# on Environmental Services Supply through Regulation, Voluntary Agreements and Markets

# HIGHLIGHTS

Reward for environmental service (RES) schemes cannot stand alone as an incentive-based mechanism. Enabling policy environments also need to exist to ensure that these schemes are operational, and that there are opportunities for RES to scale up and scale out and be sustainable. In addition, policy makers should be able to set policies at local, regional and national levels that spell out an optimal level of acceptable environmental quality standards. RUPES recognizes the concept of compensation and reward for environmental services (ES) as a kind of 'traffic light' system in which the relationship between regulations and voluntary actions differs according to the threshold determined by the regulation and level of environmental maintenance practiced.

At the national level, there are three focal areas of RES policy advocacy to ensure that appropriate institutional and financing mechanisms are available for RES: (1) process and implementation of land rehabilitation; (2) allocation of rehabilitation funds; and (3) financing institutions for conservation. Finally, any RES projects should build a networking platform to share experiences and information and to improve coordination among stakeholders engaged in RES.

1. RES mechanisms need to be in harmony with regulatory approaches to better manage the environment and meet the goals of poverty eradication.

2. Governments should set the optimal level of acceptable ES protection as a baseline within their regulations.

**3.** Substantial amounts of public funds are currently allocated to reforestation in different countries of Asia. These programmes are generally not meeting their objectives. Such funds can become more effective from both environment and poverty perspectives if they are used for more flexible ES rewards.

4. A national multi-stakeholder platform is needed for an inter-sectoral professional debate and partnership on complex issues of poverty and the environment, especially this nascent approach to tackle both issues. Key findings

1. Identify national initiatives and policies that potentially support and correspond to the development and implementation of RES schemes.

2. Conduct policy advocacy that is cross-sectoral and link it with other policies, such as policies on land access, infrastructure, credit and labour markets.

**3.** Link RES schemes with potential public investment as a funding source.

4. Organize networks at local, provincial and national levels as channels for learning and sharing experiences and information on ongoing RES initiatives.

5. Clarify and remove communication constraints among stakeholders.<sup>1</sup>

#### Section 1. RES, national initiatives and policies: complementary approaches

The relationship between regulations and voluntary actions can be visualized as a 'traffic light'<sup>2</sup> (see the figure below). The transition between the red and amber light zones determines the minimum acceptable behaviour set by the regulations. The transition between the amber and green determines the baseline of 'business as usual'. For example, industries that control their pollution at the level allowed by certain environmental regulations operate at the amber zone. If they break this regulation, they shift to the red zone; conversely, if they improve their technology on waste management and exceed minimum compliance levels, they deserve to be in the green zone.

The opportunity for RES to operate as an incentivebased mechanism depends on the level of 'optimal acceptable behaviour set by regulation'. RES cannot work if there is no regulation that sets what activities can or cannot be done. Low environmental quality standards will make it difficult to expect any improvement in environmental quality. In this case, polluters will operate in the red zone, and we cannot expect that giving incentives will provide any solutions to environmental degradation. In such a situation, the government should enforce higher environmental quality standards. On the other hand, when regulations set a very high demand on minimum acceptable behaviour, there is no space for the application of any incentive-based mechanism. This condition also makes adherence to regulations very difficult as the regulations and laws are substantially ahead of implementation and compliance. These conditions indicate that if we want to apply any incentive-based mechanisms, the current regulatory framework needs to be revised. In addition, national policy reform to facilitate the appropriate application of ES reward schemes requires crosssectoral cooperation and re-consideration of existing rights to resource use.



'Тваяя LIGHT' conceptualizing compensation and reward mechanisms in relation to existing regulation

This 'traffic light' concept can also help us to distinguish between the definitions of compensation and reward for environmental services.

- Compensation for Environmental Services (CES) Type 1 operates in the red zone. The popular example of this approach is 'polluter-pay' compensation. The polluters compensate their victims for any environmental damages inflicted.
- Compensation for Environmental Services (CES) Type 2 operates at the edge of the red and amber zones. Environmental permit-trades take place in this domain. The sellers will sell underutilized 'rights to pollute' or 'share of environmental resource use', such as hunting permits, logging permits or water rights. The buyer can (a) have an opportunity to offset operations causing pollution, such as the 'cap and trade' mechanism and mechanisms under the Kyoto Protocol; or (b) buy the rights in order not to utilize them for conservation purposes, such as the conservation concession approach.
- Reward for Environmental Services (RES) Type 1 operates in the transition from the amber to green zone. It provides rewards for any environmental rehabilitation efforts.
- Reward for Environmental Services (RES) Type 2 operates constantly in the green zone. It prevents losses and maintains environmental qualities beyond existing standards of legal protection.

#### Section 2. Improving national public investment to enhance ES supply

Apparently, the suite of financial sources and schemes for environmental conservation is increasing.<sup>3</sup> High public awareness and compliance are supporting this positive trend. Public sources usually entail national governments and include such schemes as taxation, royalties, revenue-sharing fund, special allocation fund, and the like.

In many countries, governments still perceive that forests are the only possible provider of important environmental services, and there are long traditions of 'reforestation' or even 'afforestation' (for lands that have been without forest cover for at least 50 years). Often these programmes start in response to a manmade or natural disaster, such as the Yangtze floods in 1998 in China. However, such programmes do not lead to natural forest conditions, but emphasize the growing at high-planting density of fast-growing trees, often of only one or a few species. The programmes typically suffer from top-down planning, administrative issues, and low on-the-ground success rates against the conservation objectives set. But more fundamentally, these programmes may not have been realistic to start with.



These substantial numbers of funds provide opportunities for conservation efforts under RES, where conditionality to deliver at least good performance that results in real environmental outcomes is clearer. However, existing institutions will need strengthening in managing and allocating current conservation funds, and new institutions will need to be created.

#### Streamlining the conservation fund for achieving conservation outcomes

In Indonesia, a number of government initiatives on forest-land rehabilitation have been implemented since the early 1970s. Currently, they are funded through the Re-greening Fund – Dana Reboisasi. The Re-greening Fund is managed by the national government and distributed to the provincial and district governments as a Fund for Special Purposes – Dana Alokasi Khusus. From 2003-2009, the fund triggered a national movement on land rehabilitation called GERHAN, targeting a total of 5 million hectares of degraded land (Directorate General of Bina RHL, 2006).<sup>4</sup>

The movement has received much criticism due to its ineffectiveness in solving the land and forest degradation problems in Indonesia. The governmental fund for reforestation and afforestation and the GERHAN programmes are allocated to farmers as direct incentives (such as financial cash or seedlings) to plant trees on their farms. The failure of these rehabilitation programmes is worsened by the failure to govern and manage the remaining natural forest. The pressures on natural forests are increasing due to factors such as illegal logging, fires and conversion to non-forested land. The rehabilitation activities only last when the fund supporting is available. When the funding finishes, there is no incentive for local people to maintain and continue the conservation efforts, since they have no sense of being part of or "owning" rehabilitation programme results. From the policy and regulation aspects, the National Forest Law Number 41/1999 Article 35 mentions the existences of funding sources for investment in re-greening and rehabilitation of forest. However, the main problems are to guarantee the availability of these funds and to assure that they are professionally managed and used for their original purposes. The current funding allocation for forest rehabilitation is part of the Ministry of Forestry budget. However, there is no clear institution or mechanism for distributing funds to lower layers of implementers, such as the provincial, district, local government or direct field implementers. This usually causes delays in implementing the activities.

At the national level, the Re-greening Fund is categorized as non-tax revenue, meaning its financial management is mixed with other general state revenues under the National Budget for Revenues and Expenses. This makes the provision of this fund for the forestry sector more difficult due to administrative and bureaucratic processes. (An international consultant auditing this Re-greening Fund stated that the management of the fund was inefficient and needed revising.<sup>5</sup>)

Moreover, especially for managing the state-forest area, the current national budget distribution is based on dividing the overall directorate budget allocation among the areas, as opposed to allocating budget to the protected areas based on priorities related to their biodiversity value and management requirements. The setting of the rehabilitation grant is based on yearly budget reporting. It means the fund should be reported within one-budget year. For the field implementers, this condition is very difficult since the rehabilitation activities depend heavily on rainy seasons, which sometimes come at the end of the annual budget year. The pressure to use the budget within a year usually results in spending the fund arbitrarily. The process of making the funds available is full of complicated and financially unaccountable bureaucratic processes. Moreover, existing forestry laws and rules are weak when it comes to supporting initiatives for creating new sources for forest and land rehabilitation and conservation initiatives. Some rules can even serve as barriers to such initiatives and actually contribute to forest land degradations.

Supportive regulations and policies do exist to enable independent institutions to be established for financing conservation. For example, Article 21, Forestry Law Number 41/1999 stated that a financing institution that can support the development of the forestry domain is needed. At the policy level, the development of an alternative financing institution has become one of the activities of the Strategic Plan for National Forestry Programme. It is recommended that the financing institution should be independent and credible to manage and allocate funds for forest rehabilitation and management, either at national or international level. This alternative financing institution (Lembaga Keuangan Alternatif - LKA) should act as an executing agency in distributing the funds. In this case, the funds are saved under the LKA's account and not under the Ministry of Finance. It implies that the funds under LKA should not be limited to a one-year budget cycle as applied to other state budgets. Transactions should be able to be conducted any time, depending on planting seasons and investors' readiness to support the conservation activities.

In the case of hydropower royalty sharing, RUPES has experiences in facilitating the re-allocation of this public fund. The story of Bakun<sup>6</sup> in the Philippines and Kulekhani<sup>7</sup> in Nepal proved that the communities could maximize the use of these royalties for conservation and livelihood improvement.<sup>8</sup>

#### Better use of the hydropower royalty...

The concept of Payments for Watershed Services is expected to work well in Bakun since the essential ingredients are present for payment for environmental services: buyers of watershed services, represented by the two hydropower companies; sellers of watershed service, represented by the community upland farmers dwelling within the watershed areas who apply their indigenous land-use practices; and an intermediary or broker of the reward mechanism, represented by the Bakun Indigenous Tribe Organization (BITO), as a municipal-wide grassroots organization.



Hydroelectric power generation in Bakun is encouraged under Philippine laws as a

The Bakun Watershed supporting the two hydroelectric companies

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, such as:

Law	Title
Executive Order No. 215	Allowing the Private Sector to Generate Electricity
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 regulating
	benefits provided to the host communities.

There are two kinds of benefits derived by Bakun from hydroelectric companies:

- Statutory benefits in terms of tax payments mandated under existing government laws (see Table above) paid to both local and national treasury offices. The national wealth tax is 1 percent of gross revenue of the power company, and it is being paid directly to the local government units concerned following a sharing scheme: 20 percent to the province, 45 percent to the municipality, and 35 percent to the *barangay* (village); and
- 2) Voluntary social development and livelihood assistance. The company remits 3 percent of its net sale to the local government unit with a sharing scheme of 2 percent for the municipality and 1 percent for the host barangays.

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

#### Section 3. Adopt, adapt and learn: How to accelerate the learning of multistakeholder fora

If we do not start to implement ES reward schemes now, we may well be too late to achieve the Millennium Development Goals and other targets that require adequate environmental quality for all human beings. If we start to implement such schemes before we really know what we are doing and how to do it, we will probably waste a lot of time, effort and resources. In between these two perspectives (the 'doers' and the 'thinkers'), there is room for the 'tinkers', for step-wise learning by adjustment while action is undertaken. Much learning depends on adaptation to local conditions of basic principles that emerged from initial adoption of less-than-ideal starting points.

The key is to organize the learning and sharing of lessons, and preferably in an environment that set on improving – rather than blaming the actors engaged in – imperfect first steps. The impact of national and provincial lesson sharing and policy dialogue can have significant influences on the implementation of such reward mechanisms at site level. For example, the RUPES conceptual scheme has helped local stakeholders to evolve from a 'command and control' and 'top down' approach to environmental management, towards a situation where environmental justice, rights and equitable upstream-downstream relations are (at least) being discussed. This is facilitated by clarifying and removing communication constraints.



RUPES Global Event as a medium for stakeholder's interactions at local, national and international level

The RUPES project identified and started to address constraints inhibiting systematic transfers of rewards to upland communities. These constraints include a lack of political will or institutional capacity, lack of a supportive legal framework and financial resources, and even limited community interest and commitment. Institutional constraints are examined, such as conflicting and competing jurisdiction by multiple government agencies (e.g. Ministries of Environment and Ministries of Forestry) over the regulation of upland environment services provided by the people living there. RUPES recognized these constraints and attempted to provide solutions through its experiences in facilitating independent national ES networks in Indonesia and the Philippines. RUPES involvement at national level – especially in these two countries – offered a promising approach to improving coordination between government agencies and improving existing legislation on environmental conservation.

## **References:**

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<sup>4</sup> The GERHAN programme classifies degraded land into 3 categories: 1st priority (extremely degraded land) such as shrubs and bare land; 2nd priority (degraded land) such as secondary forest; and 3rd priority (other land uses).

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<sup>8</sup> Leimona B and Lee E. 2008. Pro-Poor Payment for Environmental Services Some Considerations. Bogor, Indonesia. http://www.worldagroforestrycentre.org/sea/Publications/searchpub.asp?publishid=1858

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#### The RUPES Project:

Throughout the world, upland people, many of them poor, earn their livelihoods from land and landscapes that, when properly managed, provide valuable environmental services to others. However, management practices that maintain or increase environmental services often carry a cost to upland people in terms of time and/or income. Regulations and prescriptions of land use aimed at securing environmental services are often ill-designed and exacerbate rural poverty. RUPES aims to work with both potential users and producers of environmental services to find conditions for positive incentives that are voluntary (within the existing regulatory framework), realistic (aligned with real opportunity costs and real benefits) and conditional (linked to actual effects on environmental services), while reducing important dimensions of poverty in upland areas.



At each of the six RUPES action sites, local institutions partner with the World Agroforestry Centre (ICRAF) to implement action research aimed at developing effective reward mechanisms in the local context. The sites are Muara Bungo, Singkarak, and Sumberjaya in Indonesia; Kulekhani in Nepal; and Bakun and Kalahan in the Philippines. National policy dialogues are aimed at making policy frameworks more conducive to positive incentives.













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