

# Watershed Services Agreements: An Analysis of Benefits towards a Pro-poor Reward Mechanism in Bakun, Philippines

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## Abstract

Memoranda of Agreements (MOAs) supporting the Philippine laws which govern the hydropower companies in Bakun watershed were analyzed to examine the efficacy and transparency of the MOAs as basis of rewards. This study was conducted to develop a model of intervention to improve reward mechanisms that benefit the upland communities for the watershed services they provide. Two kinds of benefits (statutory and negotiated) derived by Bakun municipality from the hydro companies were identified and its pro-poor potentials were assessed. Based on the results, recommendations and challenges were identified to support the development of a pro-poor reward mechanism.

## Introduction

Bakun, a marginalized agricultural municipality in the mountainous region of the northern Philippines was selected as one of the six pilot sites for the Rewarding Upland Poor for Environmental Services (RUPES)<sup>1</sup> program in Asia. The concept of Payments for Watershed Services (PWS) is expected to work well in Bakun since essential ingredients for PES such as: buyers of watershed services as represented by the two hydropower companies, sellers of watershed services which are the community upland farmers dwelling within the watershed areas while applying their indigenous land-use practices, and an intermediary or broker of the reward mechanism which is the Bakun Indigenous Tribe Organization (BITO), as a municipal wide grassroots organization, are present.

Hydroelectric power generation in Bakun is encouraged under Philippine laws as a major economic development thrust. There are a number of policies and agreements supporting the nature and amount of benefits that communities receive from hydroelectric power companies (Table 1).

Table 1. List of legal stipulations governing the nature and amount of benefits derived from hydropower generation.

Law	Title
Executive Order No. 215	Allowing the Private Sector to Generate Electricity
Republic Act (RA) 7156	Mini-hydroelectric Power Incentives Act of 1991
RA 7160	Local Government Code of the Philippines
RA 7638	Department of Energy Act of 1992 (DOE Act)
RA 9136	Electric Power Industry Reform Act of 2001
Energy Regulations (ER) 1-94	Rules and Regulations Implementing Sec. 5(i) of RA 7638.

<sup>1</sup> RUPES is an International Fund for Agricultural Development (IFAD) supported project, which aims to development reward mechanisms for environmental services.

With these legal instruments, specific benefits for the Bakun municipality from the hydroelectric companies (HEC) are translated through Memoranda of Agreements (MOAs). The first MOA between HEDCOR, Inc. (then NMHC) and Bakun Municipality was signed in 1991 while the second MOA involving Luzon Hydro Corporation (LHC), Benguet Province, National Power Corporation (NPC), and Bakun LGU was signed in 1997.

Together with the Cordillera Highlands Agricultural Research Management (CHARM) project, and the World Agroforestry Centre (ICRAF), BITO examined the efficacy and transparency of these MOAs as basis of rewards. This activity aims to assess the performance of the benefits derived by the municipality from HEC as stipulated in the MOA; to recommend ways how to improve reward mechanisms that benefit the upland communities for the watershed services they provide; and develop a model of intervention that allows the indigenous peoples (IPs) to exercise their rights in decisions that affect their livelihood.

### Benefits flowing to whom

There are two kinds of benefits derived by Bakun from HEC: 1) statutory benefits in terms of tax payments mandated under existing government laws (Table 1); and 2) voluntary social development and livelihood assistance.

*Statutory (mandatory) benefits.* HEC directly pay the *business and real property taxes* to the local government unit (LGU) treasury office while *the special privilege tax* is paid at the national treasury.

The *national wealth tax* is one percent of gross revenue of the power company, and it is being paid directly to the LGUs concerned following a sharing scheme: 20 percent to the province, 45 percent to the municipality, and 35 percent to the barangay (village) (Figure 1).

A different benefit-sharing scheme is observed with the HEDCOR, Inc., which MOA was signed before the enactment of the Local Code of 1991. The company remits three percent of its net sale to the LGU with a sharing scheme of two percent for the municipality and one percent for the host barangays.

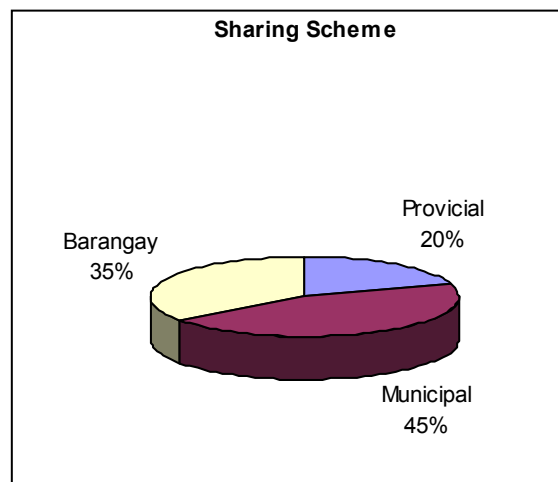


Figure 1. Share scheme for the national wealth tax.

With regards to *ER 1-94 funds* (as provided under the country's Department of Energy Act of 1992 and the Electric Power Industry Reform Act of 2001), the benefits are provided to the host communities in the following forms:

- Electrification fund (EF) equivalent to 50 percent of one centavo per kWh of total electricity sales of the power station (PhP0.0050/kwh);
- Development and livelihood fund (DLF) equivalent to 25 percent of one centavo per kWh (PhP0.0025/kwh); and
- Reforestation, watershed management, health and/or environmental enhancement fund

(Refo funds) equivalent to 25 percent of one centavo per kWh (PhP0.0025/kwh) of the total electricity sales of the power station.

These funds can be accessed by the host LGU upon submission of project proposals, which are evaluated and approved by the Department of Energy prior to implementation.

All these mandatory taxes have substantially supplemented the revenues of the municipality. The funds derived from HEC are then integrated in their annual budget appropriation for community development. As of December 2006, the total cash benefits and assistance derived by Bakun from the power companies was estimated at US \$3.7 million. For the most part, it is the LGU's prerogative to utilize the payments from HEC to finance basic community services such as health and education, as well as for community development projects prioritized by their Sangguniang Council.

*Voluntary or negotiated benefits.* The voluntary benefits are provided annually by the power companies in response to the requests of the LGU and /or People's Organizations (POs). Most of the benefits are in the form of carefully prioritized infrastructure projects such as roads and bridges while others are in the form of social development and livelihood assistance. Estimated voluntary benefits provided by HEC as of 2006 was US \$165,000.00. These benefits could be perceived as company's gesture of goodwill in response to the urgent needs of the communities.

These MOA and non-MOA benefits have indeed contributed in the development of the municipality particularly the major roadways (e.g. Halsema highway going to La Trinidad, Benguet and Baguio City). However, more interventions have yet to be done in terms of the natural resource protection and management, which supports the source of livelihoods of the IPs. In particular, there should be annual budget appropriation for Natural Resource Management (NRM) activities/projects funded from the payments/benefits derived from the power facilities.

### **Pro-poor potential**

Based on the result of this study, recommendations were made to improve the existing financing mechanism to be more pro-poor, these are:

- Implementation of agroforestry farming projects as strategy for community livelihood development;
- Direct negotiation of the communities through BITO to hydropower companies for the voluntary benefits;
- LGU should observe proper balance in the utilization of the negotiated benefits such that infrastructure as well as resource conservation and management projects are implemented proportionately; and
- Utilization of the funds (e.g. national wealth tax as paid by the hydropower companies) to produce more public services such as electrification of barangays, farm-to-market roads, and land tenure delineation activities addressing the unequal access to physical capital in the uplands.

### **Avenues/Mode of Intervention to a Realistic Pro-Poor Mechanism**

To realize the abovementioned recommendations, the following are identified avenues and mode of intervention to improve the existing benefit mechanisms for the Bakun watershed stakeholders.

*Bakun Integrated Watershed Development and Management Plan (BIWDMP).* Through the facilitation of the RUPES project in Bakun, the BIWDMP is currently being formulated that would integrate the RUPES concept as a distinct strategy to achieve resource conservation and poverty alleviation. This plan integrates all piecemeal watershed management projects being implemented within the domain, and will serve as the main document on which all watershed management projects and activities are based. BIWDMP will identify priority watershed management and community livelihood projects, and one of these is the development of agroforestry farms within open and critical portions of the watershed. This project will improve the water quality that supports HEC while simultaneously providing additional incomes to the upland farmers. It is envisioned that HEC would be encouraged to finance the development of agro-forestry farms.

*Adoption of a municipal-wide improved land management practices.* HEC has expressed willingness to upscale the rewards being provided to the communities provided there would be a marked reduction in the volume of silt and sediments that flow to their facilities (i.e. turbines) especially during the rainy season. HEC has been incurring huge expenditure in maintaining turbines and other related facilities that are damaged by siltation/sedimentation. If this problem could be addressed by the upland dwellers through the adoption of improved land management practices, then HEC would be willing to grant more rewards to the communities.

*Annual provision of voluntary benefit.* Aside from the abovementioned benefits, the hydro companies are strengthening their goodwill through provision of voluntary benefits such as scholarships, repair and maintenance of school facilities, provision of computer and copier machines; medical and dental assistance, assistance to roads maintenance; livelihood assistance; seedling dispersal programs, assistance to cooperatives, and training of selected farmers among others.

### **Lessons Learned and Challenges**

From this study, BITO sees the potential avenues and mode of intervention to develop a pro-poor, realistic and conditional payment agreement with HEC. At this stage, capacity building activities especially for equipping the IPs (e.g. training on water quality monitoring, sustainable agroforestry/NRM systems and management of RUPES mechanisms; training on project development and management) are vital.

At the same time, from all the activities and the dialogues conducted, HEC now see potential gains for the people and their company in rewarding watershed services. New MOA is under negotiation in which the IPs of the upstream communities are the target recipients of the reward. In addition, identified research needs to support a pro-poor, realistic and conditional payment agreement includes:

- Effective valuation of watershed services
- More demonstrations of viable agro forestry livelihood technologies in Bakun
- Policy and legal reforms
- Development of a holistic market-based reward for environmental services.

**References**

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