Compensation for Ecosystem Service Value Improvement (CESVI)

28 November 2018
Business for Sustainable Development (BSD)

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Supporting companies throughout their sustainability journey

Creating systems transformation in key development areas

**CAPACITY BUILDING ON SUSTAINABILITY**

**SUSTAINABILITY & INTEGRATED REPORTING ADVISORY**

**STRATEGY & PERFORMANCE MANAGEMENT**

**CIRCULAR ECONOMY**
- Solid Waste Management
- Materials Exchange Program
- Partnership with PARMS

**MOBILITY SOLUTIONS**
- First and Last Mile
- Telecommuting Solutions
- Sustainable Mobility Project

**AGRICULTURE & ECOSYSTEMS**
- Farmers-Market-Finance Linkage
- Carbon Sequestration Investment
- Ecosystem-based Adaptation

**CONTRIBUTION TO ACHIEVEMENT OF SDGs**

STRATEGY FRAMEWORK
Contribution of Ecosystems in the Philippines:

- Watersheds - 81.56 km³ of water for drinking, agriculture, and industry in 2009.

- The forestland (15.8 million ha) - 1.1 million m³ of logs and fuelwood in 2016.

- Philippine waters - world’s richest ecosystems. Corals coral reefs - at least USD 1.064 billion to the economy in 2005 (1 km² = net revenues of USD 29,000 to USD 113,000 - World Bank).

- Mangroves - at least USD 83 million per year.

- Our Fisheries is one of the largest fish producers in the world – commercial (36%), municipal (30%), and aquaculture fisheries (24%) of the total annual fisheries globally.
Our Challenge

• Ecosystems Value is externalized

• PES remain voluntary
  • methodologies for remain inconsistent
  • expenditure for ecosystem not guaranteed.
  • Freeloaders abound

• Paying for ecosystem services is a disadvantage in the competition landscape
How can we shape the market to benefit those who invest in ecosystem protection and restoration?
Mechanism:

(1) reduce, if not eliminate, freeloaders; all who benefits, pays

(2) Returns for investment in ecosystem restoration and protection

(3) Science-based, Results-based compensation
Proposed Mechanism
**Ecosystem Service**

**Ecosystem Service Investor**

*Investments for Ecosystem Service improvement*

**Ecosystem Conservation Fund (ECF)**

*Compensation for Ecosystem Service investors*

**Ecosystem**

*Provision of Ecosystem Service for users*

**Ecosystem Service User**

*Payment by Ecosystem Service users, based on valuation*

- **National Government**
- **Local Government**
- **Development Organizations**

*Public funds and donations*
Precedence?

ER 1-94
As amended by Department Circular 2000-03-003
ER 1-94’s policy objectives include:

ENERGY REGULATION NO. 1-94

RULES AND REGULATIONS IMPLEMENTING SECTION 5 (i) OF REPUBLIC ACT NO. 7638, OTHERWISE KNOWN AS THE “DEPARTMENT OF ENERGY ACT OF 1992”

SECTION 1. Title. — Pursuant to Section 5 (i) of Republic Act No. 7638, otherwise known as the “Department of Energy Act of 1992,” which provides that 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 the energy-generating facility: Provided, however, That the other provinces, cities, municipalities, or regions shall not be deprived of their energy requirements,” the Department of Energy hereby adopts and promulgates the following rules and regulations.

SECTION 2. Policy Objectives. —

To promote harmony and cooperation among host LGUs, the community and people affected, the energy resource developers or power producers, and the appropriate agencies of the national government whereby the community and people affected and the host LGUs are provided with the benefits under a coordinated and consultative or participative process while the power producers or energy resources developers are accorded community support and legal protection by the host LGUs.

SECTION 3. Scope of Application. — These rules and regulations shall apply to energy resource development projects and energy-
The allocation of funds is split for EF, DLF, and RWMHEEF:

Source: EPIMB
The process flow for the project implementation is the following:

**Process Flow**

**Electrification Fund**
- LGU submits list of area/s for EF proposal to DU's/EC's
- DU assess the area/s, submit req docs & endorses to DOE
- DOE evaluates, approves, issues NTP, MOA, & facilitates fund release
- DU implements project
- DOE conducts financial & technical audit

**DLF & RWMHEEF**
- LGU submits DLF & RWMHEEF proposal thru a resolution
- PP conducts initial evaluation & endorses to DOE
- DOE evaluates, approves, issues NTP, MOA, & facilitates fund release upon LGUs SUB. OF COMPLETE BID DOCS
- LGU implements project
- DOE conducts financial & technical audit

Source: EPIMB
Ecosystem Valuation?
Ecosystem Service
Investor

Investments for Ecosystem Service improvement

Provision of Ecosystem Service

Results-based compensation with principle of additionality

<table>
<thead>
<tr>
<th>Yr 1</th>
<th>Yr 2</th>
<th>Yr 3</th>
<th>Yr 4</th>
<th>Yr 5</th>
<th>Yr 6</th>
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- BAU scenario
- Program for Ecosystem Service improvement

Ecosystem service value improvement

Compensation for Ecosystem Service investors

National Government

Local Government

Development Organizations

Public funds and donations
Total Economic Value (TEV)

Source: Christie, Mike. “Valuing Ecosystem Services” presentation. 2015.
Methodology

Approaches to Monetary Valuation

Revealed Preference Approaches
- Market Price Method
- Productivity Method
- Hedonic Pricing Method
- Hedonic Wage Method
- Travel Cost Method
- Cost Analysis Method

Stated Preference Approaches
- Contingent Valuation Method
- Damage Cost Avoidance Method
- Conjoint Analysis
- Replacement Cost Method
- Factor Income Method
- Substitite Cost Method

ES Value Improvement Estimation

<table>
<thead>
<tr>
<th>Ecosystem Health Index (Density/Cover Diversity / Species Richness)</th>
<th>ESV Factor (based on TEV) (PhP/Ha)</th>
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<tbody>
<tr>
<td>1 (Poor)</td>
<td>10,000</td>
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<tr>
<td>2</td>
<td>20,000</td>
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<td>3</td>
<td>30,000</td>
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<td>70,000</td>
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<td>8</td>
<td>80,000</td>
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<tr>
<td>9</td>
<td>90,000</td>
</tr>
<tr>
<td>10 (Extremely healthy)</td>
<td>100,000</td>
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ES Value Improvement Estimation

BAU scenario vs Program for Ecosystem Service improvement

CESVI = (8-4)*10,000
= 40,000 / hectare * 50 hectares
= 2 M PhP

Investment = 200,000 / year * 8 years
= 1.6 M

Profit = P 400,000
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Thank you!