

Compensation for Ecosystem Service Value Improvement (CESVI)

28 November 2018



**PHILIPPINE BUSINESS
FOR THE ENVIRONMENT**

Business for Sustainable Development (BSD)

Bonar Laureto



OUR MEMBERS



CHAIRMAN



EDGAR O. CHUA
Makati Business Club

PRESIDENT



RICHARD B. TANTOCO
President and COO,
Energy Development
Corp.

TREASURER



EDITH I. ALCANTARA
President and CEO,
C. Alcantara and
Sons, Inc.

MEMBERS



LEONARDO B. ALEJANDRINO
Chairman
Investcorp Inc.



EDUARDO A. SAHAGUN



RAMON GIL "CHITO" MACAPAGAL
Corporate Affairs Head
SMIC and SMFI Trustee



FELINO A. PALAFOX JR.
Founding & Managing
Partner, Palafox
Associates



CORAZON P.B. CLAUDIO
Board Director,
Science Centrum



CESAR A. VIRATA
Corporate Vice
Chairman, Rizal
Commercial Banking
Corp.



DR. ROBERTO DE OCAMPO, OBE
Chairman, Philippine
Veterans Bank



JACQUES REBER
Chairman and CEO,
Nestle Philippines Inc.



CEZAR "BONG" P. CONSING
President, Bank of the
Philippine Islands

OUR BOARD OF TRUSTEES

Supporting companies throughout their sustainability journey

CAPACITY BUILDING ON SUSTAINABILITY

SUSTAINABILITY & INTEGRATED REPORTING ADVISORY

STRATEGY & PERFORMANCE MANAGEMENT

Creating systems transformation in key development areas

CIRCULAR ECONOMY

MOBILITY SOLUTIONS

AGRICULTURE & ECOSYSTEMS

CONTRIBUTION TO ACHIEVEMENT OF SDGs

Solid Waste Management
Materials Exchange Program
Partnership with PARMS

First and Last Mile
Telecommuting Solutions
Sustainable Mobility Project

Farmers-Market-Finance Linkage
Carbon Sequestration Investment
Ecosystem-based Adaptation

STRATEGY FRAMEWORK

Contribution of Ecosystems in the Philippines:



**AGRICULTURE &
ECOSYSTEMS**

- 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

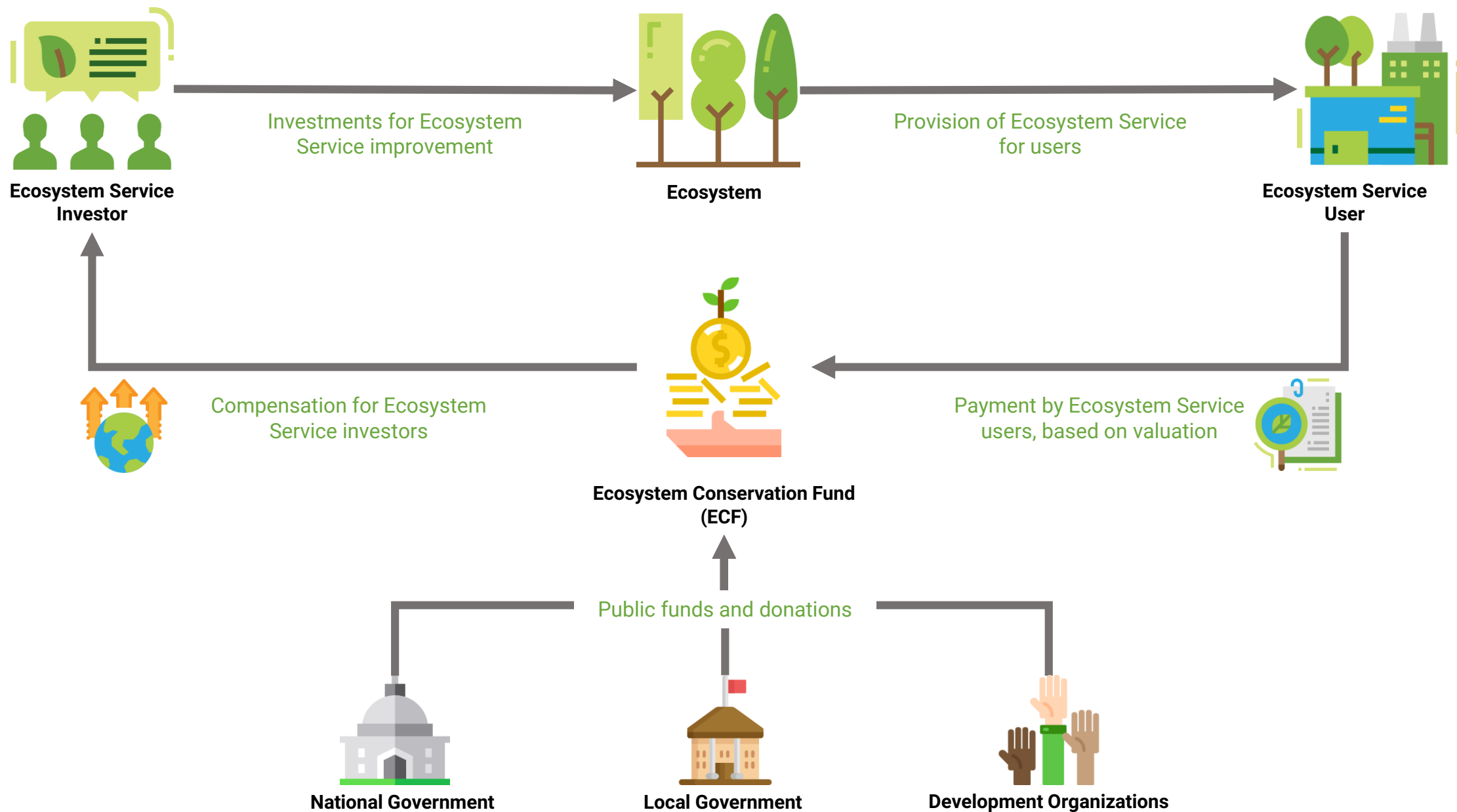


How can we shape the market to benefit those who invest in ecosystem protection and restoration?

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



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.

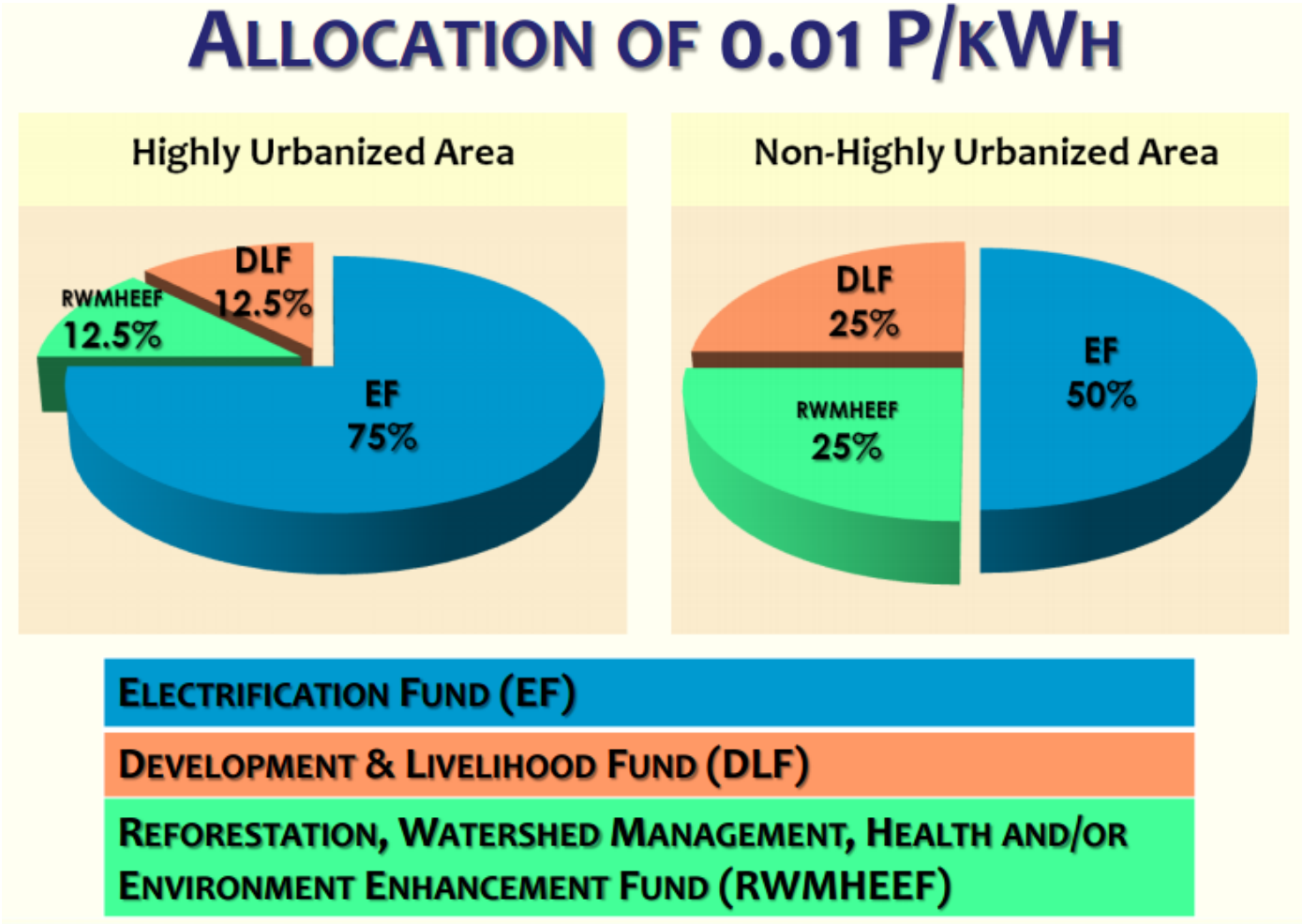
SECTION 2. *Policy Objectives.* –

affected with public interest; and

- c) 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-

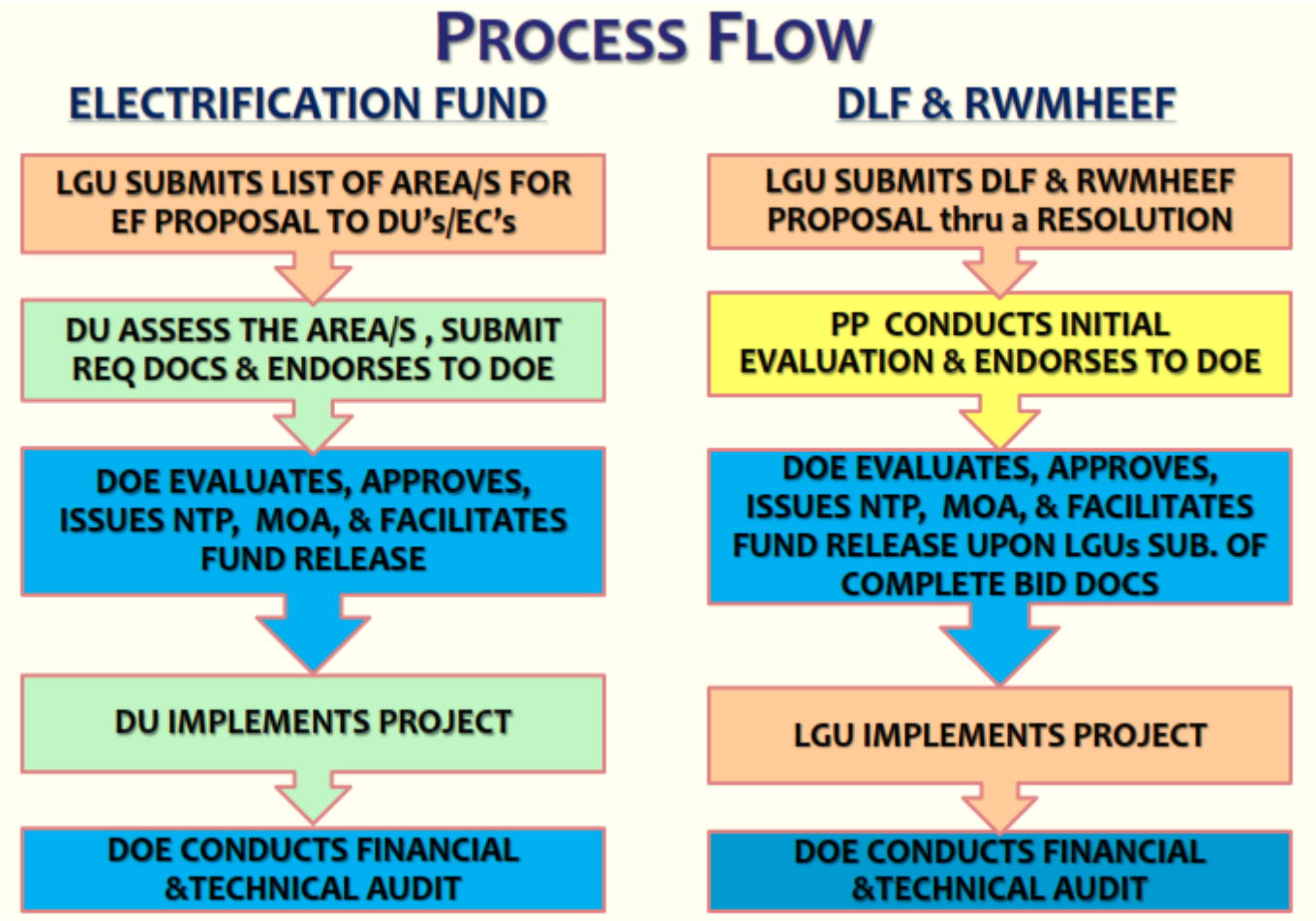
The allocation of funds is split for EF, DLF, and RWMHEEF:



Source: EPIMB



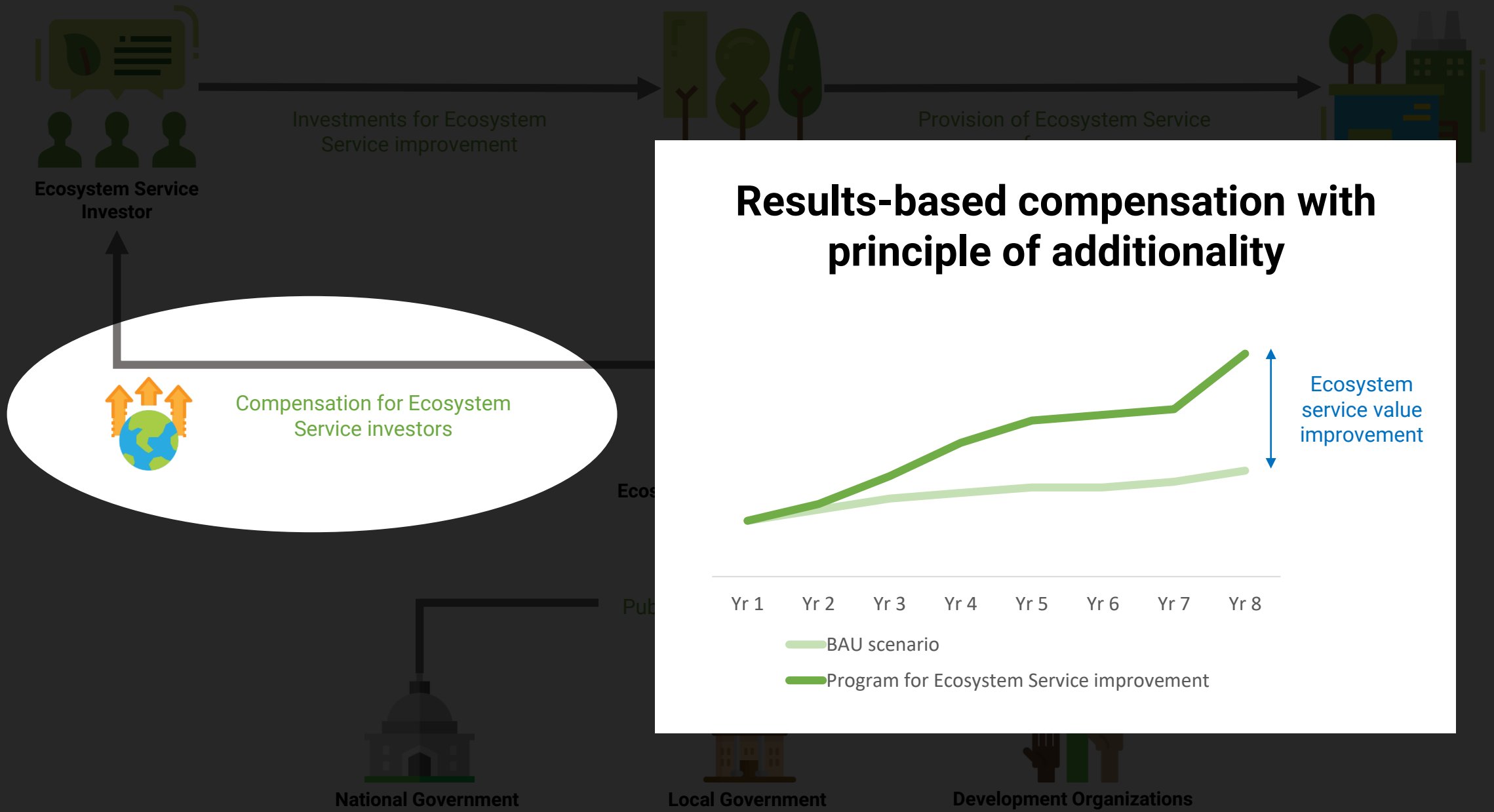
The process flow for the project implementation is the following:



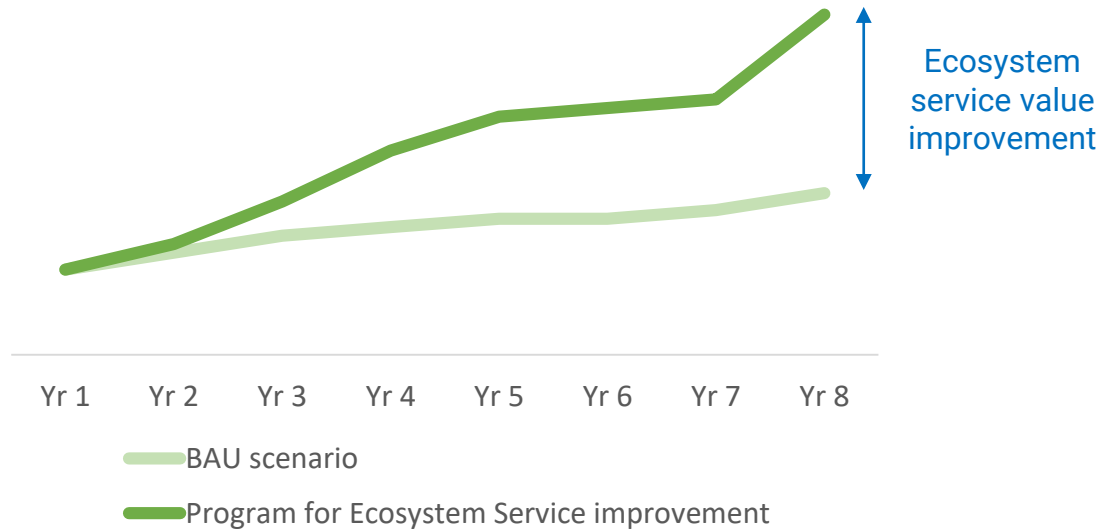
Source: EPIMB



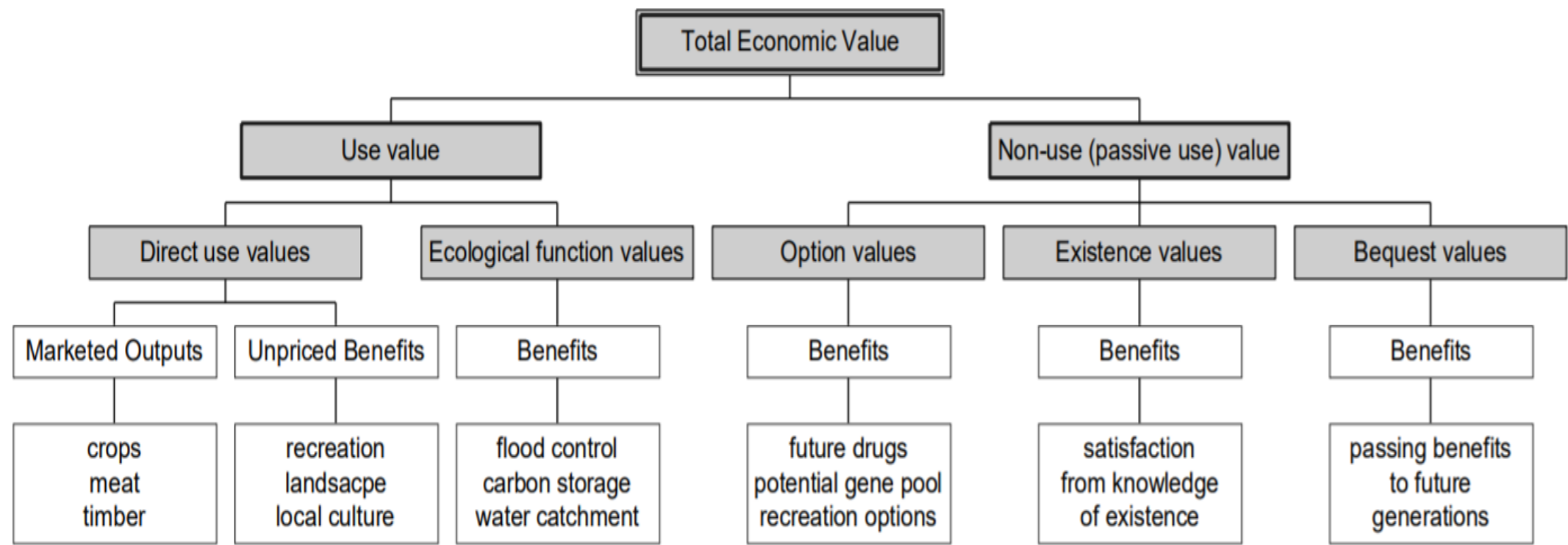
Ecosystem Valuation?



Results-based compensation with principle of additionality

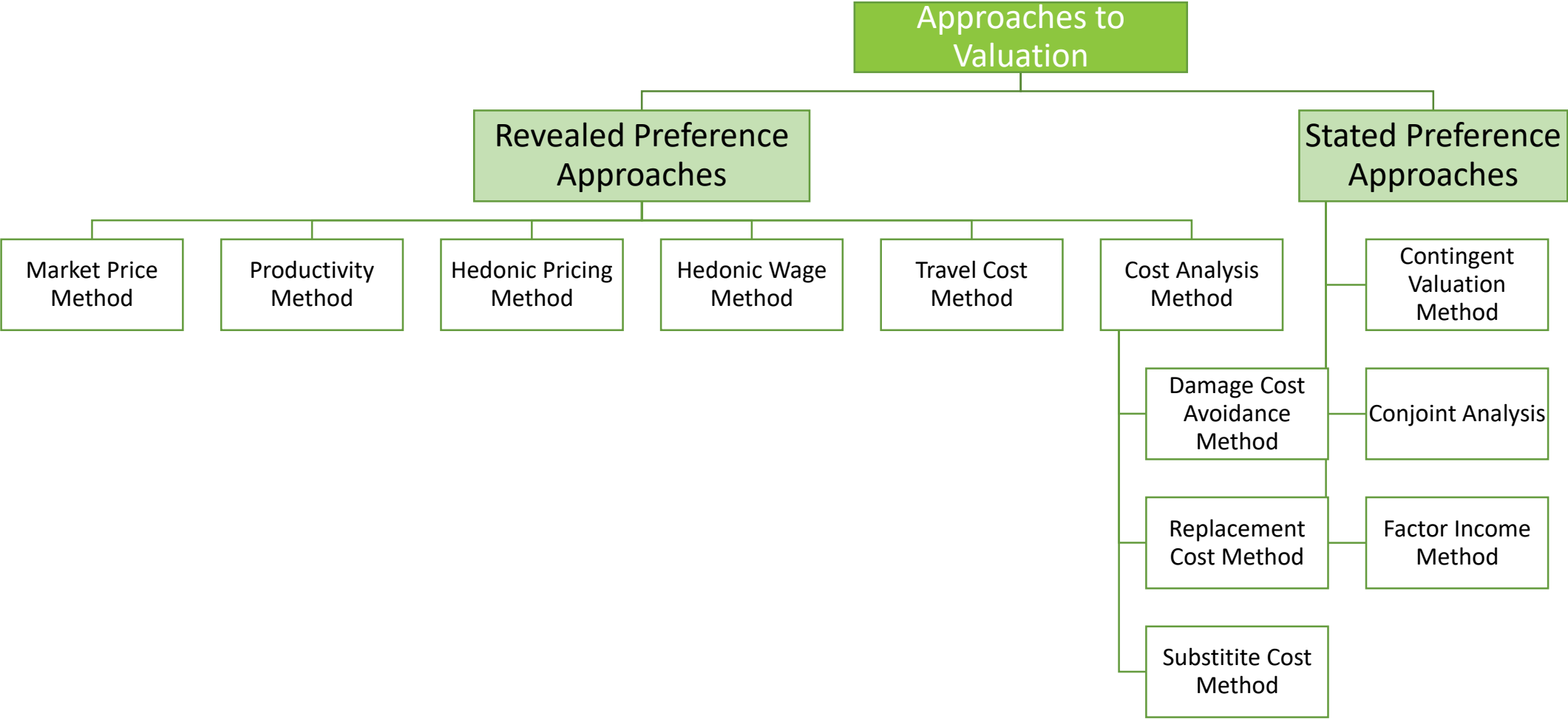


Total Economic Value (TEV)



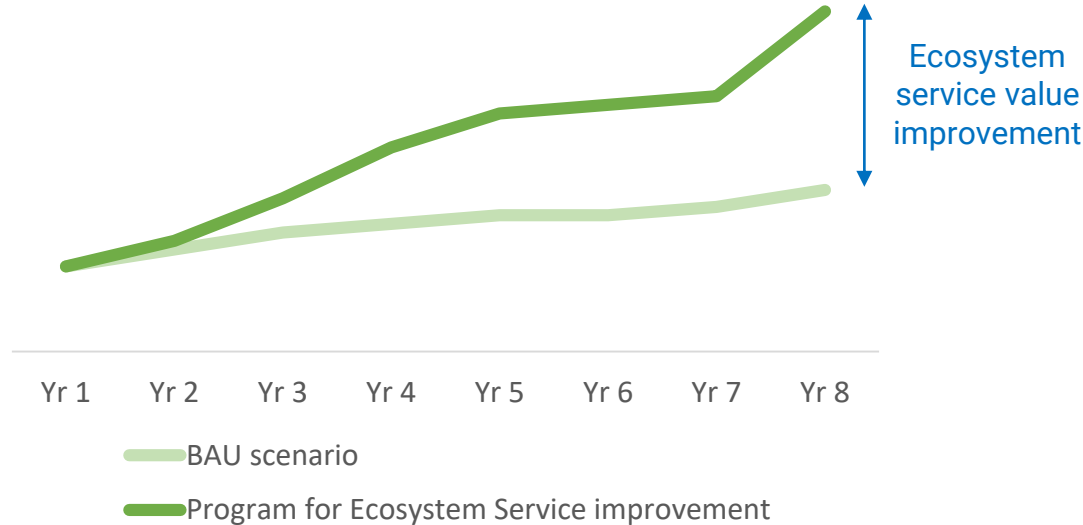
Source: Christie, Mike. “Valuing Ecosystem Services” presentation. 2015.

Approaches to Monetary Valuation



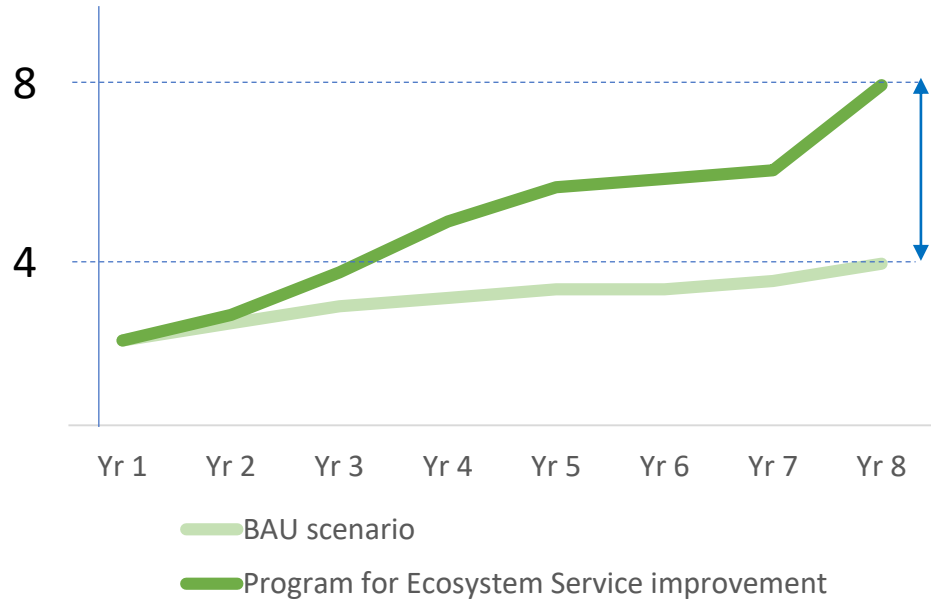
Source: Carson, Rebecca M. and John C. Bergstrom. “A Review of Ecosystem Valuation Techniques.” University of Georgia. 2003.

ES Value Improvement Estimation



Ecosystem Health Index (Density/Cover Diversity / Species Richness)	ESV Factor (based on TEV) (PhP/Ha)
1 (Poor)	10,000
2	20,000
3	30,000
4	40,000
5	50,000
6	60,000
7	70,000
8	80,000
9	90,000
10 (Extremely healthy)	100,000

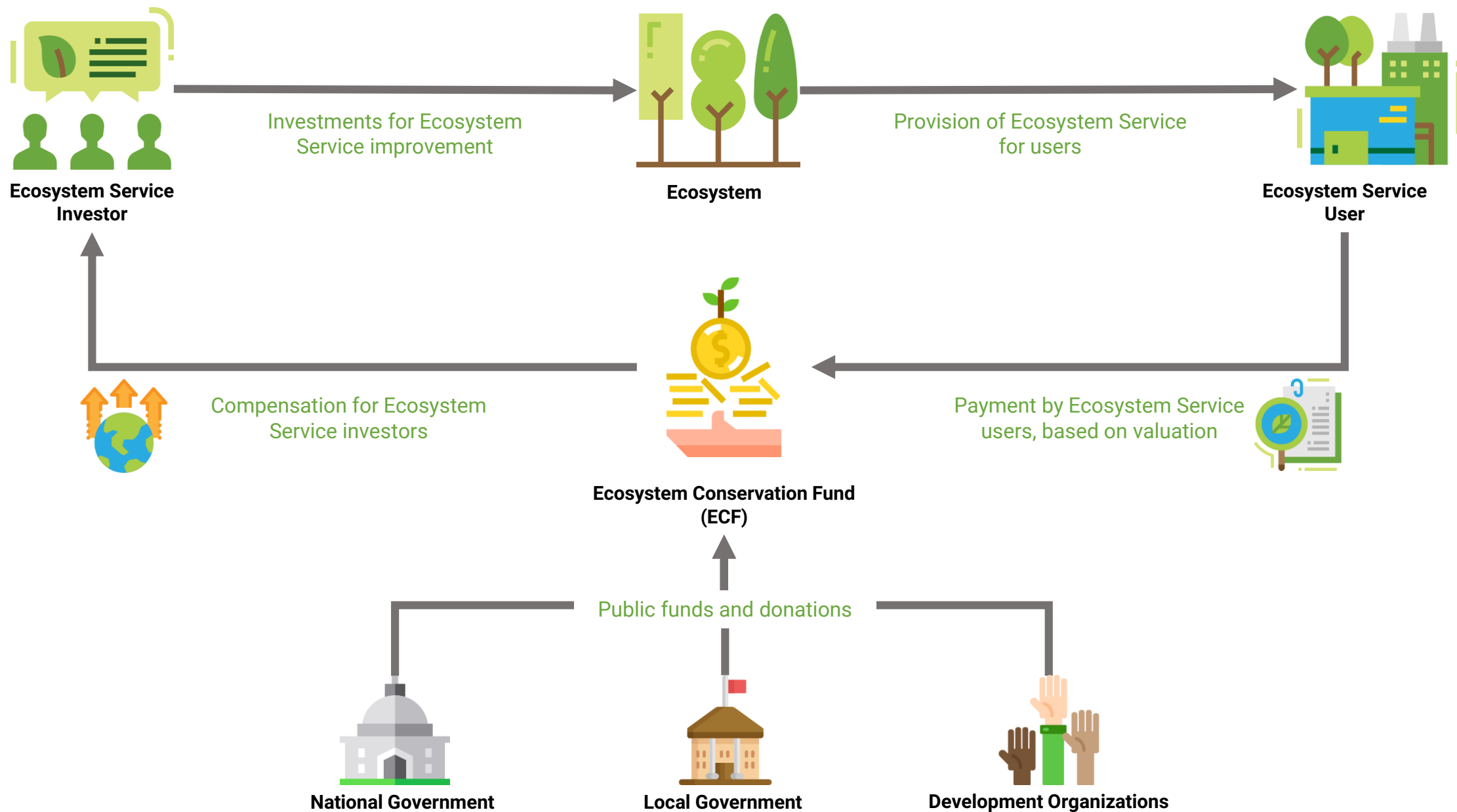
ES Value Improvement Estimation



$$\begin{aligned}\text{CESVI} &= (8-4) * 10,000 \\ &= 40,000 / \text{hectare} * 50 \text{ hectares} \\ &= 2 \text{ M PhP}\end{aligned}$$

$$\begin{aligned}\text{Investment} &= 200,000 / \text{year} * 8 \text{ years} \\ &= 1.6 \text{ M}\end{aligned}$$

$$\text{Profit} = \text{P } 400,000$$



Thank you!