The realities of using ecosystem services values and payments for forest conservation and restoration : examples from the Philippines

Ann Koontz

Presentation Overview
PES as Tool and Mechanism

CLIMATE CHANGE AND OUR FALTERING LIFE SUPPORT ECOSYSTEMS

With climate change, the frequency and severity of extreme weather events are expected to rise.

- Heightened vulnerability of lowland populations to the increasing ferocity of floods and droughts
- Our ecosystems meant to support human and food security faltered at the height of abnormal weather conditions

CLIMATE CHANGE AND OUR FALTERING LIFE SUPPORT ECOSYSTEMS

- Seven (7) extreme weather events either directly hit or sideswiped Mindanao two years and four months after Sendong
- Average annual typhoon occurrence in Mindanao - one or nil

THE NEW NORMAL?

RI-EWWP 2013

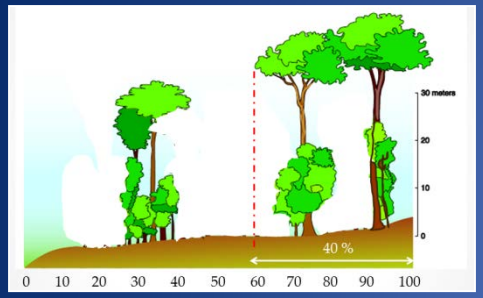
CLIMATE CHANGE AND OUR FALTERING LIFE SUPPORT ECOSYSTEMS

Event	Date	Dead and Missing	Damage to Infrastructure
Tropical Storm SENDONG	Dec 17, 2011	3,000	PhP17 billion
Super Typhoon PABLO	Ddc 4, 2012	2,000	PhP37 billion
Super Typhoon YOLANDA	Nov. 8, 2013	>10,000	>PhP400 billion

CURRENT REALITY CHECK: EXTENT OF FOREST COVER

DETERMINING THE ACTUAL TOTAL FOREST COVER OF THE COUNTRY - 2.78 M HAS

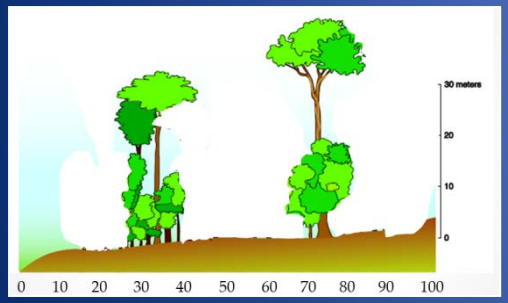
(based on a *2010 satellite imagery, Source: Philippine Forestry Statistics 2012*)



CLOSE CANOPY FOREST

Crown & undergrowth cover >40 percent of the ground

1.9 MILLION HAS
X .7 = 1.33 M HAS



OPEN CANOPY FOREST

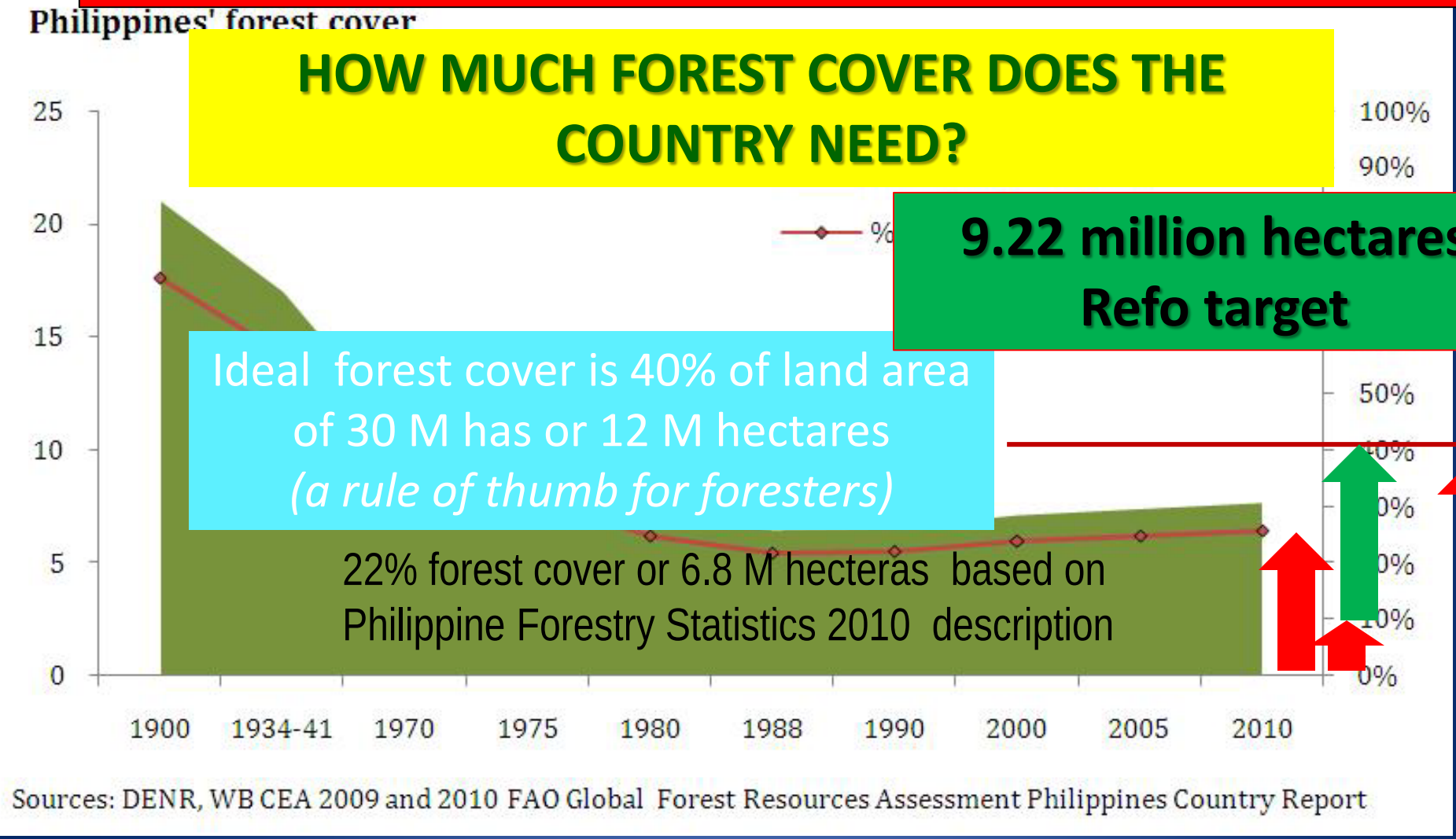
Crown coverage of at least 10 percent and less than 40 percent.of forest floor

4.6 MILLION HAS
X .25 = 1.15 M HAS

0.3 MILLION HAS

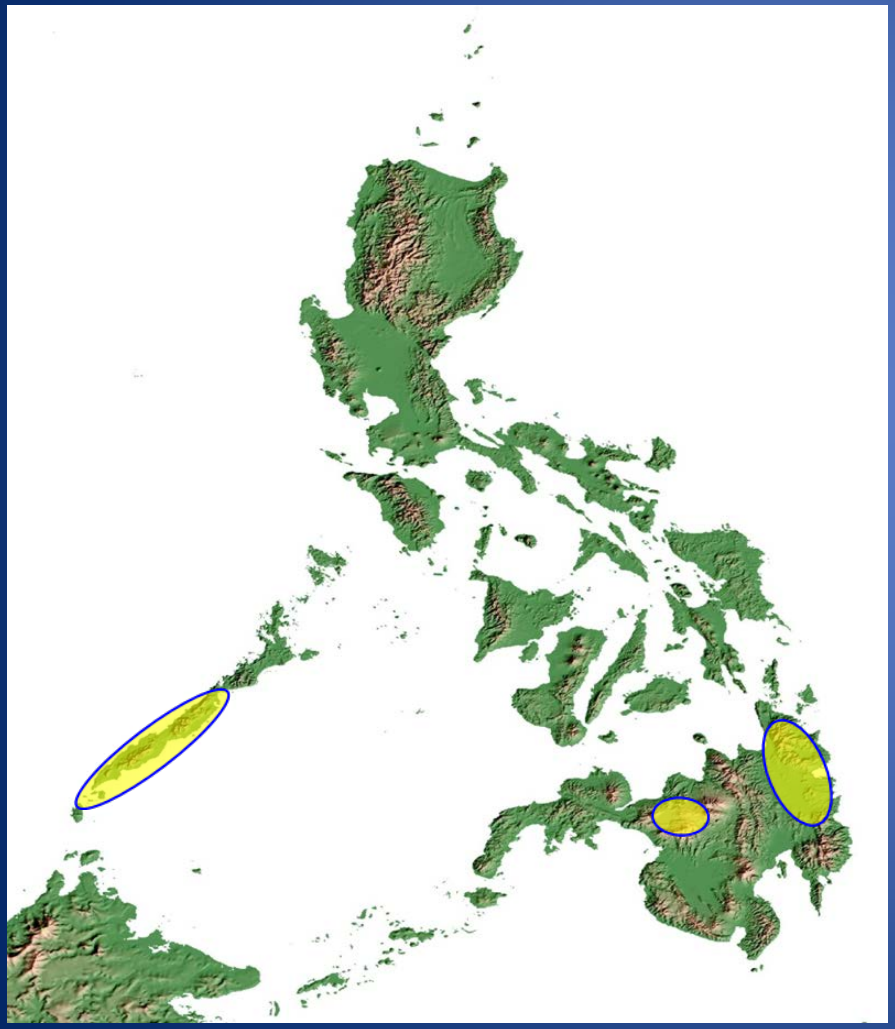
ACTUAL TOTAL =
2.78 M HAS

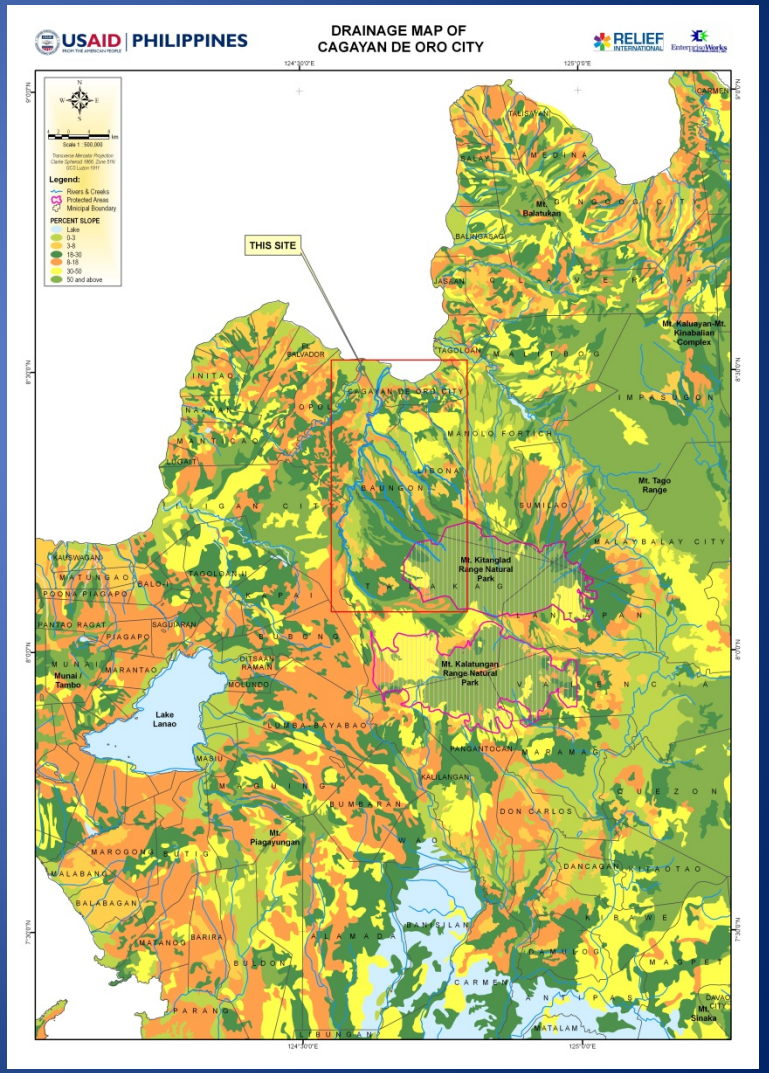
CURRENT REALITY CHECK: EXTENT OF FOREST COVER



ACTUAL TOTAL = 2.78 M HAS or 9% of Philippines land area of 30 M hectares

Landscape Level - Cagayan de Oro, Mt. Kitanglad Mt. Kalatungan (Urban and Rural)





Mindanao Watershed Reforestation Experience

Modeling

- Modeling valuation with multiple ecosystem services
- Involvement of multiple stakeholders – indigenous, community, local government, industry (DOLE, Del Monte, Unifruiti, water boards, etc.)
- $xx - $xx of value per hectare of forest benefits generated; cost to protect and rehabilitate

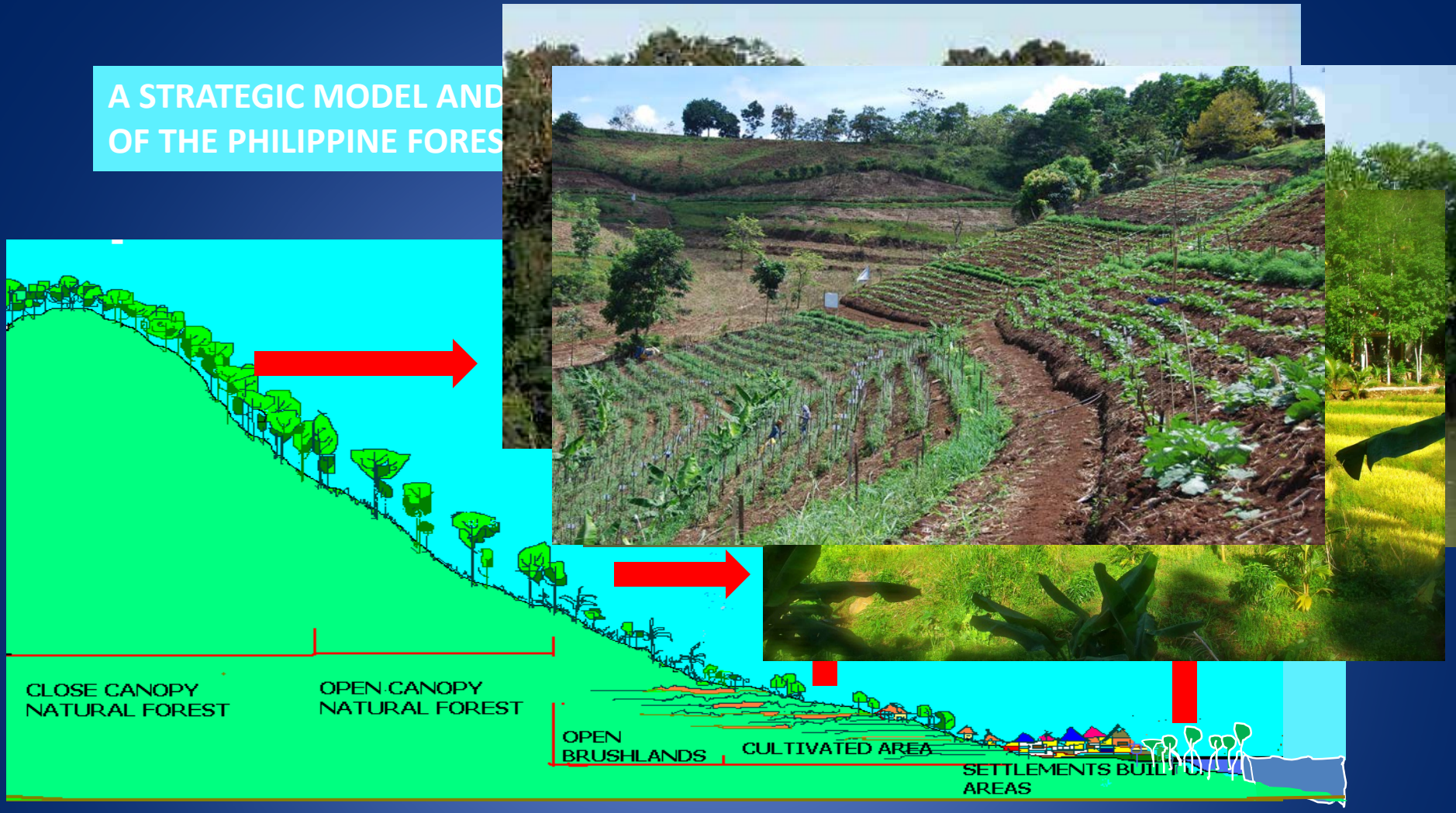
Political

- Regulatory, tax for a given service
- Coordination across jurisdictions
- Political will , accountability and lack of corruption

Market

- True market system
- What buyer is willing to pay and what it costs seller to provide the service (reforestation, protection, lost short-term cash, etc.)
- What forest communities willing to do for what $ and other benefits

A STRATEGIC MODEL AND
OF THE PHILIPPINE FORES



A SUSTAINABLE AND CLIMATE-CHANGE RESILIENT RIDGE-TO-REEF LAND USE MODEL

Sources of Funds
Learning from Costa Rica

- tax on fuel sales
- payments from private sector firms (renewable energy producers (hydro power and water users and bottlers)
- Sale of Certified Tradable Offsets (CTOs) derived from forest ecosystems.

POTENTIAL SOURCES AND AMOUNT THAT CAN BE GENERATED TO SUPPORT THE PES SCHEME IN THE PHILIPPINES

(rough conservative figures subject to further verifications)

SOURCE	TAX PER UNIT	AMOUNT GENERATED PER YEAR
Diesel	.2 ctvs/liter	P3.5 B
Gasoline	.2/liter	P3.0 B
LPG	1/kg	P2.0 B
Hydro	.2/KH	P3.5 B
Electricity	.1/KH	P16 B
Kerosene	.2	P1.5 B
Water use (irrigation, domestic, bottled water	.25/cu m	P3 B
Aviation gas	.25/liter	P1.5
Others		P5 B
TOTAL		**P39 BILLION/YEAR**

Major Multi-fund sources for PES

- **WATER LEVIES**
  (San Carlos City, Oroquieta, *Initao, Misamis Or.)*
- **SUBSIDIES-** Cooperatives Comunity Development Fund (CDO COOPS, MinDA, GIZ for San Carlos)
- **WATERSHED ENVIRONMENT FUND**
  (Watershed Code of Davao City and Butuan City)
- **VOLUNTARY CONTRIBUTIONS**
  - In kind-adopt a refo site (business sector)
- **"COMPACTS"**
  - Private Sector –IP communities MOA
- **WATER EXTRACTION FEES**
  (Bacolod City Production Assessment Charge)
- **CSR-** (Cepalco, Holcim)
- **CARBON OFFSETS -** (STEAG in Mis. Or.)

SOME PES MODALITIES AND FUND SOURCES IN THE PHILIPPINES

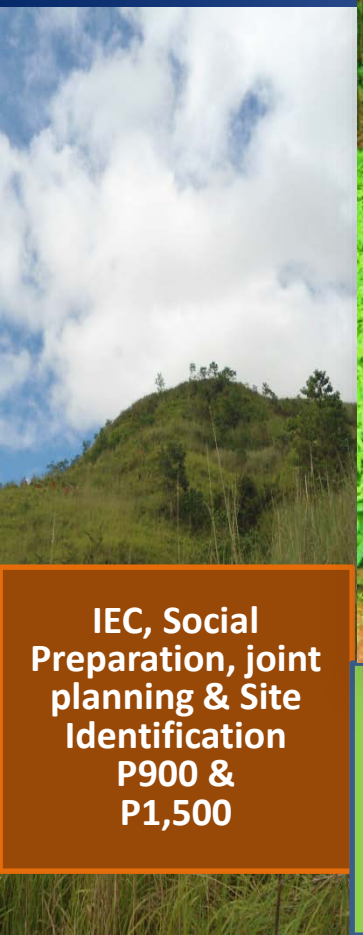
Project/Implementor	PES Funding Source	Enabling Instrument
Mt. Kalatungan PES Project	Buyers [illegible]ment/subsidies	MOA
Bacolod City Water District	[illegible]oduction Assess[illegible]Charge (PAC)	Sec. 39 of PD 198
Higaonon Tribe-Unifrutti PES	Private sector	Sacred Compact, CSR
San Carlos City Green Fund	Envi protection, Water levy, [illegible]en Fund	City Ordinances
RUPES	LGU and downstream user[illegible]S arrangement	MOA?
Initao PES	[illegible]ter levies	Mun. Ordinance
Davao City	Watersh[illegible]vironment Fund	Watershed Code
Butuan City	Watershed Environment Fund	Watershed Code
Oroquieta City	Watershed protection charge	City Ordinance?
Libona PES	Watershed protection charge, CSR	Mun ordinance (in progress)

GREEN PHILIPPINE HIGHWAYS

AMID CLIMATE CHANGE, ROADSIDE PLANTING OR WATERSHED REHABILITATION?

setting planting priority targets and identifying locations of strategic importance

PO's Roles



IEC, Social Preparation, joint planning & Site Identification P900 & P1,500

Seedling Production P6,000

Site Preparation P1,000

Planting (?)

Maintenance and Protection P3,000

Harvesting, Utilization, Re-planting P1,000

National Greening Program (NGP)

COMPARATIVE COST OF AGROFOESTRY ESTABLISHMENT

SOURCE OF ESTIMATES	COST PER HECTARE	NOTES
NGP	PhP13,400	Only 500 trees per hectare density
Kailane Ecofarm	45,000	Mixed forest and agroforestry
Butuan Water District	60,000	Agroforestry (fruit trees)
Hineleban Founation Inc.	63,000	With pioneer succession planting approach and livelihood
The Green Fund of San Carlos City Refo Carlos City	45,150.00	Reference: Engr, Toti Villarante Jr.
Loan II component of JBIC	43,146	Pulhin, 2006
UPLB Prof Rebugio et al estimates,	P 36,000	As of 2006 prices est
PES Mt. Kalatungan Project	70,000	cum livelihood In 5 years

CUSTOMARY BENEFIT SHARING

(Engaging the services of Indigenous Peoples communities and Upland Settlers)

PROTECTION OF WATERSHED → IRRIGATION WATER

SERVICES

unifrutti

SELLER ← PAYMENT OF PhP 1,000 PER HECTARE PER YEAR AS PAYMENT TO OFFSET WATER USED FOR IRRIGATION → BUYER

Conclusions

Actions

- Adoption of science and economic modeling
- Coordination of ground efforts rural and urban
- Commitment to scale; ecosystem function (not just trees planted)
- Assistance at community and local government levels

Progress/What's Working

- More politicians on board ($ and regulations)
- Convening stakeholder at landscape scale; coordination
- Cross visits (Costa Rica and Nepal helpful); scale of forest restoration possible
- Capacity building assistance challenge getting to scale and forest function