mother company of HEDCOR and the Bakun LGU. One MOA is on the mini-hydro project of the Northern Mini-hydro Corporation, which was signed, by the two parties in 1993 and the other is a MOA on the Bakun AC Hydro of the Luzon Hydro, which was signed in 1997. Both MOAs uphold the benefit for the host LGU as required by several laws, namely the National Wealth Law, the Department of Energy Act and the Local Government Code
- The main benefits to the Bakun LGU as stipulated in the MOA on the Mini-hydro are the following:
 - o 2% share of Northern Mini-hydro net sale of power generated by the hydro project to the Municipality of Bakun and 1% share to the barangay where the hydro plants are located
 - o Assistance for the energization in all the barangays of the Municipality;
 - o Reasonable assistance for maintenance of roads leading to the power plants
 - o Technical support for community development and livelihood
 - o Cooperation and assistance for the protection of watershed

The main benefits stipulated in the MOA of the Bakun A/C Hydro:

- 1% of the National Wealth tax from the gross revenue of the power plant for the utilization of water to be paid directly to the LGU and shared 20% to the province and 35% to the Barangay.
- Electrification fund equivalent to P0.0025 per kwh of the total electricity sales
- Development and livelihood fund equivalent to P0.0025 per kwh of the total electricity sales in accordance with the following sharing scheme: Province (25%), Municipality (25%), Barangay (20%) and Region (30%)
- Environmental Enhancement Fund equivalent to P0.0050/kwh of the total electricity sale of the power station
- Advance financial assistance of P16M in the pre-operation phase of the project (deductible from future payments) for the electrification of three barangays, access roads, dev. and livelihood projects
- Electrification of the four other barangays during the operational period
- Donations from the project proponent several equipments and funds for community cooperatives and other projects;

Actual Benefits Derived from the Operations of Bakun Hydro Projects

- The benefits from the HEDCOR operations include a share from the National Wealth Tax. The Municipality of Bakun has been receiving its share from the national wealth tax since 1992, a year after the HEDCOR started to operate the three mini hydro plants. For the year 2000, covering the period from November 1999 to October 2000, the Municipality of Bakun received its share of the 2% tax which is equivalent to P2.9 (P2,913,433.58). For the first three quarters of the following year, the two shares of the Municipality amounted to P1.2M (P1,243,384,382.17) while the barangay's 1% share amounted to 471,974.75.
- In addition, HEDCOR and its power distributor, the Benguet Electric Cooperative reported that it was able to energize 672 households in Barangay Poblacion and in Ampusungan, Bakun in 1994. These two barangays have a total population of 3,634.
- HEDCOR reported a cumulative donation in the amount of P35,000 from March 1997 to Feb. 2001 for community and school projects in addition to technical training for farmers and information dissemination on the project.
- Benefits (as stipulated in 1997 MOA) from Bakun A/C have yet to be realized (as of the time of the research). Reported donations, so far, include: a four-wheel drive vehicle, bulldozer for LGU use, new roads built/upgrades. Share from national wealth not yet received due to boundary dispute between Alilem LGU (location of power plant) in Ilocos Sur and Bakun LGU.

Source: Key informant interviews in Bakun and review of LGU and project documents

In summary, the review indicates that each of cases show a number of critical success factors:

- Responsive social mobilization grounded on strong community organization with civil society mediation;
- LGU leadership or active support, even aggressiveness in initiating policy harmonization and reform through LGU management of watersheds which used to be lodged solely with the DENR;
- Technical training in watershed management, soil and slope stabilization, adaptive farming techniques; and
- Economic benefits through appropriate livelihood support (basic infrastructure, marketing support, micro financing, and entrepreneurship in consonance with the objective of sustainable watershed management.

3.1.5 Policy constraints in establishing markets for watershed services

In relation to environmental service market creation the institutional and policy issues are complex. There are limitations in the current approach to the market in watersheds for water supply that must be addressed as basis for determining the institutional reform needed in the benefit sharing arrangements.

- Current water use policies do not clearly identify and substantiate a water management approach to water resource use and conservation. The basic institutional conflict for delivering water stems from the fact that while watershed management is a responsibility lodged with the DENR, it is implementable only if the upland community is considered not simply as a partner but as a co-owner of the project. The responsibility of watershed management ultimately rests with a trained and empowered local community, not with the DENR which functions as a line agency.
- Policies on water resource allocation and use have remained independent or unrelated to activities and policies concerning the watershed. This particular problem arises because there is an absence of a watershed management approach to groundwater and surface water management.
- Groundwater is implicitly viewed as an inexhaustible resource and, therefore, is deemed to have no value in its raw form. For example, the definition and use of water charges, as well as the production fee

assessment, reflects the zero valuation of raw groundwater. In the Water Code and IRR, water charges and fees are regarded as relevant only to the financial expenditures and status of the Water District. Thus, revenues from water charges are usually set aside only for the payment of loan interests and principal, or as a sinking fund for debt payment. The revenues may also be set aside for the expansion and improvement of the water district but there is no reference to a fund for watershed protection and development. The Water Code does not appear to consider watershed use and development as an input or capital resource for making water available to localities. The responsibilities attached to water rights, in short, are confined to the extraction and distribution of water, to a neglect of water development as a critical requirement to achieve sustainability in the ES market.

- To address the prospect for water shortage, government basically relies on market-oriented measures, such as privatization and build-operate-and-transfer schemes. Market-oriented measures, however, are inadequate in the determination of the full economic value of surface and groundwater, especially as the importance of watershed protection and management relative to the provision of water is not formalized. Further, we can paraphrase economics a bit: market-oriented policies sometimes cannot fully capture the economic value of a resource in the presence of externalities and the public good characteristics of environmental goods and services.
- Water resource management has depended largely on “regulatory mechanisms” often excluding a watershed management approach having operationally delineated control areas, and “adequate market-based policies.” The regulatory mechanisms usually pertain to consumption and delivery schedules. This implies that to be an effective resource manager, a water management agency must have operationally delineated control areas as to which agency can determine water use, oversee groundwater extraction, monitor (or anticipate) the prospect of local water depletion, reduce the number of groundwater users without permits, and compel the enforcement of market policies.
- Despite provisions for rewards and incentives, bureaucratic procedures or other tax incentives given by the government to private companies circumvent the local

communities' enjoyment of the rewards. For instance, Tuba municipality has an existing agreement with the Baguio Water District (signed 23 December 1996) for BWD to pay to the municipality 1% of their annual gross sale on the volume of water drawn since 1992 in accordance with the implementing rules and regulations of the Local Government Code starting 1992 (the share in national wealth). In reality, the remittance of said share passes through the central government first such that the local community had to wait for at least three years before receiving their share which, when received, could not be distributed efficiently to the concerned barangays because of Internal Revenue Allotment-induced conflicts related to administrative boundary limits of adjacent areas.

- Non-implementation of the Special Privilege Tax Payments. The expected additional tax benefit in the operation of mini-hydros was not being received by the Bakun Municipality due to the non-implementation of the Special Privilege Tax that is guaranteed in the Mini-Hydro Act (R.A. 7156). Because of the absence of implementing guidelines of RA 7156, Bakun was still awaiting this tax payment though the municipality has been hosting the three mini-hydros of HEDCOR for almost ten years. Considering that the special privilege tax is 2% of the gross receipts from the sale of electric power and from transactions incident to the generation and transmission of power, the amount is not a small sum. This tax that is payable by power developers (Northern Mini-Hydro – HEDCOR, NPC and BENECON) to the host LGU is much bigger in comparison to the other energy and water related taxes.
- The link between watershed management and community benefits is weak, with watershed management as an assumed responsibility of the host community, in return for the benefits they get. Nowhere in the interviews and reviewed LGU records is watershed management cited as a regular field of collaboration between energy generators and the host community, whether the activities are for watershed maintenance or enrichment. The structure of host community benefits, in fact, is heavy on basic services. Watershed management is still marginalized, even though the environmental service depends critically on it. In short, there is really no effective, operational

watershed management or enrichment program in place.

- Unfulfilled commitments of the power developers and distributors that are stipulated in the Memorandums of Understanding. This includes slow and limited electrification of host communities. One of the responsibilities of the power producer as provided in the MOA in the Bakun case is the electrification of all barangays (item # 6 of the MOA with Northern Mini-Hydro). The HEDCOR and its power purchaser, BENECON, had energized only two barangays, as of 1994. To date, there are only three out of seven barangays that are supplied with electricity and these three are not completely energized.
- Transparency in agreements. An example is the non-disclosure of sales accounts of HEDCOR or the Northern Mini-Hydro (Bakun). The LGU is concerned that there is no way for them to determine the basis of computation of the 2% municipal tax share and the 1% of the host barangays. LGU officials claim that the power developers do not provide them with financial reports. As a result of this, the LGU is obliged to accept what the energy producer releases as LGU share. Accordingly, the power producer uses the minimum proportion set by the law, thus depriving the local community any role in negotiation for better terms.

3.1.6 Potentials for reforming the benefit sharing arrangements

There is a need to focus adequate attention to include the accountability of principal agents (buyers of water) over ensuring the sound management of groundwater and surface water resources. The 1976 Water Code and 2004 Clean Water Act do not link water costs with watershed management costs. A number of options may be explored: contributions to a watershed management fund, or even separately to a ground water fund (that can address externalities in the cost of production/extraction); increasing user fees based on willingness to pay arrangements; improved permitting standards and procedures as to exclude “free riders” (the source of “leaks” or imperfections in the environmental service market)

In addition, the providers of watershed protection e.g. the rural upland communities, must have good and adequate rewards and

incentives to encourage them to take on the responsibility to ensure that watersheds are taken care of and that water continually flows from the watersheds. The package of incentives that can be extended to upland communities may include: reduced costs for their own consumption, establishing or improving the community's own supply system at the cost of the water buyer/supplier, health and medical support. The challenge (a principal agent problem) is how to design the incentive system such that the LGU and community members will behave in accordance with the interest of the principal agent.

The advocacy for adequate market-based policies based on recognition that markets sometimes do not fully capture the value of an environmental resource emphasizes the need to study water evaluation methods, and the need for the larger society to appreciate the role of upland communities in making water available for use. An improved valuation method must include the opportunity cost for watershed management.

There are opportunities which managers of watersheds have not fully utilized, which could be promoted. These opportunities are reflected in the Joint DENR-DILG MC 98-01, which provides the legal basis for the co-management of certain watershed areas between the DENR and the LGUs, for an area not exceeding 5,000 hectares. The second, Joint DENR-DILG MC 2003-01, shall strengthen the co-management scheme by making both agencies responsible for the identification and establishment of communal forests, community watersheds and reforestation areas.

The circular for co-management allows the LGU to administer and manage watersheds or portions thereof, with the DENR providing technical assistance while the LGU is expected to comply with the legal standards. What circular 2003-01 offers is a better step forward in redirecting benefits to local communities since forest lands can be devolved to the LGU based on approved forest land use plan (FLUP) developed through a transparent, accountable and participatory process. If undertaken within the framework of community based forest management (CBFM), as the LGU experiences in the Sierra Madre region and Maasin in Iloilo have shown, the LGU can indeed be a very critical agency in ensuring better benefits to flow back to upland communities for the environmental service they play in watershed management.

Systematically determine and monitor the utilization of the DLF and RWMHEEF – a role that should be assumed by the host community and not left to the hydroelectric power producer, according to the intent of the policy and the requisites of local development.

Further, local communities (through the LGU or stable POs), must be assisted to negotiate an appropriate share from the water use fee (i) as a share in the national wealth, to be negotiated from the “floor” or least value, not as the upper limit of what the Local Government Code provides, and (ii) to be used to fund the watershed management requirements, and to monitor the utilization of such fund. A similar benefit-sharing scheme is explicit in the hydropower sector, but the two important legislations for the sector are silent on compensatory or replacement/opportunity cost. There is still a need to increase the capacity of LGUs and local ES providers / interest groups, the POs, to negotiate/re negotiate better terms of the MOA with power producers, to calibrate the user fees and LGU share in national wealth.

In the Bakun A/C hydro, there is also the conflict in the sharing of the 2% tax payment between the Municipality of Bakun, Benguet and the Municipality of Alialem, Ilocos Sur. (It is important to note that the tax share from the Bakun A/C hydro is relatively a big amount considering that the power plant has an installed capacity of 70 megawatts. It is therefore expected that the power sales from this project is much more than the share from the three mini hydros. Though HEDCOR classifies this as small hydro, the DOE classifies this as big hydro project because it generates more than 50 MW).

3.2 Biodiversity Conservation

The market for biodiversity as a way to promote conservation is largely undeveloped in the Philippines because of the complexity of the object of valuation, and the definitional problem relating to species and ecosystems. Not only is the inventory task monumental as basis for determining the methodological implications of species richness, evenness and distance (Solow et al. 1993), but there is also a lack of consensus on the total number of species, rate of biodiversity loss, and biodiversity indicators that should form the standards for the valuation method (Bann 2002). From a general perspective, the emerging interest in valuation studies for biological resources has focused on select species perceived

to be rare, unique and threatened, rather on the diversity or richness itself.

3.2.1 Legal basis

The conservation of biological resources rests primarily on two key pieces of legislation, namely, Executive Order No. 247 (Prescribing Guidelines and Establishing a Regulatory Framework for the Prospecting of Biological and Genetic Resources, Their By-products and Derivatives, for Scientific and Commercial Purposes, and for other purposes, 18 May 1995), and RA 9147 (An Act

Providing For The Conservation And Protection of Wildlife Resources And Their Habitats, Appropriating Funds Therefore And For Other Purposes, 30 July 2001). The NIPAS Act, which establishes a system of protected areas in the country, is complementary to these legislations.

3.2.2 Rewards and benefits for biodiversity protection – Issues and Concerns

EO 247 is a landmark legislation to regulate bioprospecting. Draft of revisions to DAO 96-20 not only provides some harmony with the

Box 10: Assessment of Conservation Initiatives in the Palawan Corridor

An assessment of previous efforts in the corridor relative to the desired biodiversity conservation outcomes shows that research and planning exercises comprise the dominant activities in previous efforts along with training activities, albeit largely for the project staff of implementing agencies rather than for the community residents as priority target. The earlier initiatives of the World Bank, USAID and even the EC were directed primarily to provide or strengthen basic skills in planning, monitoring and data management in order that the staff of implementing government agencies shall have the basic competencies. Although focused on Ulugan Bay, the UNDP-UNESCO baseline assessment provides a very comprehensive starting point to an understanding of the coastal resource utilization patterns that include as well as impinge on even the PPSRNP barangays. The EC-assisted Palawan Tropical Forest Protection Program (PTFPP) produced a detailed socio-economic baseline and biophysical assessment using the catchment area approach that guided the formulation of the first comprehensive protected area management plan and strategy for the park.

Contrasting the degree of attention that has been given to addressing direct and indirect causes of biodiversity loss, the assessment reveals that the level of accomplishment of most conservation projects is in research and management planning, not the actual improvement of biodiversity status through enrichment, protection or even the maintenance of habitats and species. As an indirect driver in biodiversity loss, this domain pertains to the provision of a favorable climate for conservation to be institutionally supported and sustained. Concrete gains have been the completed benchmarks and planning studies, which provide the basis for subsequent initiatives to proceed in a more systematic and integrated manner. In addition, capacity strengthening and capability building among institutional players (from the LGU, DENR and PCSD staff) are crucial preparations for improved conservation management.

However, because there are neither direct nor short-term results that can demonstrate the effect of systematic planning and training, the preponderance of these types of investment creates a disincentive to multi-stakeholder involvement in conservation, since the resulting perception is that communities do not derive any benefits although their participation is always (and repeatedly) sought.

Vis-à-vis the major support coming from big international agencies like the World Bank, USAID, the European Commission and the UNDP that mainly assist these types of initiatives, accomplishments of smaller and short-term undertakings of minor international NGOs through the local civil society groups (NGOs and peoples organizations) are significant and important in the area of social mobilization – organizational development of community groups, training, pilot livelihood projects, and advocacy. Where the major conservation programs had built from the earlier efforts in social preparation by the NGOs, local participation has been sustained and brought to higher levels of engagement such as enforcement and enrichment (as in the NIPAP and CRMP project sites).

In general, though, there is as yet very little that has been done in the area of livelihood assistance or enforcement that links poverty alleviation with the conservation objectives. Such gaps are more programmatic than a bias, inasmuch as capability building, next to the research and planning exercises, usually came as second priority in how project interests evolved. Relative to tangible benefits that local communities expect, livelihood assistance has been limited to one-shot experiments through pilot projects or limited assistance in the form of training and meager capital inputs.

The PTFPP provided livelihood interventions so as to decrease the dependency of the upland groups on the forest resources. However, these livelihood interventions (such as duck raising, handicrafts, broom making, honey collection, vegetable gardening), as reported by the Mission, have economic impact focused on the individual level and are assessed to be not sustainable, considering that profits made are too negligible compared to the amount and effort spent in producing and marketing the products.

Source: R.R. Boquiren, *ASSESSMENT OF CONSERVATION INITIATIVES IN PALAWAN (Final Report)*, written for Critical Ecosystem Partnership Fund - Conservation International 16 June 2003.

conditions of the recently passed Wildlife Act and the provisions of the IPRA, NIPAS and other relevant laws, but also improves the benefit sharing arrangements between resource users and providers as to favor the latter including minimum levels of bioprospecting fees, milestone payments and flexibility in types of payments. Pertinent provisions of the consultation draft are presented in Appendix 3 on the direction of the debate on valuation and incentive schemes (Appendix 3).

Rewards and benefits for biodiversity conservation are not without institutional issues and conflicts arising from the resource use. That the conservation community has the largest number of organizations and agencies involved is evident in the experience of Palawan. Whether the efforts are succeeding, and to what extent local communities are now deriving benefits from conservation, is articulated in the assessment of the conservation Initiatives in the Palawan Corridor (Box 10). The assessment illustrates how the provision of conservation rewards is trailing behind accomplishments in research, planning, social mobilization and training.

The environmental agenda in Palawan was largely promoted by the national government before the 1990s through the declaration of specific protection areas. Among the first of such official actions was the proclamation of the Puerto Princesa Subterranean River National Park as a protected area in 1971 (Proclamation 835, amended by Proclamation 212 in 1999). This was followed by Proclamation 219 (1976), which declared the entire province as a National Game Refuge and Bird Sanctuary, and its small islands as national reserves. The Calauit Game Preserve and Wildlife Sanctuary was set aside in 1976 (Proclamation No. 1578) to protect and repopulate a number of wildlife species. In 1981, Proclamation 2152 declared Palawan as a Mangrove Swamp Forest Reserve where cutting and use is prohibited, in which was covered the mangrove areas of El Nido. In 1984, DENR Administrative Order 518 similarly declared El Nido as a Marine Turtle Sanctuary.

That these policies have not yet been fully translated into significant conservation gains is an indication that actual conservation needs in the corridor require more than mere policy initiatives.

Table 2. Assessment of Conservation Objectives

Trends	Responses	Assessment
1. Aversion of habitat destruction is the over-riding objective in most of the reviewed projects	Most reviewed initiatives	The realization of such objective is still distant, since most initiatives have prioritized planning and benchmarking studies, and training.
2. Actual habitat protection and enrichment as components.	PTFPP NRMP- CRM UNDP-SISDP NRMP-FRM	This objective is still weak, addressed only in terms of the following: - Mangrove rehabilitation/ enrichment - CBFM; fruit trees propagation - Nursery establishment for almaciga, fruit trees
3. Species protection is pursued through improved natural resources management for terrestrial and marine ecosystems.	NRMP- CRM NRMP-FRM OXFAM-UK	Capability among resource users from the community is the common strategy used With assistance to LGU (PNP) and DENR structures, private sector participation is mobilized in monitoring and confiscation
4. Species conservation is as yet a limited conservation domain.		Only five projects at the species level in the entire province (including the Pawikan Conservation Program, Irrawady dolphin in northern Palawan, PCCP, CFI, and the Calauit Island Game Reserve – these projects with funding constraints for sustainability.
5. Strategies tested: - Social fencing - Provision of tenurial security - Alternative/ supplemental livelihood	UNDP-GEF-SGP RRMP (VWB), NRMP- CRM/FRMP NIPAP PTFPP BCN NIPAP PTFPP NIPAP COMPACT	Capability building and support activities for communities in critical areas Capacity and capability building of key agency staff (LGU, DENR, PCSD) Social mobilization for areas targeted for CADC application; not sustained beyond social mobilization phase Social mobilization up to actual application for CADC in project sites Short term, stand alone demonstration projects with weak links made with conservation agenda.

Local, national and international players in subsequent environmental protection programs in the past two decades have thus worked to expand their links and work towards more integrated action. The World Bank, Asian Development Bank, USAID, the UNDP-GEF-SGP and the European Commission became important donors for long-term conservation programs that chose Palawan among national priority sites.

Accordingly, the provincial government's first systematic consideration of the environment in economic development took the form of a planning project in the early 1980s through the Palawan Integrated Development Area Project (PIADP) that the World Bank supported along with the Asian Development Bank (ADB). The PIADP's Integrated Environmental Program (IEP) component conducted environmental assessment and planning studies starting in 1983 through the PIADP Office (PIADPO). This initiative led to the formulation of the Strategic Environmental Plan (SEP) in 1987, which was adopted into law four years later, and led to the creation of the Palawan Council for Sustainable Development (PCSD), the structure created under the Office of the President of the Republic of the Philippines to oversee the implementation of the SEP Act.

Separate from the national government initiative, civil society responses to the development needs of communities similarly have a long history of collaboration, which provides a strong ground for the realization of the goals of the prospective SEP Law. Among the older non-governmental organizations (NGOs), for instance, is the Palawan Center for Appropriate Technology (PCART), set up in 1983, which pursued projects that promoted sustainable farming practices. Haribon Palawan (formed in 1989) and Nagkakaisang Tribu ng Palawan (NATRIPAL) focused on development issues being raised by fisherfolk and indigenous peoples, respectively. These Philippine NGOs and their international fund sources recognized early on the sustainability elements in the small-scale utilization of natural resources by the indigenous peoples, the Tagbanua, Batak, and Palaw'an, around which a considerable amount of research and documentation were produced. By the late 1980s, a province-wide network of 23 NGOs formed the Palawan NGO Network Inc. (PNNI) to support a growing environmental movement, which the post-1986 political realignment inspired. More mainland Luzon- and specifically Manila-based NGOs similarly implemented projects that addressed development challenges in the province,

such as PRRM and IDEAS, both beginning 1997. These civil society initiatives thus provided the parallel efforts of the local government units in the province. The SEP undoubtedly encouraged the flow of conservation investments that were instrumental to the subsequent declaration of an increasing number of protected areas in the province.

While the conservation community is perhaps the largest among stakeholders from civil society, their immediate gains from destructive resource utilization are far from matching the opportunity cost of conservation or willingness to pay for conservation services. The case of Lakewood in Zamboanga confirms the market preference of even CADC or CBFMA holders for easy income over protection (Box 11).

There are limited experiences in developing non-timber forest product gathering at sustainable yields to serve as alternative conservation-based economic engagement. A Palawan NGO, PCART, has achieved self-reliance from herbal products after long years of experimentation. Another PO alliance, NATRIPAL, is developing wild honey gathering, as an alternative, but harvesting techniques are reportedly inefficient and even destructive. In protected areas where the only allowed economic activity is currently able to produce only for subsistence, the prospects for marketing conservation are not encouraging.

More valuation studies are needed to support any project that would create viable livelihood engagements out of biological resources in conservation areas. At the moment, tourism service appears to be the more practicable and feasible ES market that can be created to achieve the conservation targets.

The operationalization of a rewards system from the trade in biological resources, or from bioprospecting, has yet to be tested. Meanwhile, the draft DAO that is intended to repeal Department Administrative Order No. 96-20, carefully thought out as they are, attempts to distinguish various costs for each step in the application process, throughout the bioprospecting itself, until during and after development of products from bioprospecting.

A basic issue, however, is implementability of the detailed procedure and requirements, which may be the very disincentive to legitimate bioprospecting. The fees attached to each step in the process seem steeply priced while compliance appears procedurally unrealistic.

Box 11: CADC-CBFM Case

Pegsalabuhan Subanen Lakewood Association, Inc. is a CADC-CBFM holder for an agreement covering an area of 10,000 hectares in Barangays Matalang, Dagum and Baking, Municipality of Lakewood in Zamboanga del Sur.

The approved CBFMA states the following objectives:

- Protection of forestlands within the CADC-CBFM area against illegal logging and other unauthorized extraction of forest products, slash and burn agriculture forest destruction;
- Assist the DENR in the prosecution of violators of forestry and environmental laws;
- Follow all duly promulgated laws, rules and regulations pertinent to forest management;
- Prepare and implement CRMF, RUP and Annual Work Plans with assistance from DENR and LGU;
- Formulate and implement benefit sharing scheme among members
- Pay the required forest charges and other fees (CBFMA February 6, 2002 in accordance with DAO 96-29).

Even prior to the awarding of the CBFMA, the Chairman of PSLA Inc. entered into a mutual understanding with Alfa & Firsha (ALFAFIRSHA) Properties Development Corp. to act as developer of the CADC area (on February 5, 2002). ALFAFIRSHA entered into a MOA with MAHAJAYA BUDI SDN. BHD, a private company based in Malaysia to jointly and equally act as developer of the ancestral domain/land to meet the requirement of the ADMP.

The MOA calls for 8,000 has within the area to be converted into an Oil Palm Plantation and for integrated agricultural activities, "in order to promote socio-economic upliftment of forest dependent communities at the same time achieving sustainable management of forest resources". This is conditional upon the approval of the government (whether implied or expressed), which the LGU gave in the form of a letter showing full support and endorsement from the provincial governor.

The Contract of Exclusivity dated 29 January 2002, effective for 25 years and automatically renewable on the mutual consent of the parties sets the benefits to be derived from production period as follows:

- 60% of net income to the financier; 15% of net income to ALFAFIRSHA and
- 25% of net income to the land owners

Further, the landowners shall be employed for non-white collar job during the development stage (3 years), for at least 9 hours daily; may be continued thereafter as may be beneficial to the financier/developer; further, in case the landowner violates the contract, that the financier/developer shall be entitled to compensatory damages: at least 60% of due share if landowner negotiates any form of business with any of the partners of the joint venture, and in case of withdrawal of land, cost of development and forgone income for a period of 35 years.

Source: Primary sources or documents (CADC, CBFMA, MOA, Special Power of Attorney, Letter of Endorsement of Provincial Governor)

3.3 Ecotourism

3.3.1 Legal basis

Under the NIPAS, the mechanism to promote sustained financing is the Integrated Protected Area Fund (IPAF) as provided for in (Chapter X Section 7, RA 7586). The fund is designed to be composed of income from the following:

- Taxes for the permitted sale and export of flora and fauna and other resources
- Proceeds from the lease of multiple use areas, including tourism concessions
- Contributions from industries and facilities directly benefiting from the protected area
- Fines and fees, including protected area entry fees, collected and derived from operation of the protected area
- Contributions, donations, endowments and grants from any source
- Such other revenues as may be derived from the operation of the protected areas.

Fees and charges to be collected are to be fixed by the Secretary, and only the Secretary upon recommendation of the PAWB can approve any changes. This gives a wide leverage that the DENR enjoys to improve the user fees, taxes, and fines that can be collected within the protected area.

3.3.2 Rewards, incentives and payments for landscape beauty/ecotourism – Issues and Concerns

Ecotourism is one of the fastest growing sectors in the world today and whereas once considered a niche market is now quite mainstream. In contrast with other environmental services the drivers for the ecotourism market is largely driven by supply with land stewards who are demonstrating a greater willingness to impose charges on the 'buyers' of the service (be that tourists or tour operators).

Economic benefits from ecotourism include increased income (from entrance fees, access rights, associated services (salaries/wages), development of related economic sectors, and increased land values). In addition to the financial value, these are important in giving rural communities possibilities in diversifying their livelihood strategies and providing alternative sources of income.

Environmentally and socially, ecotourism can provide some benefit. Ecotourism can generate support for conservation among communities as long as they see some benefit and it doesn't threaten their other sources of livelihood. Ecotourism can also provide resources training and skills development, education, healthcare, improved local infrastructure and improved social capital.

However, while the benefits are significant, the realization of the promise is less apparent. Most revenue from ecotourism has traditionally gone to tour operators and where the community does capture cash benefits it is by a relatively small proportion of the community (Kiss, 2004). Additionally, an influx of tourists into rural communities carries with it another set of negative impacts in addition to the considerable investment of time and support is required so that rural communities can engage in ecotourism business ventures.

Contradictory to this growth in ecotourism is the decline in the investment in the protection of natural habitats that support this market. The fact that spending on the upkeep on scenic natural destinations has continued to decline despite rapid growth in ecotourism also points to a fundamental problem with the market for landscape beauty – a gap between payments for tourism products and payments for landscape beauty (Landell-Mills & Porras, 2002).

Mt. Kitanglad Range and Natural Park³ is one of CPPAP's 10 sites since 1994, funded by the GEF. The Sub-IPAF Fund was installed in 1994 thru PAMB Resolution No. 87. As of December 2000, total collection was P194,570 – an amount deemed too low as to meet the cost of operations and improvements of the PA. Options

³ Sources : CPPAP Phase I Qualitative Assessment Draft Report, Vol. V, Institutional Impact Assessment of Mt. Kitanglad Range and Natural Park; Building on Lessons from the Field, PA Management Experiences in Southeast Asia, Proceedings of the IUCN-World Commission on PA / 3rd SEA Regional Meeting, 2003

that were considered to enhance self-financing of the IPAF were considered by the PCU in consultation with the NIPA Board and DENR Management, to establish a local panel of persons with relevant experiences and stakeholders (DENR, IPAF Governing Board, NIPA), and discuss the priority options.

In 2002, close to project end, the PAMB (in Resolution No. 91 s. of 1999) sought with the DENR Secretary the charging of user fees on land by communication companies, as one way of increasing the IPAF. The PAMB has had to compel the private companies into meeting their obligations. Other efforts to increase the support for the MKRNP include tapping the funds for the congressional districts of Bukidnon. Meanwhile, to enhance the provision of environmental services, local government units have passed local laws that promote conservation farming especially in sloping lands. A number of associations and groups who help support biodiversity and watershed protection include the Kitanglad Guard Volunteers coming from largely indigenous peoples' communities, women's associations, students, porter association, and the Mt. Kitanglad Federation of peoples organizations.

Mt. Pulag National Park⁴ has a land area of 11,550 hectares guarded by two to three personnel most of the time. The challenge that is being raised, especially with the end of foreign funding, is how to involve the local community to help not only by way of reducing destructive activities, but also in park management. Since the park began to have an increasing number of visitors, the IPAF collection has also been improving, to the extent that the minimal staff maintained to manage the park is being supported now from the collection.

The benefits extended to upland communities at present include income as tour guides. Local residents do not consider this engagement sufficient. Currently, though, the immediate recourse to improve IPAF collection is to systematically study user or visitor fees. Such collection may be considerably improved if visitors also enjoy improved facilities and new activities. The statement of collection and fund utilization for the Park reveals that such options are easily achievable (Box 12).

Assuming the same level of collected fees in March to December 2001 and estimating half of the January to February 2002 collection, Mt. Pulag

⁴ IPAF Records, PAWB

Box 12: Collection and Utilization of Funds in Mt. Pulag National Park

Statement of collections:

2001: PhP 630,881
 2002: PhP 390,884
 TOTAL: PhP 1,012,765

Activities	Project Proposed Target			
	3rdQ	4thQ	Total	%
1. Park Protection and Maintenance	58,698.00	58,698.00	117,396.00	31.27
2. Park Administration and Protection (PAMB Operations)	113,000.00	145,000.00	258,000.00	68.73
Traveling expenses	10,000.00	20,000.00	30,000.00	11.63
Board meetings/seminar/training	50,000.00	70,000.00	120,000.00	46.51
Park community assistance/services	52,000.00	55,000.00	107,000.00	41.47
Supplies and materials	1,000.00		1,000.00	00.39
Grand Total	171,698.00	203,698.00	375,396.00	100.00

IPIAF utilization is only at par with collected fees. With improvements in promotion and resource mobilization, Mt. Pulag can significantly increase its IPIAF, considering the positive trend indicated in the 200% increase in collection in the period from March to June 2002 (compared with the same period in 2001).

3.3.3 Potential for improving the benefit-sharing arrangements

Identifiable issues related to improving the ES rewards and incentives are the following:

In Mt. Kitanglad, the IPIAF is reportedly being undermined by the collection of entrance fees by the Council of Elders (CoE) under the auspices of their Prior Informed Consent Certification. A fee of P50.00 is imposed plus, according to Park Superintendent sources, two chickens, one for the sectoral datu and the other to the council. In effect, these are now two fees that the park visitor has to pay. It was reported that some datu deputized by the CoE are dissuading would-be park visitors from paying the entrance fees imposed by the PAMB.

In most protected areas, the prescribed entrance fees for various users are imposed without any prior study conducted to serve as basis for the computation. Systematic studies are therefore suggested to determine the reasonable entrance fees.

As tourism services are neither well developed nor supported by appropriate infrastructure, the present level of visitor and user fees may not adequately cover the operating and maintenance costs of the park, much less the requirements of

protection. Other sources of the IPIAF must therefore be developed. The direction of requiring fees from other user groups within the protected area is worth pursuing (as in the case of communication companies like ABS-CBN in Mt. Kitanglad). To date, however, the policy framework for charging user fees for communication services made possible by high elevation areas is not in place.

Even at current levels of visitors and collected entrance fees, some improvements may be made to install transparency and greater efficiency. In observed practices in a number of protected areas, there is much to be improved in the issuance of tickets for park entrance, collection of required fees, recording, and audit. The same goes for fund utilization.

A common practice in protected areas, for instance, is to charge operational expenses of non-protected area personnel against the IPIAF.

3.4 Carbon Sequestration

Climate change is one of the primary concerns of humanity today. The most recent IPCC assessment report concludes that there is strong evidence that human activities have affected the world's climate (IPCC, 2001). The rise in global temperatures has been attributed to emission of greenhouse gasses, notably CO₂. Forest ecosystems could help mitigate greenhouse gas concentrations by absorbing carbon from the atmosphere through the process of photosynthesis.

The vast areas of forestlands in the Philippines offer great potential for carbon services through

the conservation of existing forests and through upland rehabilitation activities such as reforestation and agroforestry (Lasco and Pulhin, 2000; Lasco and Pulhin, 2001; Lasco et al., 2002). Existing forests have carbon stocks of up to 200 tonC/ha while tree plantations can sequester up to five tC/ha/yr (Lasco 2002; Lasco and Pulhin, 2003).

More recently, payment for carbon sequestration services moved closer to reality with the near-ratification of the Kyoto Protocol under the UN Framework Convention on Climate Change. The protocol provides for a Clean Development Mechanism (CDM) where forestry projects (limited to reforestation and afforestation for the first commitment period) that sequester carbon in developing countries like the Philippines can earn credits. These credits can be “sold” to industrialized countries so that they can meet their commitments under the protocol (UNFCCC, 1998).

The CDM allows developed countries to invest in carbon emission reduction projects in developing countries, with the latter generating carbon reduction credits for the investors from developed countries. The aim is to reduce CO₂ emissions from the burning of fossil fuels (oil, coal) largely contributed by the transport, power generation, and industrial sectors; capture green house gas (CH₄, N₂O) emissions from solid waste and biomass; and sequester carbon in forests. The overall emission reduction target for developed countries listed in Annex I Parties as a group is at least 5% below 1990 levels, to be achieved by the commitment period 2008 to 2012 (an average over the 5 years).

CDM eligible projects include renewable energy, fuel switching, end-use energy efficiency improvements, supply-side energy efficiency improvements, waste management, sink projects (only afforestation and reforestation), improvements on industrial processes (reduction of CO₂ from cement, HFCs, etc.), and in agriculture (reduction of CH₄ & N₂O emissions).

These projects could help promote sustainable development in the uplands by providing livelihood opportunities to local communities while at the same time mitigating climate change (Lasco et al., 2001). However, there are several potential threats that should be addressed such as over-reliance on exotic species and displacement of local settlers.

Currently, the ES market for carbon sink in the Philippines is just starting to catch interest. Several local and international organizations in the Philippines are developing forestry projects for possible CDM and/or other carbon finance. These include Conservation International, the Laguna Lake Development Authority, and the Ikalahan Foundation. These projects are in various stages of development and some could be operational as early as 2005 (inputs from Lasco, 2004).

3.5 Community Based Forest Management

In 1995, President Ramos signed Executive Order 263 adopting the Community-based Forest Management Program. Realizing the folly of assigning CSCs to individuals under the ISF program, EO 263 broadens the stakeholder base by giving Community-Based Forestry Management Agreements (CBFMAs) to organized upland communities. The central theme of CBFMA is “people first and forest protection will follow.” CBFM is therefore a form of forest resource management centred on people’s empowerment. It is considered as having the greatest potential for becoming the most appropriate strategy to save the remaining forest of the Philippines and develop open lands through community participation, with some form of tenurial security awarded to them. At the national level, around 34% or 5,040,341.66 hectares of forestlands have been allocated to the CBFM program as of June 1999. With only 3.9 million hectares is tenured. This means that more than a million hectares are in the process of working the tenurial instrument called CBFMA.

Although not without it’s own set of issues (see Appendix 2), CBFM can be an important institutional mechanism for carrying forward ES initiatives. Some of the learning’s from the CBFM experience are as follows:

- The landscape of greater forest lands control in terms of area, shifted from the Timber License Agreement to People’s organization in the upland communities. Before, practically all the productive forestlands were under the hands of big corporations and only a handful to the upland communities. At present, there are only around 10 active logging companies with an area of 813,949 hectares and more than 5 million hectares to the people’s organization with secured tenurial instruments. After almost a decade of framing a new mindscape,

the mind-set of the majority of people dependent on natural forest resources view “timber harvesting” as the only viable income activity. It is in this context, therefore, that CBFM provides an alternative and, indeed, possibly a last hope to arresting forest degradation.

- CBFM beneficiaries who are not dependent on timber resource showed in many respects that CBFM is still the best option, but CBFM areas where timber resources are available for extraction are continuously under pressure.
- The community’s absorptive capacity to be empowered is variable and cannot be time-fixed.
- Income in CBFM areas is the most critical factor to be addressed by the program implementers. It is the last thread holding local communities and government. Survival is the push factor why people continue to destroy the forest resources; once a family’s stomach is empty, however, natural forest resources should not be the first and last resort for local communities to generate income.
- Water is critical in the upland communities. Farming activities are fully dependent from this basic resource. Absence of water during dry season forced people to engage in illegal logging. Hence, supplemental livelihood alone will not suffice because what is needed is income from stable sources, unless the irrigation problem is resolved.
- Equitable sharing of benefits from timber and non-timber extraction activities in communal areas is difficult to practice. Moreover, resource extraction on natural forest as “magnet” to participation may not sustain participation. Frustrations sometimes lead to more destructive reactions. Sense of ownership to common properties is not easy to achieve. Resource-users theory may or may not guarantee protection. It may work if the users have no other source of income.
- Upland communities are historically weak and dependent on political leaders. Upland communities although organized are not empowered. Their influence on decision-making is still weak to resist outside pressures.

4 CONCLUSIONS

The case studies and policy review revealed a very rich set of insights on the critical issues that need to be addressed in an agenda to improving the provision of ES rewards, incentives and payments to upland communities. Clearly, such an agenda will require not just a reform in institutional arrangements affecting access and benefit sharing in the utilization of common resources, but a whole range of capacity- and capability-building program as well as research.

4.1 Critical factors in environmental service rewards, payments and incentives

As the early sections highlighted there is existing benefits and rewards for watershed protection, biodiversity conservation and landscape beauty. Currently there is no clear market for carbon sequestration in the Philippines although this is expected to happen within the next few years with the advent of a national Designated Authority and better understanding of the rules governing afforestation/reforestation especially for smallholders.

Communities protecting watershed currently derive benefits as supplemental income from trees and tree establishment activities. Additionally some benefits are being seen in terms of seed capital for income generating projects and for training (agroforestry leadership, project management, adaptive farming technologies, watershed management etc.). The funding source for these benefits largely arises from the national wealth or specific project implementation.

Communities engaging in watershed protection for hydroelectric power plants enjoy power benefits (electrification), employment, skills development in the energy and agro-industrial areas and access to the national wealth through the DLF and RWMEEF funding programs.

Application fees (bioprospecting), training and supplemental income in livelihood projects are being realized for biodiversity conservation.

Notwithstanding the benefits that are theoretically in place for rewarding providers of environmental services, a number of issues need to be addressed in order to move forward in developing equitable and efficient ES transfer

agreements. It has been noted that tenurial security alone is not a guarantee for success. Furthermore, payments tied to externally funded projects especially funding through loans is also problematic. Issues arise on whether project funding creates new values and attitudes that serve as a disincentive to developing sustainably. In addition, often accountabilities are unclear beyond the project period – a critical issue in terms of monitoring and measurement of watershed services.

In terms of benefits realized and the sharing of benefits, production sharing arrangements are not yet fully realized with alternatives for short-term benefits from protection of source areas for ES still insufficient. The benefit sharing from national wealth is not observed fairly across LGU levels, lacks transparency and there is weak appreciation of policy provisions among local officials. Bureaucracy delays and inadequate incentives to communities, private sector, LGUs, and governmental managers to protect and manage areas, leverage investments, and seek out collaborative actions are continuing problems. Issues arise on over regulation, state capture, governance, unpredictable and unstable forest and institutional policies especially those related to property use rights of tenure holders.

The policy environment provides some constraining factors to ES rewards and payments. To date water resource management has depended largely on “regulatory mechanisms⁵” instead of incorporating a watershed management approach that could include operationally delineated control areas and “adequate market-based policies.” Policies do not clearly identify and substantiate a water management approach to water resource use and conservation. In addressing the prospect for water shortage, government basically relies on market-oriented measures, such as through privatization and build-operate-and-transfer schemes. This is echoed in the policy on bioprospecting where unimplmentable provisions exist in both the existing policy and in the draft instrument. Weak regulation of the policies (wildlife trade especially) has led to habitat destruction.

In terms of appropriate pricing for the service, the valuation of water is variable with the full economic value often underestimated by service providers/developers (no value in raw form, no

⁵ The regulatory mechanisms, however, usually pertains to consumption and delivery schedules.

opportunity cost / replacement cost in price of water). There is also a need for valuation studies of user fees (parks) and tourism support services and for these to be translated into enforceable policies. Local government and civil society groups do not have sufficient capability in resource valuation and negotiation for ES rewards and payments.

What arises from the review of the cases examined in this study is that there are factors that can contribute to the success of any possible ES scheme. Local government leadership and support is the most critical success factor for mobilizing community involvement, providing local policy framework in accord with the area's needs and priorities, leveraging external assistance (with the LGU as the corporate or jural entity), initiating policy harmonization and reform, institutionalization through sustained leadership and support, and as co-manager with national entities.

A further factor in success is social preparation and acceptability. Although a long drawn process the benefits in terms of sustainability and longer-term accountability are critical. The role of civil society has proven to be valuable often because of the experience of limited success with government.

There have been successes in small-scale, limited energy development projects initiated by civil society groups and/or LGUs. Critical elements include sound, stable social preparation; appropriate technical design; appropriate livelihood activities. Funding support is critical in social preparation and project management to develop organizational capability and technical skills for livelihood enterprises.

4.2 Recommendations

4.2.1 *Policy enhancement and re-appreciation of common resources and environmental service (not an all-out reformulation process)*

Based on the study, the needed policy reform will not require any major re-crafting of existing laws, executive and administrative orders and circulars or related policy issuances. Instead, the suggested direction is the enrichment of existing policies with implementation guidelines that will emphasize (i) the larger context in the harnessing of environmental resources and its link to productivity and sustainability; (ii) the

interdependent rights and accountabilities of all ES players; a commitment to fair, equitable sharing of benefits from environmental services among providers, generators/developers, buyers and sellers.

In as much as the shift in perspectives will require sustainability issues in the provision of environmental services, the national and local discussions must harness the contributions of all ES players from a multi-stakeholders' perspective.

For example, most existing laws have sufficient provision for ES benefits to be enjoyed by the local communities. Yet, either these are not fully realized because provisions, for example in watershed management, are not carried out in accordance with the policies, or are not monitored, regulated, and/or missed out in formal agreements. Hence, the suggested direction in policy and institutional reform is to engage implementers from line agencies, LGUs and the general public to creatively enrich the existing policies (and programs) so that multi-stakeholder and inter-agency collaboration and complementation can be achieved in relation to improving the institutional setting for ES harnessing, protection and benefit sharing.

National and regional (site-specific) discussions can be supported to tackle the identified institutional constraints, gaps in policy, gaps in institutional roles, and practical issues related to the management of environmental resources that bear on the sustainable provision of environmental services. Such possible themes or issues were surfaced by the study in relation to watershed management and water supply and hydropower, biodiversity conservation, and ecotourism.

4.2.2 *Capacity and capability building in ES negotiation, valuation, and protection*

LGUs and local organizations (peoples organizations, non-governmental organizations that provide technical assistance) will require sufficient preparation in good ecosystem governance, conflict resolution, and skills upgrading related to improving ES payments and developing ES markets.

Good ecosystem governance will require LGUs and institutional players to efficiently and sustainably manage their resource areas with an increasing sense of accountability in terms of functional areas that are now the domain of

decentralized governance, and inter-generationally (in a depoliticized manner).

Skills upgrading is expedient if the upland communities are to negotiate for a better structure of ES payments. They must be equipped not only with the technical know-how on environmental management and conservation, but also in the generation and analysis of data for evaluating environment indicators, assessment of the costs and benefits of environment-related policies and projects, development of innovative financing schemes (i.e. user fees, environmental guarantee funds and conservation fees tied to development projects), negotiation for appropriate institutional arrangements and equitable sharing with local and foreign business sectors involved in major development projects (e.g. logging, mining, plantations, industrial zones, tourism), enhancement of participatory and consultative approaches, and integrated planning that involves different government and private agencies representing units from various levels of governance.

Other examples of capacity-building concerns include:

- Resource valuation techniques (e.g., Environment and Natural Resource Accounting)
- Land use planning (that integrates Forest Land Use Planning and conservation)
- Determination of property regimes and rights and appropriate tenurial instruments
- Market-based schemes, cooperative endeavors and credit mobilization particularly for small-scale producers
- Various approaches to zoning and management planning to dissuade encroachment into protected areas and critical habitats
- Innovative contractual arrangements toward community-based resource management as well as partnerships with corporate-led projects

- Environmental impact assessment of infrastructure, forestry, energy, communication, tourism projects

4.2.3 *Research and advocacy on ES management and benefit sharing*

Rewarding upland poor for the environmental services they provide is a very innovative and aggressive perspective – as it challenges the usual top-down and prescriptive nature of centrally-generated policy, often in conflict with its real, practical workings. It is nothing new however, in that the spirit behind the concept has long been expressed by communities who have traditionally been and are ultimately made responsible for providing the environmental services.

In view of the static character of most policies, and the conflicting demands of business interests and civil society sectors on environmental services, the direction of policy reformulation (or ES appreciation) process can be very attractive yet tedious and possible confrontational. Negotiation and conflict-resolution processes need to be tempered with reasonable and convincing research, information and communication and education or advocacy programs.

Research is basic for resource valuation, determining the feasibility of alternatives to destructive natural resource utilization activities, even for product development and marketing support.

Solid information from resource valuation studies, when properly disseminated, can generate wide social acceptability of the rights and obligations attendant to the protection and harnessing of environmental services. Such awareness raising is crucial to aid the capacity- and capability-building goals in reconfiguring the structure of ES payments and incentives.

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APPENDIX 1. POLICIES EXAMINED IN THE STUDY

General Legislation

1. Philippine Constitution [1987]
2. Republic Act No. 7160: An Act Providing For A Local Government Code [1991]
3. Republic Act No. 8371: An Act To Recognize, Protect And Promote The Rights Of Indigenous Cultural Communities/Indigenous Peoples, Creating A National Commission On Indigenous Peoples, Establishing Implementing Mechanisms, Appropriating Funds Therefore, And For Other Purposes [1997]

Sectoral Legislation on Institutional Arrangements for the Use of Environment Services

1. Presidential Decree No. 1151: Philippine Environmental Policy [June 6, 1977]
2. Presidential Decree No. 1152: The Philippine Environment Code [June 6, 1977]
3. Executive Order No. 192: Providing For The Reorganization Of The Department Of Environment, Energy And Natural Resources, Renaming It As The Department Of Environment And Natural Resources, And For Other Purposes [June 10, 1987]
4. Presidential Decree No. 705: Revising Presidential Decree No. 389, Otherwise Known As The Forestry Reform Code Of The Philippines [May 19, 1975]
5. Republic Act No. 7586: An Act Providing For The Establishment And Management Of National Integrated Protected Areas System, Defining Its Scope And Coverage, And For Other Purposes [June 1, 1992]
6. Water Code of the Philippines [PD 1067]
7. Department of Energy Act [RA 7638, 1992]; ER 1-94
8. Electric Power Industry Reform Act (EPIRA) [RA 9136, 2001]
9. Republic Act No. 9147: An Act Providing For The Conservation And Protection Of Wildlife Resources And Their Habitats, Appropriating Funds Therefore And For Other Purposes [July 30, 2001]
10. Republic Act No. 7611: An Act Adopting The Strategic Environmental Plan Of Palawan, Creating The Administrative Machinery For Its Implementation, Converting The Palawan Integrated Area Development Project Office To Its Support Staff, Providing Funds Therefore And For Other Purposes [June 19, 1992]
11. Executive Order 263: Adopting the Community-Based Forestry Management as the National Strategy to Ensure the Sustainable Development of the Country's Forestland Resources and Providing Mechanism for its Implementation [July 19, 1995]
12. Republic Act No. 9275: Clean Water Act [February 4, 2004]
13. Executive Order 318: Promoting Sustainable Forest Management in the Philippines [June 9, 2004]

Executive/ Administrative Issuances Implementing and Complementing the Above Legislations:

1. Executive Order 224 : Vesting on the National power Corporation (NPC) the complete Jurisdiction, Control, and Regulation over Watershed Areas and Reservations Surrounding its Power Generating Plants and Properties of said Corporation [July 16, 1987]
2. Memorandum 288 : Formulating the Philippine Agenda 21 [July 5, 1995]
3. Executive Order No. 247 : Prescribing Guidelines and Establishing a Regulatory Framework for the Prospecting of Biological and Genetic Resources, Their By-products and Derivatives, for Scientific and Commercial Purposes, and for other purposes [May 18, 1995]
4. Presidential Decree No. 1586 : Establishing An Environmental Impact Statement System, Including Other Environmental Management Related Measures And For Other Purposes [June 11, 1978]
5. Department Circulars (ER 1-94 on DLF & RWMHEEF; Joint DILG and DOE Circular 95-01 on the sharing of national wealth, taxes, royalties, fees or charges)

Draft Department Orders (still to be acted on by the DENR)

1. Revised guidelines for the prospecting of biological and genetic resources in the Philippines, repealing Department Administrative Order No. 96-20
2. Revised Rules and Regulations for the Implementation of Executive Order 263, Otherwise Known as the Community-Based Forest Management Strategy
3. Revised Guidelines Providing the Mechanisms on the Production Sharing Agreement with People's Organizations (POs) in the Harvest of Forest Plantations Owned by the Governments Inside Community-Based Forest Management (CBFM) Areas
4. Revised Guidelines Governing The Implementation Of Development And Service Contracting Inside Community-Based Forest Management Areas
5. Rules and Regulations Governing the Special Uses of Forestlands
6. Prescribing Guidelines on the Introduction of Genetically-Modified Organisms (GMOs) under the Environmental Impact Statement (EIS) System
7. Imposition Of The Graduated Fines under Ra 6969 and Its Implementing Rules and Regulations, DENR Administrative Order No. 29, Series Of 1992 (Dao 29,S. 92)
8. Guidelines on the Implementation of the Forest Stocks Monitoring System (FSMS)
9. DAO Forest Charges
10. DAO Rules And Regulations Governing The Co-Production On Special Uses Of Forest Lands

APPENDIX 2. COMMUNITY BASED FOREST MANAGEMENT PROGRAM*

Legal Basis

In 1995, President Ramos signed Executive Order 263 adopting the Community-based Forest Management Program. Realizing the folly of assigning CSCs to individuals under the ISF program, EO 263 broadens the stakeholder base by giving Community-Based Forestry Management Agreements (CBFMAs) to organized upland communities. The central theme of CBFMA is “people first and forest protection will follow.” CBFM is therefore a form of forest resource management centred on people’s empowerment. It is considered as having the greatest potential for becoming the most appropriate strategy to save the remaining forest of the Philippines and develop open lands through community participation, with some form of tenurial security awarded to them. At the national level, around 34% or 5,040,341.66 hectares of forest lands have been allocated to the CBFM program as of June 1999. With only 3.9 million hectares is tenured. This means that more than a million hectares are in the process of working the tenurial instrument called CBFMA.

Department Administrative Order No. 96-29, the implementing guidelines of CBFMA, describes the CBFMP as a forest management strategy wherein “participating organized communities may be granted access to forestland resources under long-term tenurial arrangements, provided they employ environment-friendly, ecologically-sustainable and labor intensive harvesting methods. Such harvesting methods shall be mentioned under a site-specific management plan of each recipient community and duly approved by the DENR.”

Under DAO 96-29, the following are the stages in the CBFMP:

Preparatory Stage - includes information and education campaigns, building institutional linkages, and identifying potential areas; areas for possible selection include uplands and coastal lands of the public domain except those covered by other forest resource use/extraction agreements, protected areas and certified ancestral land/domain areas;

People’s Organization Formation and Diagnostic Stage - includes community appraisal, establishment of people’s organizations where not yet existing, registration, and application;

Planning Stage - includes preparation of Community Resource Management Framework (CRMF), Resource Use Plans (RUPs) and Annual Work Plans (AWP); an Interim Resource Use Plan (IRUP) may be granted to allow the applicants to continue sustainable forest resource use practices pending the acceptance of the RUPs but the IRUP is issued only after a community appraisal;

- Implementation Stage.

That the CBFMP enjoyed quick reception by occupants of more than a third of forest areas throughout the country speaks of the enthusiastic interest in improving the forestry situation. It may be insightful to examine the experience in CBFMP, for which a comprehensive assessment for Region 2 is presented herewith.

CBFM Areas Issued in Region 2

The region has a total area of 2,683,758 hectares of which is 1,723,694 classified as forest land. Since CBFM areas are forestlands, as of 2004, around 35% or 612,000 hectares covered in 135 CBFM projects have been issued to and managed by the communities in Region 2. The total number of beneficiaries recorded is 105,614. Among the six provinces, Quirino has the most number of projects; however, Cagayan province has the largest numbers of beneficiaries.

Resource Use Permit Issuance and Suspension: Region 2

The issuance of Resource Use Permit in the Cagayan Valley region started in 1996, limited then to the harvesting of bamboos. In 1998, the harvesting of common hardwood (CHW) and narra started with initial volumes of 4465.81 and 311.70 cubic meters, respectively. The total area authorized for harvesting until 2002

* The author acknowledges the major inputs from Dr. Andres Masipiqueña for the section on the CBFM experiences from Region 2, from “CBFM: Still the best option?,” paper presented during the 7th ICOPHIL conference in June 16-19, 2004 at Leiden University, Leiden, The Netherlands.

is 12,966.64 hectares with a total allowable cut of 37,574.87 cubic meters. The allowable cut issued to the POs is higher than the allowable cut given to the Timber Licenses in the region. Furthermore, the volume is more than twice the volume allowed by IFMA holders with 15,482 cubic meters of total allowable cut covering more than 26,453 hectares.

While enjoying the privilege of harvesting timber, violations were observed and validated by the authorities. As a result, several permits were suspended. The move was to improve CBFM implementation in general, and mitigate errors.

Since 2003 no new RUP has been issued while all harvesting operations in the entire country has been suspended in compliance with the Memorandum issued on January 13, 2003 by the current DENR Secretary. Included in this order was the suspension of all timber harvesting operation in both forest plantations and natural forests. Among others, the main reason behind the suspension order was the persistent reports and allegations on abuses supposedly being committed in the issuance of, and operations related to, Resource Use Permits in CBFM areas. On February 17, 2003, the Secretary issued a memorandum ordering a conduct of thorough assessment of existing RUP granted to CBFM POs. The memorandum emphasized the need to coordinate with local government units (LGUs) and affected people's organizations to demonstrate the principles of transparency and participation.

As per record, three suspension orders issued by the DENR caught the attention of different stakeholders. In 1998, all RUPs issued to CBFM holders were suspended in compliance with the Memorandum of then DENR Secretary Antonio H. Cerriles dated September 22, 1998. In May 14, 2002, Regional Executive Director (RED) Alfredo Pascual suspended the harvesting operation of a CBFM holder in Isabela.

In accordance with this assessment, the Regional Multi-Sectoral Forest Committee in Region 02 was formed by the RED (as per a special order no. 130 series of 2003) in the last quarter of 2003 up to the first quarter of 2004 in response to the DENR Secretary's memorandum. The team was composed of representatives of non-government organizations, the Philippine National Police, Philippine Army, Academe, religious group, People's Organization Federation, national offices in the region and media. The Committee visited seventeen CBFM areas: 10 in Cagayan, 3 in Isabela, and 4 in Quirino.

The visits of the Team were undertaken to (1) determine the performance level of POs in terms of their financial capability, training needs, self-reliance, threat and weaknesses, awareness level, membership rate of increase; (2) assess the POs' collaborative efforts; and (3) ascertain/determine compliance with forestry rules and regulations.

Highlights of the Team's assessment:

a. Organizational Capacity

i. Governance

- Leadership is weak. The financier or adviser intervened in the operation and decision making of the cooperative. They take advantage of the poor leadership and unstable organizational and financial skills. Leaders do not call general assembly meetings. The members of the Board are not ready in carrying out their functions and responsibilities. Management guidelines are inadequate. The daily operations of the POs were hampered by the lack of policies and guidelines concerning the operation of the organization. The Board of Directors failed to formulate new or modify existing policies to replace obsolete ones, or if there are good policies, these are not necessarily followed. Some policies are not written except the by-laws and policies on timber harvesting operations.
- Lack of Transparency. Financial documents are not open to the members. No common files of records exist. Not all members are aware of the POs' activities.
- Selected leaders dominate POs. Organizational activities are controlled by the few who do not develop second line leaders.
- Lack of awareness of members about organizational goals. Not all members of the POs are aware of the vision, mission and goals of the organization, other than lacking understanding about the program objectives. They perceived CBFM as a means of legalizing the extraction of forest resources.
- Extraction focus of the AWP. Annual work plan is focused on harvesting and fail to address the needs of developmental activities e.g. farming technologies and alternative livelihood. AWPs are prepared only when there is harvesting.

ii. Financial Management

- Members and officers of the organization: skills in budget planning, book keeping, receiving, disbursing, accounting, auditing and other business elements are inadequate.
- Procedural protocol in financial management is mostly absent. Defective or absence of records makes then difficult to monitor financial flows.
- Delineation of functions among finance people is not clear.
- Financial exercises are done not to improve operations, but just to satisfy requirements.
- Income statement on IGP not monitored and reported to members.

iii. External Relations

- POs are tied up with their financiers, the only market support, who dictate the price of timber and other forest resources. As a result, POs incur a high level of indebtedness.
- Most POs have no assistance from local government unit (LGU) and other government agencies.
- In some areas, POs have conflicts with LGU, and many barangay leaders are also the chairmen of the cooperative.

iv. Protection and Monitoring

- POs have no credible records of resource manifestations and dispositions
- Members are not fully aware of what resources they have and where these resources are located
- Some POs have no established activities for protection and conservation

v. Organizational and Program Sustainability

- No efforts to develop second-line leaders
- Absence of plans for other livelihood activities
- No other internal fund raising activities except for membership fees
- No other income-generating project (IGP) except logging
- Some POs' membership and share capital is not increasing

b. Technical Capacity

- It is the DENR personnel who prepare and formulate annual work plan of the POs, not the cooperative.
- Nurseries are not maintained; there is low survival rate for planted seedlings.
- ANR and TSI activities are not seriously implemented.
- Some POs have no development activities.
- Many officers of the POs are not capable of writing project proposals.

c. Violations

- Royalty fees are collected in exchange of blank official receipts.
- In some CBFM areas, harvesting was open to everybody as long as the sharing agreement was followed.
- Individual members sold lumber without the knowledge of the POs.
- Members failed to protect their area of responsibility. In some cases they are the violators by cutting outside approved cutting areas.
- Timber poaching by outsiders continues.
- Slash and burn cultivation is rampant during summer.

d. Some Gains on CBFM Implementation without RUP

- Many PO members who were dependent on logging income gradually found alternative sources.
- POs and LGU are proven effective partners in environmental law enforcement.
- Unity among members is achieved when all members' needs are addressed.
- Low-level educated members became good and effective leaders.
- "Hall of Fame" awardees in sustainable development
- Strengthened capability to access funds
- Improved members' personality
- Established plantations through volunteerism
- Most housing units are made of concrete materials.
- Curved or minimized timber poaching
- Food sufficiency and increased income

- Members showed sense of ownership of the forest.
- Institutionalized commitments and multisectoral support from all partners
- Forest regenerated, seeds and planting stocks secured.
- Biodiversity restored

e. Resource Use Permit Issuance

The approval and issuance of Resource Use Permits (RUPs) is at the level of the Community and Natural Resources Officer (CENRO). Before, the approval was at the level of the Regional Executive Director. The purpose of delegating this function to the CENRO is to shorten the bureaucratic procedure. However, the authority was abused as some RUPs were issued with incomplete requirements such as maps and inventory data among others. These documents are allegedly lost in the process but the team has reasons to believe that the said documents were really not available. It is evident that CENRO authorities and the higher DENR hierarchies are always under pressure from within the organization and from outside interest groups. The absence of regular and legal sources of construction materials for projects forced contractors to buy from illegal ones.

Quirino and Cagayan cases

To provide greater detail to the CBFM experiences in Region 2, two cases were also examined, one considered a model project and, in fact, lauded as a successful project for which reason a Philippine debt with the Government of the Federal Republic of Germany was written off early this year.

Box 7: Philippine-German Community Forestry Project – Quirino (CFPQ)

Project of the Philippine Government and the Government of the Federal Republic of Germany, 2002-2003

Funding:

Department of Environment and Natural Resources (DENR) : min. of Peso 15 M

Provincial Government of Quirino (PGQ) & the Five Municipalities (LGU) : min. of Peso 11 M

Kreditanstalt fuer Wiederaufbau (KfW) : DM 5.0 M

DECTsche Gesellschaft fuer Technische Zusammenarbeit (GTZ) : Up to € 0.365 M

Goal: sustainable development of Quirino and similar Provinces

Purpose: practical concepts and procedures for sustainable community resources management are institutionalized and used in a functional manner by people's organizations (PO), government agencies and other relevant institutions.

Accomplishments:

- CBFM Convergence Desk established within the FMB
- 5 CBFM consultations and round table discussions conducted
- National Forum on Lessons Learned conducted
- Cost-benefit analysis conducted in forestry and agriculture
- Manuals for FRI Field Procedures and Analysis prepared
- Technical reports generated in Forestry, Sustainable Agriculture, Land Use Planning and Geographical Information System and Capacity Development have been compiled and annotated
- Provincial GIS and outstations established and functional
- 14 thematic maps of the Provincial Atlas prepared
- 957 hectares reforested
- 365 farmers assisted in individual farm planning & dev't
- Constructed 2 irrigation projects & 2 SFR
- Gravelled 22.62 km and widened 20.10 km farm to market road
- Training Center, Clonal nursery, & Agroforestry demo area functional
- Simplified & user-friendly CBFM guidelines promoted
- Adapted CFPQ experiences in NRM used by other stakeholders
- Institutional mechanism for CBFM implementation in Quirino Province established
- RUP in 3 sites generated net revenue of P0.700M and provided 30 full time jobs
- Annual agricultural crops generate annual additional income of P15,000 per household.
- 1000 ha plantations and 260 ha agroforestry areas will generate up to P300M in 7-10 years
- POs generally adhering to their envisioned land use plan
- Forest cover of Quirino remained stable for the past 3 years

The other case study showed a small area success early on in its experience, but now appears to be headed to face sustainability problems. The starting years of the PO were a source of learning for other organizations in the conservation community. With only NGO assistance and no large foreign funding, the PO was able to show good results in ANR, rattan establishment, and the like in the beginning, their project experience gaining recognition as a successful one.

Eventually however, organizational and implementation weaknesses began to develop. Membership has not been increasing, and many crucial decision-making situations are being left to the PO leader to assume. During the CBFM assessment by the designated Team, some of the members of the team feel uncertain about the future of the PO and their CBFM project.

Box 8: CBFM in Cagayan Valley

Background on ES Providers:

New Lands Resources Developer's Cooperative (NELARDECO)

- organized by PROCESS-Luzon in 1996 with 118 members for the purpose of implementing the Community Forestry Project (CFP) of the DENR and FPE

In 1995-2000, NELARDECO was supervised by PROCESS-Luzon in implementing the 5,500 ha CBFM (No. 020219958). No financial support came from DENR; funding for social preparation and sustainability was provided by the Foundation for the Philippine Environment, while PROCESS extended support for technical support.

Four sites of Barangay Sta. Margarita joined the Baggao Provincial and Regional CBFM Council. The Annual Work Plan for the CBFM was completed in 1998. The CBFMA was awarded in 1999, the Community Resource Management Framework affirmed subsequently

Project Components:

CO, institutional development, capability building (BC/SD, organic fertilizer production, agroforestry

Resource management: ANR in 4-5 hectares of residual forest within CBFM area; rattan seedling replenishment; expansion of forage farm for goats; 95-ha. botanical garden with boundary delineation, resource inventory, establishment of light infrastructure, enrichment planting, guidelines for botanical garden, and networking

Livelihood: seed and seedling production (plantation species, fruit trees, indigenous tree species) and gmelina; AWP approval; initial harvest for NTFP, goat raising, biofertilizer production

Networking and advocacy

Current status: After more than six years of NGO assistance, PO leadership in the CBFM area has failed to develop second liners, call membership-wide meetings, or even lead in advocacy activities. But because of a track record that was established early on, the PO continues to obtain training or funding support from the foreign donor community, even if these are for activities that are not well conceived (the original assisting NGO no longer has any role in the PO implementation.)

APPENDIX 3. EXCERPTS FROM CONSULTATION DRAFT (DECEMBER 8, 2003)

Department Administrative Order No. 2004-__

SUBJECT: Revised guidelines for the prospecting of biological and genetic resources in the Philippines, repealing Department Administrative Order No. 96-20.

CHAPTER IV: COLLECTION QUOTA AND FEES

Section 10. Application fee

10.1 The resource user shall pay the amount of five hundred pesos (PhP 500), upon filing of the application, to cover the cost of processing and monitoring the activities prior to the signing of the CRA.

Section 11. Rehabilitation/ Performance Bond

11.1 The applicant shall post a rehabilitation/ performance bond, in the form of a surety bond, in an amount equivalent to twenty- five (25%) of the negotiated package of benefits. The bond shall be posted within a reasonable time after the signing of the CRA. No collection of samples may be conducted until after the bond has been posted . . .

CHAPTER VI: GUIDELINES FOR BENEFIT-SHARING ARRANGEMENTS

Section 14. Bioprospecting fee

14.1 The minimum bioprospecting fee shall be US\$3,000.00 or US\$ 3.00 per hectare of area over which the applicant shall have bioprospecting rights, whichever is higher;

14.2 The actual amount of the bioprospecting fee may be negotiated between the Secretary, through NWMC, and the resource user, subject to the minimum set above. The bioprospecting fee is good for the duration of the collection under the CRA, or for a maximum of three years. Any extension granted for the collection of samples requires payment of an additional bioprospecting fee;

14.3 The bioprospecting fee shall be payable to the DENR in equivalent Philippine currency at the time of payment.

Section 15. Milestone Payments

15.1 The CRA holder shall pay to the resource providers the following minimum milestone payments:

- a) Annual User's Fee – Prior to any collection activity, the CRA holder shall pay to the resource providers the amount of One Thousand US Dollars (\$1000) per collection site per year, subject to Section 19 below;
- b) Royalties - A minimum amount of one percent (1%) of gross sales of the product/s made or derived from the collected samples, shall be paid annually by the CRA holder to the resource providers throughout the duration of the patent. For this purpose, the CRA holder shall present an annual gross sales report to the DENR-PAWB as basis in computation of the royalty.
- c) Product Development Fees
 - 1) Upon filing of and for each application for patent for any product derived from or by reason of any material or specimen collected from any area under the research agreement, the CRA holder shall pay within thirty days (30) after the filing of patent application a non-refundable

- amount of Fifteen Thousand US Dollars (\$15,000) to the resource providers. This shall include applications filed in the Philippines or in any other country;
- 2) During the pendency of each patent application, the CRA holder shall pay the amount of One Hundred Thousand US Dollars (\$100,000) every year until the patent is approved. Payments of \$100,000 will commence a year after the patent application is filed. If, at any point in time, the CRA holder decides to discontinue the patent application, then the payment of \$100,000 every year shall cease. Any amount paid prior to the discontinuation of the patent application shall be non-refundable.
 - 3) The product development fees paid shall be considered as advance payments of royalties and shall be deducted from the royalties due under (b) herein, under such reimbursement terms that the parties may agree to.

Section 16. Forms of Payments

Forms of Payment. - Payments may be made in cash or in kind. The CRA holder may enter into terms of agreements with the concerned resource provider for the payment of the latter's share in non-monetary forms. However, for this purpose, the amount to be credited against royalties and fees due from the CRA holder shall be limited to the proportionate share of the actual recipient-payee. The in-kind payments may be given earlier but not later than the period specified for each milestone payment in the preceding section.

16.2 In-kind payments may include:

Equipment for biodiversity inventory and monitoring;

Supplies and equipment for the resource conservation activities;

Technology transfer;

Formal training including educational facilities;

Infrastructure directly related to the management of the area;

Health care; and,

Other capacity building and support for in-situ conservation and development activities as may be agreed upon by the CRA holder and the concerned resource provider.

Section 17. Valuation of In-kind Payments.

17.1 The value of in-kind payments shall be determined by the DENR through PAWB based on the following:

acquisition cost of equipment/ infrastructure/ supplies;

cost of training for formal training;

cost of training in host country of trainer in case of technology transfer;

actual costs incurred (labor, infrastructure, IEC materials and similar expenses) for conservation and protection activities.

Section 20. Beneficiaries of the Royalties and Patent Fees

20.1 The royalties and product development fees shall be paid in the specified milestones to the following provider-groups that actually provided the specimen from which the commercial product was derived from:

Local Community (city or municipality)

Indigenous Peoples

PAMB

private land owner

Prepared by Atty. James L. Kho on 8 December 2003 based on inputs from technical experts and sectoral consultations.