



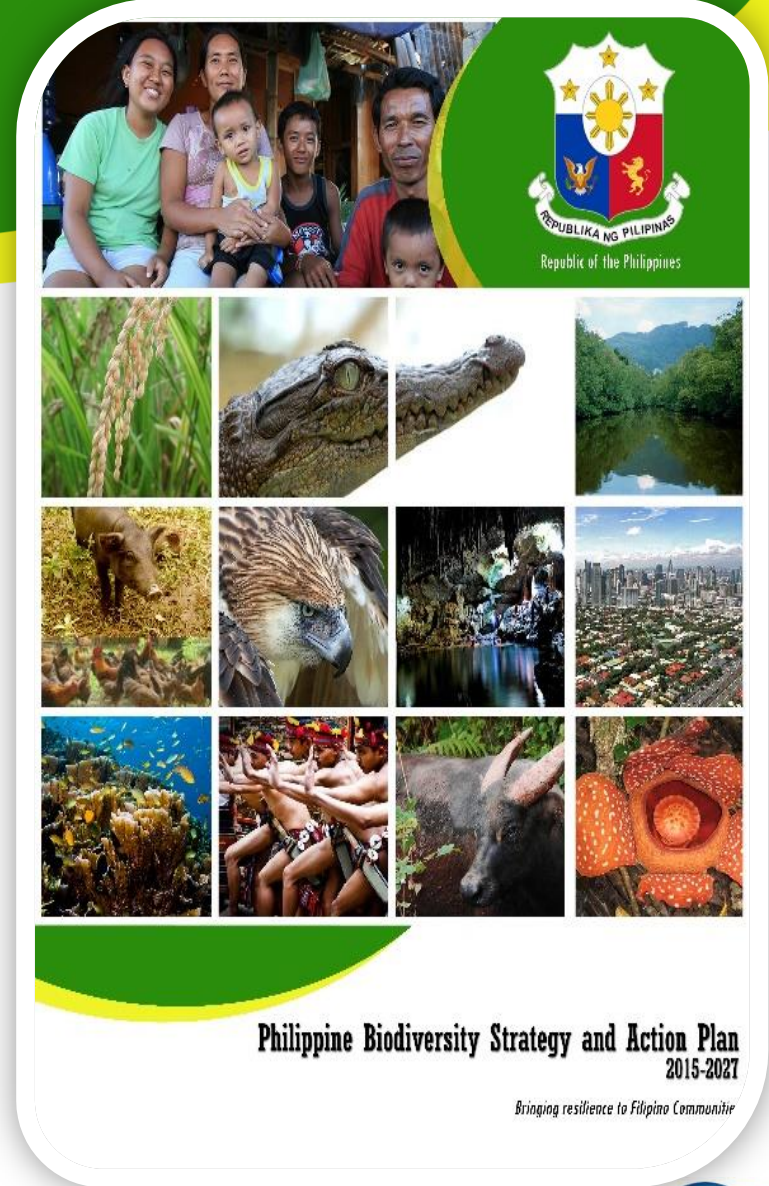
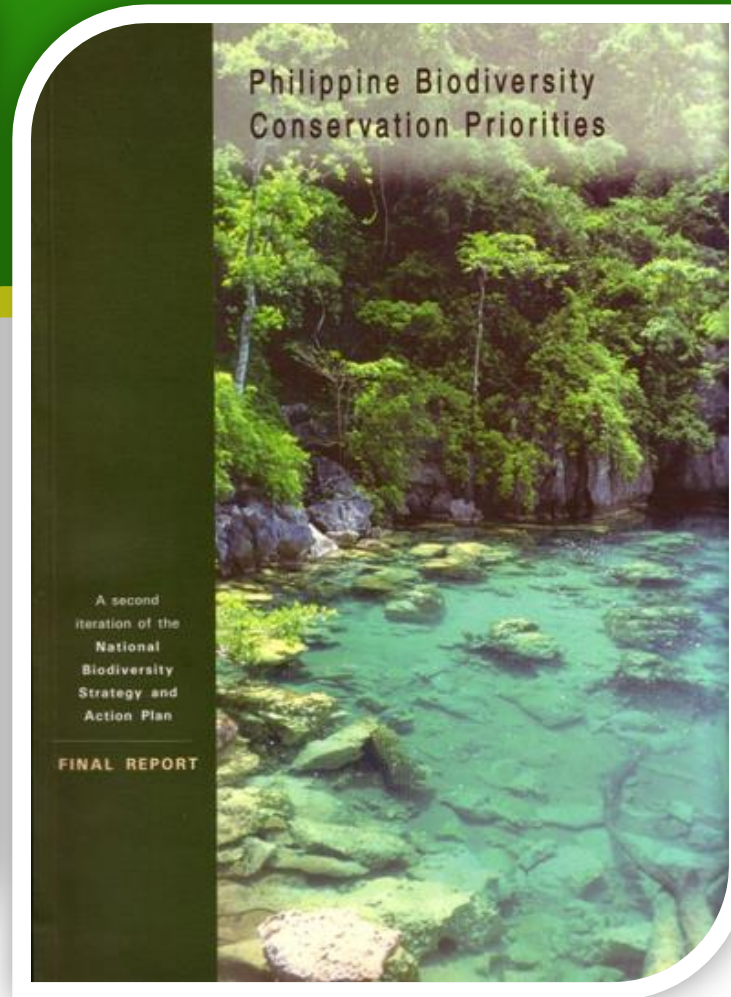
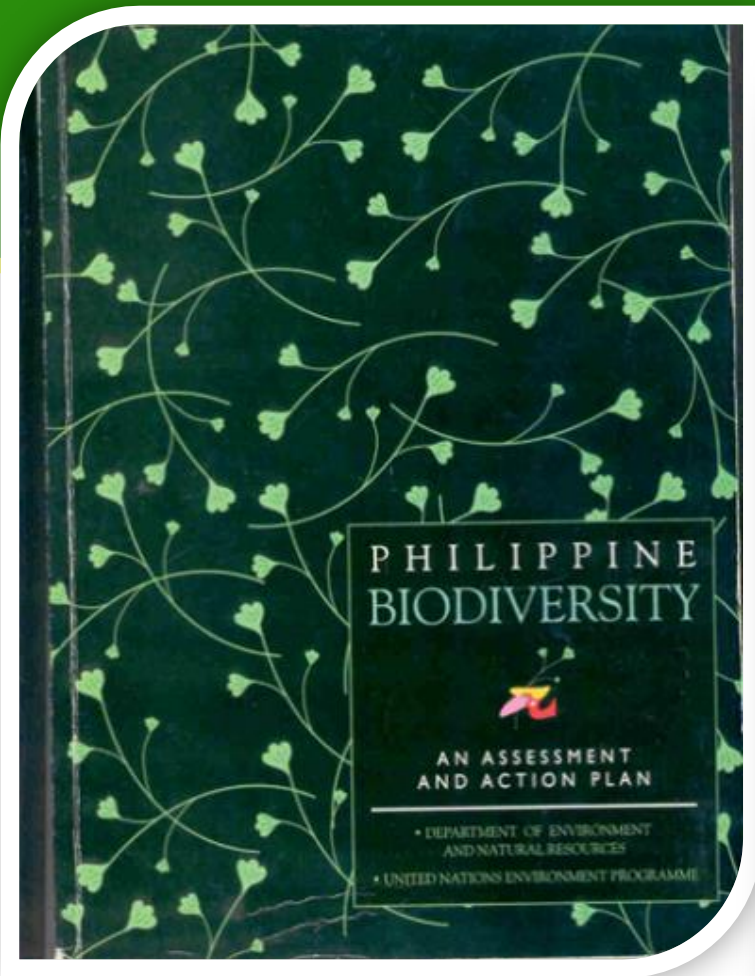
Philippine Biodiversity Strategy and Action Plan (PBSAP)

COSTING PROCESS and EXPERIENCE



- A few notes on the PBSAP
- PBSAP Costing Process (pre-work; workshops)
- Issues encountered in costing
- Computing for Medium Resolution
- Computing for Fine Resolution
- PBSAP Costing Results
- Understanding the Cost of PBSAP
- Next Steps





PBSAP Iterations



3rd PBSAP Iteration



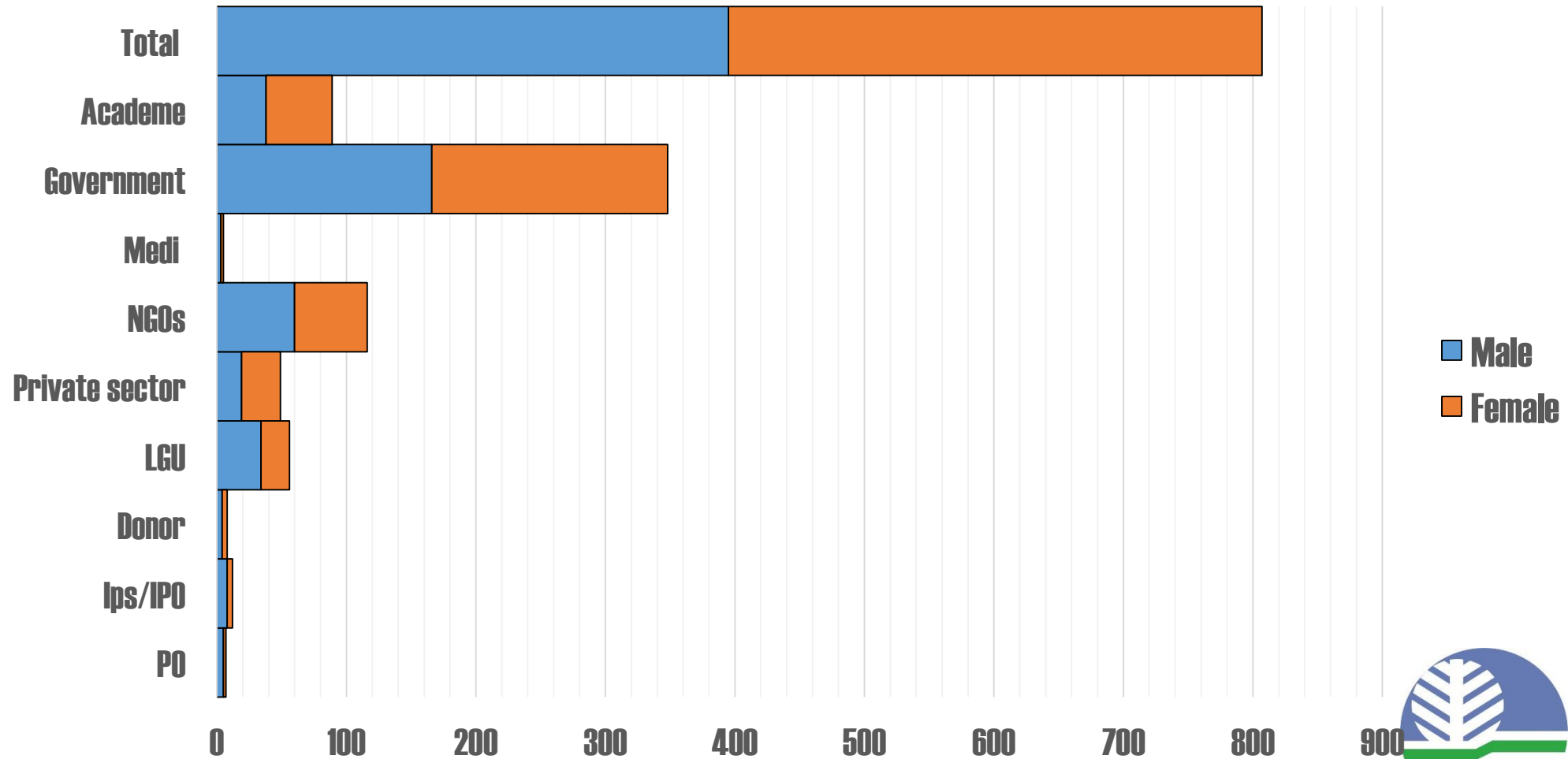
Philippine Biodiversity Strategy and Action Plan
2015-2027

Bringing resilience to Filipino Communities

“..integrate the Philippines’ obligations under the Convention on Biological Diversity (CBD) into its national development and sectoral planning frameworks through a renewed and participative ‘biodiversity planning’ and strategizing process, in a manner that is in line with the global guidance contained in the CBD’s Strategic Plan for 2011-2020.”



Profile of Consultation Participants



Problem Tree Analysis

Invasive Alien Species



Piper adduncum

Habitat loss



www.esp.org.ph/yolanda6.png

Climate Change



<http://issuu.com/upsystem/docs/may2014>

Determine carrying capacity of areas for development /
framework governing sustainable consumption and production
update info on known and unknown threatened
species and their conservation status
Lack of baseline on population of BD re
Comprehensive updated information to inform PA de
KBAs fulfill min requirements of identifying
areas as PA candidates but inadequate
as comprehensive baseline
National list of PAs not quite comprehens
newly declared PAs, local conservation in
information on impacts of actions done to prevent species
extinctions
Research

Pollution



affleap.com/public-education-is-the
alleviate-our-environmental-woes/

Overexploitation



a.worldbulletin.net/250x190/2017/05/25/fishes.jpg
terms of use of exotics
Proliferation of species not considered IAS yet but has some IAS
traits pending assessment
Unclear criteria standards and assessments

search
Drivers of BD Change PBSAP
management
funding
element

Overexploitation & Unsustainable use

reclamation materials are taken from the
mountains and sometimes brought to sites through the sea
over fishing and destructive fishing
Inappropriate agriculture practices
overexploitation of NTFP

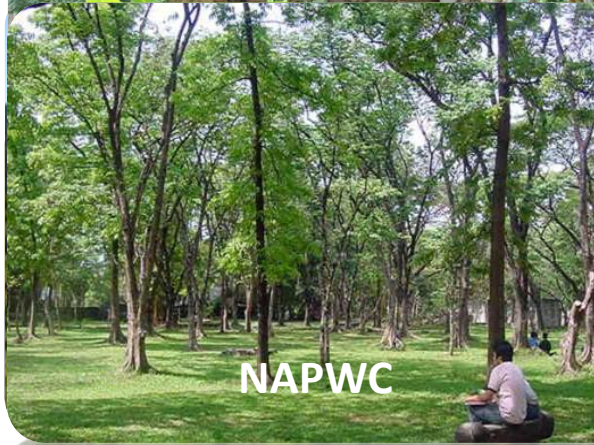
Land Degradation

Illegal reclamation of lakeshore
Destructive fishing

Deforestation

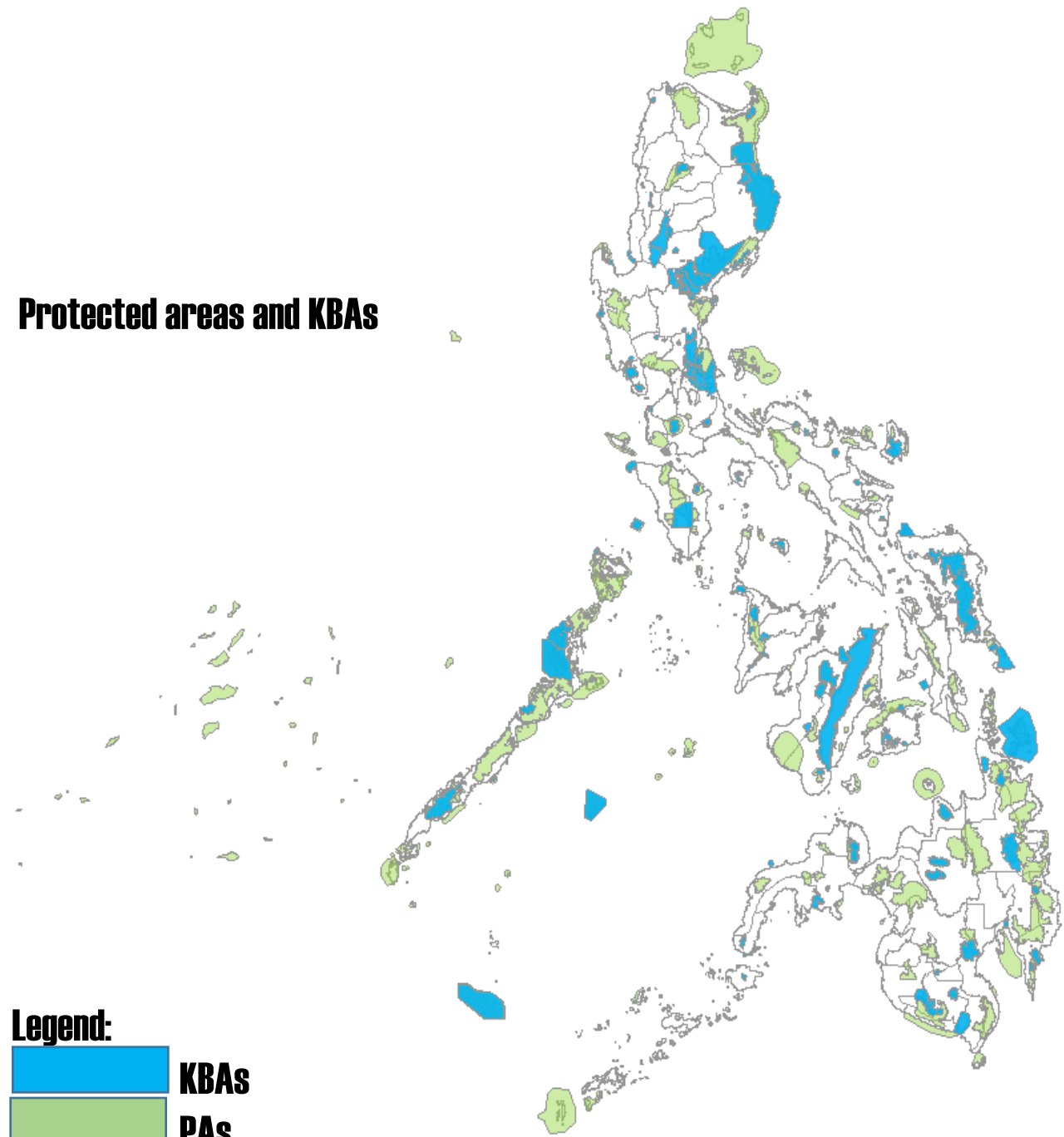
Silt

Span of interventions on the ground



Protected areas and KBAs

Legend:



PBSAP Framework: INTERVENTIONS

Human Well-being

DIRECT

Restoration of
ecosystem
functions

Promotion of
Biodiversity-
friendly
livelihoods

Strengthening
law
enforcement

ENABLING

Communicatio
n, Education
and Public
Awareness
(CEPA)

Capacity
Development
for Biodiversity
Management

Biodiversity
Conservation-
related
Research

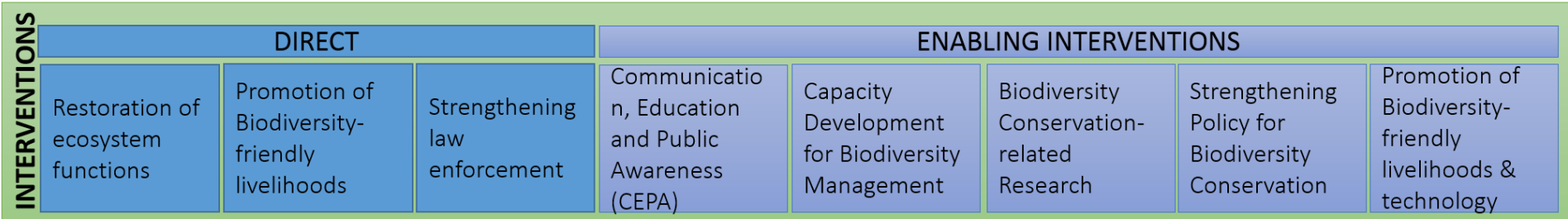
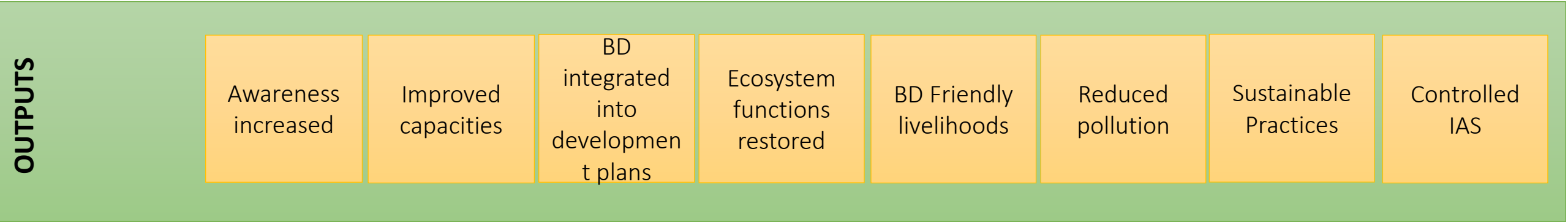
Strengthening
Policy for
Biodiversity
Conservation

Promotion of
Biodiversity-
friendly
livelihoods &
technology



PBSAP Framework: OUTPUT

Human Well-being



PBSAP Framework: OUTCOME

Human Well-being

OUTCOMES

Improved
Biodiversity
Status

Enhanced
Ecosystem
Services

OUTPUTS

Awareness
increased

Capacity
enhanced

BD
integrated
into
developmen
t plans

Ecosystem
functions
restored

BD Friendly
livelihoods &
technology

Reduced
pollution

Sustainable
Practices

Controlled
IAS

INTERVENTIONS

DIRECT

ENABLING INTERVENTIONS

Restoration of
ecosystem
functions

Promotion of
Biodiversity-
friendly
livelihoods

Strengthening
law
enforcement

Communicatio
n, Education
and Public
Awareness
(CEPA)

Capacity
Development
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Management

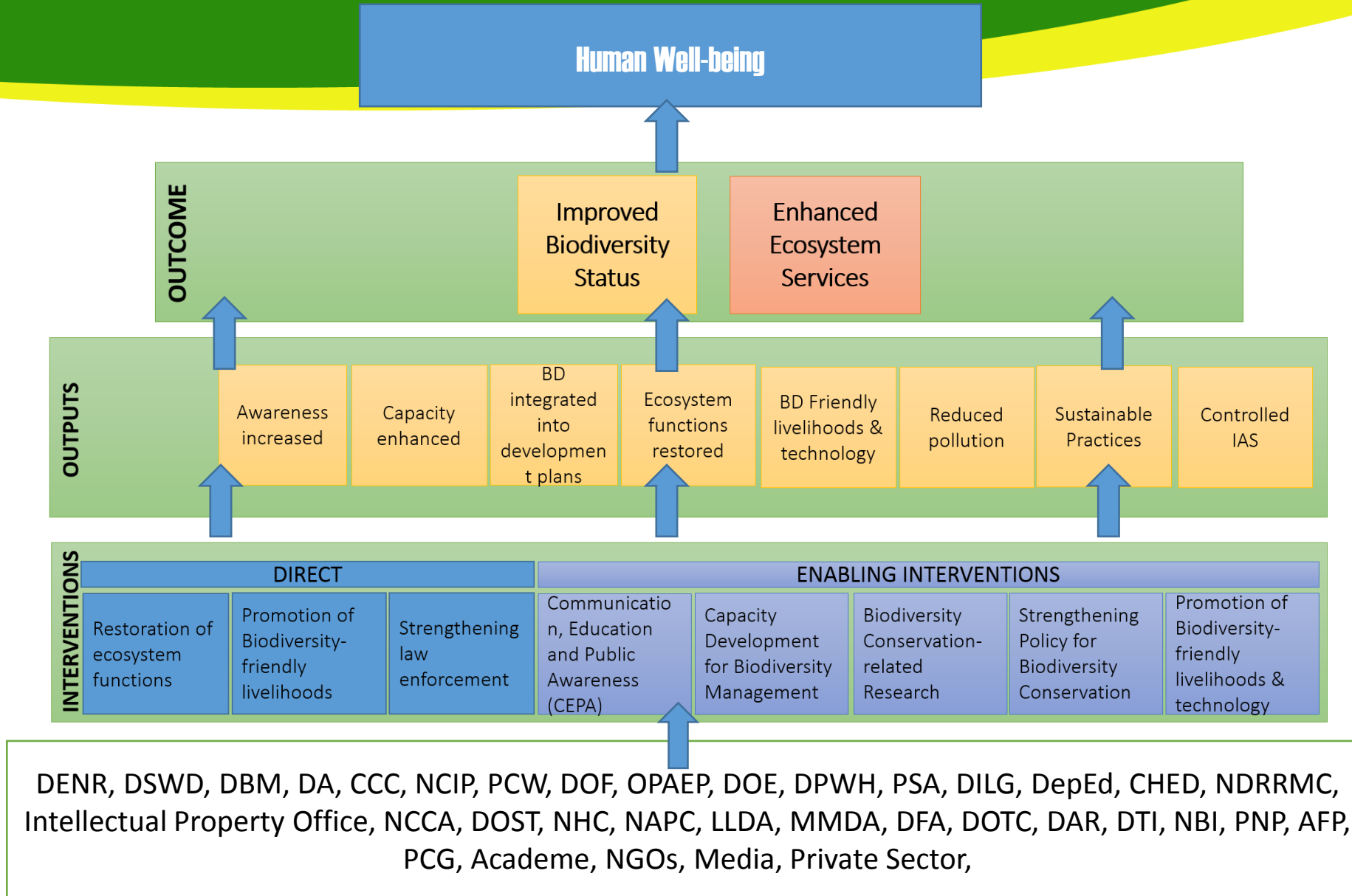
Biodiversity
Conservation-
related
Research

Strengthening
Policy for
Biodiversity
Conservation

Promotion of
Biodiversity-
friendly
livelihoods &
technology



PBSAP Framework: GOAL

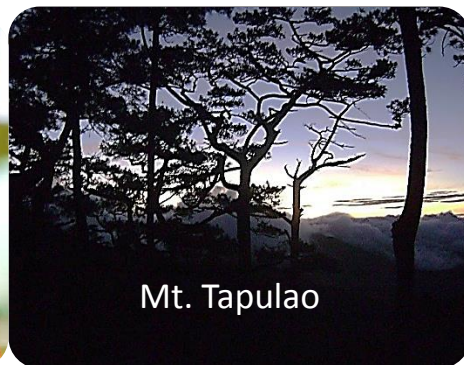




Upper Marikina Protected
Landscape



Philippine hanging
parakeet



Mt. Tapulao



NAPWC

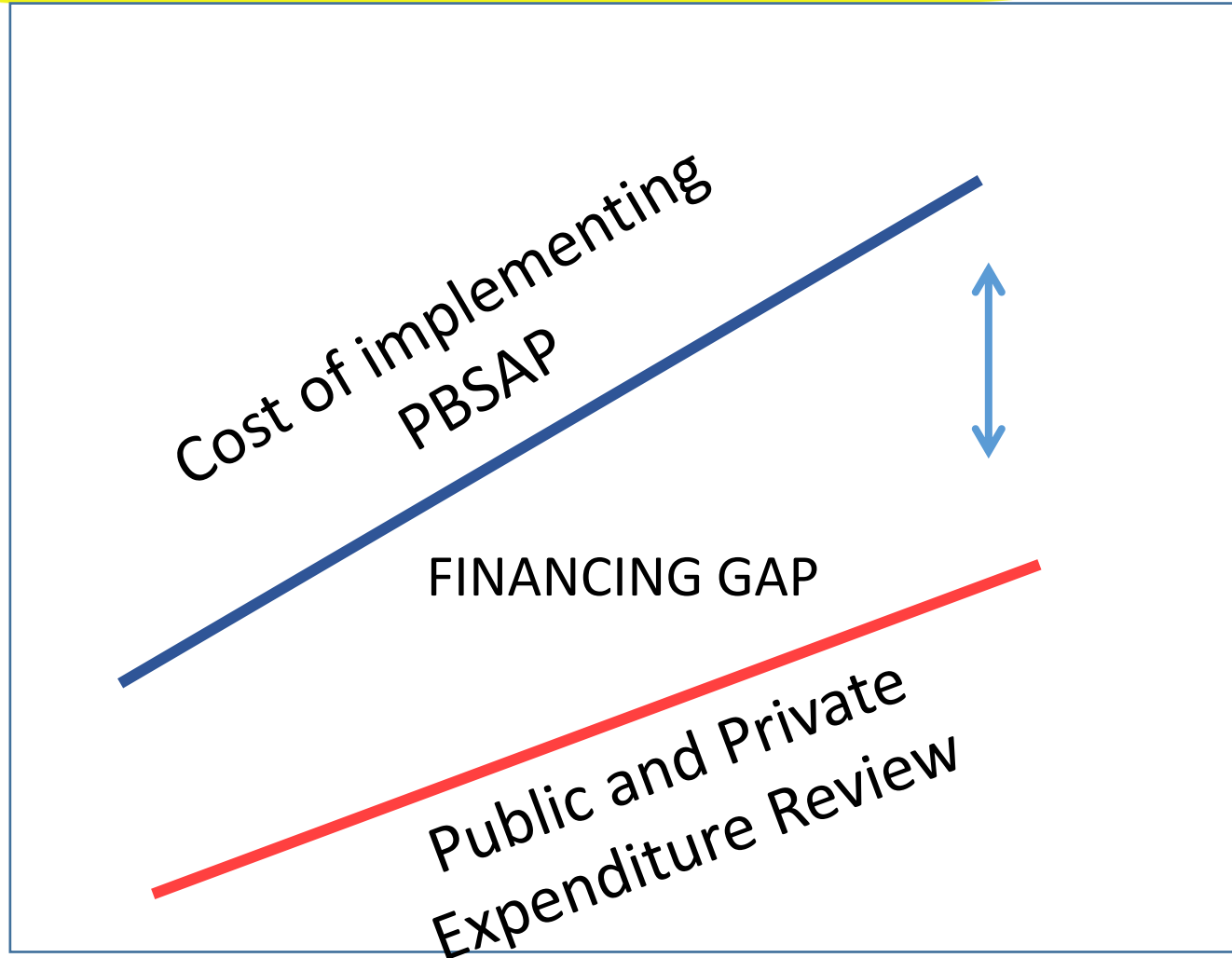


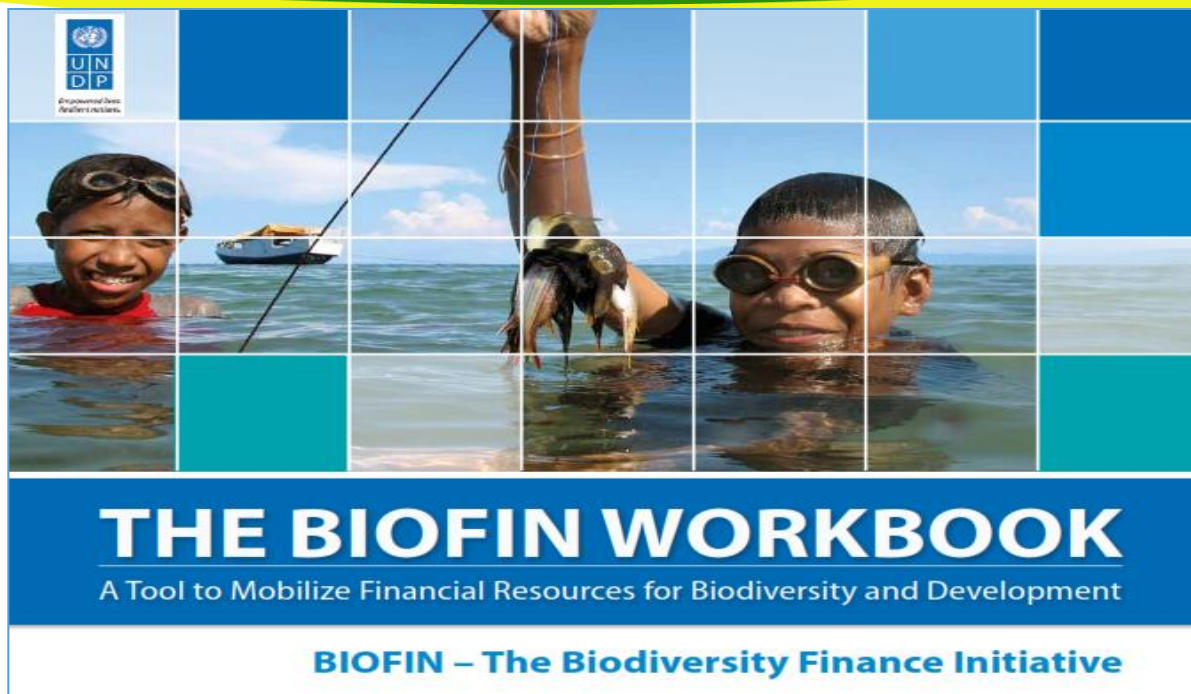
Philippine brown deer

PBSAP Costing



PBSAP Costing





Workbook 2 – Cost of Implementing NBSAP

Costs of Actions and Strategies

Financial Gaps



PBSAP Costing Process

Level 1. Coarse resolution

- Pre-work prior to Costing workshop
- Estimate of base-year cost of each strategy and actions
- Estimation of one-time and recurring costs according to the period of PBSAP from 2015-2028
- Estimate high and low ranges (apply +15%)
- Conduct of costing workshop participated by government, CSO, and private sector

Level 2. Medium Resolution

- Reformatting of costing templates
- Identify one time and recurring costs from 2015-2027
- More in-depth calculation based on the recommendations from the Costing Workshop
- Estimates for low and high ranges
- Presentation of results to BMB Senior Staff
- Apply realistic budgetary information

Level 3. Fine Resolution

- Recalculation of cost according to the recommendations of BMB Senior Staff (e.g. new cost assumptions)
- Apply planning period from 2015 to 2028
- Analyze Aichi targets assigned to each thematic area and action, and reclassify actions tagged with Targets 5 to 10 from Biodiversity Mainstreaming to Protection Strategies



The Pre-Work

Analysis of BIOFIN Methodology

Analysis of PBSAP

Designing of Costing Templates

Tagging strategies w/ Aichi Targets

Desk Research

Formulate Cost Assumptions and Activities

Workshop methodology



Issues Encountered/ Limitations in Costing

- Most targets and indicators do not have numerical equivalent (e.g. number of pilot sites; number of community-based programs; target number of plans)
- Assumptions need to be more precise vis-à-vis the targets and indicators
- Duplication of activities in the PBSAP (e.g. Database, Policy)
- Tendency to cost higher or lower



What we asked from the participants

Validate the activities in each of the thematic area

Discuss what are the realistic targets

Suggest activities to complement the actions

Elicit possible sources of information where to derive the cost assumptions

Suggest on the amount of cost per activity, equipment, supplies, and materials



Recommendations from Workshop Participants and the Biodiversity Bureau

- For costing purposes, avoid double counting – review the direct and supporting actions and lump duplicating actions/ activities
- Use standard unit costs for personnel, travel, meetings, consultants
- Identify priority areas – in the case of Inland wetlands, the participants identified 14 sites
- Use of Philippine Peso as the currency for costing. Use the US dollars for reporting purposes



Recommendations from BMB

- Need to revisit and factor in the maintenance cost for all capital outlay (e.g. infrastructure)
- Revisit the assumptions – some costs are undervalued
- Review target areas/ sites
- Review the assumptions used for inland wetlands, and coastal and marine
- In the analysis, consider biodiversity loss vis-à-vis the cost to improve its state or even revert back to former condition
- Review Aichi Targets assigned per thematic area especially Biodiversity Mainstreaming and those tagged with Targets 5 to 10



Examples of adjustments made

- Personnel cost and person-months to selected direct and supporting actions (i.e. ABS, Caves and Cave systems, Coastal and Marine, Forestry, IAS, & Urban Biodiversity)
- Increased the unit cost for reforestation activities (from PhP25,000 per hectare to PhP36,000)
- Increased the number of priority sites (e.g. For Inland wetlands – from 14 to 36; and 144 cities for urban biodiversity)
- Applied 15% of the total cost for capital outlay as annual maintenance cost for infrastructure and facilities

Modifications made from the BIOFIN Workbook

- Use of the line items/ cost category of the Commission on Audit
- Costing period – 2015 to 2028
- Classified Targets 5 to 10 under Sustainable Use Strategies
- Use of +15% factor for high range except for personnel
- Use of +5% growth factor annually for recurring costs
- Use of PhP45 per 1 USD as the standard exchange rate





PBSAP

Cost of
Actions

&
Strategies



Cost of Actions and Strategies

Summary of Cost of Strategies
per Thematic Area

Timeline Cost

Summary of Cost according to Aichi Targets

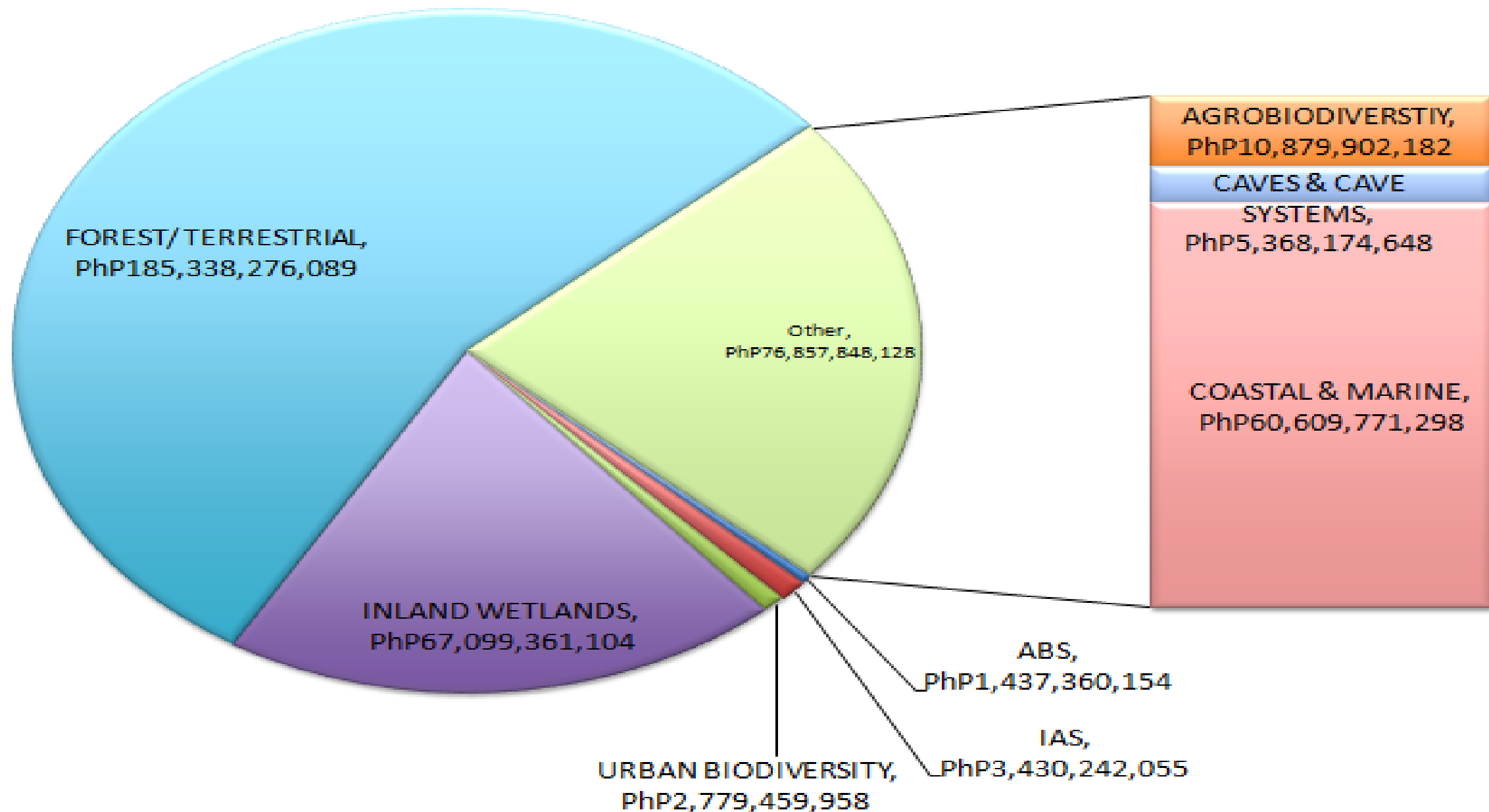


Summary of Cost per Thematic Area

THEMATIC AREA	LOW		HIGH		PERCENTAGE
	PhP	USD	PhP	USD	
ABS	1,437,360,154	31,941,337	1,822,595,204	40,502,116	0.4%
IAS	3,430,242,055	76,227,601	4,190,651,067	93,125,579	1.0%
URBAN BIODIVERSITY	2,779,459,958	61,765,777	3,726,644,438	82,814,321	0.8%
INLAND WETLANDS	67,099,361,104	1,491,096,913	77,745,127,907	1,727,669,509	19.9%
FOREST/ TERRESTRIAL	185,338,276,089	4,118,628,358	214,078,338,789	4,757,296,418	55.0%
AGROBIODIVERSTIY	10,879,902,182	241,775,604	13,091,891,532	290,930,923	3.2%
CAVES & CAVE SYSTEMS	5,368,174,648	119,292,770	7,626,725,164	169,482,781	1.6%
COASTAL & MARINE	60,609,771,298	1,346,883,807	69,890,187,089	1,553,115,269	18.0%
TOTAL	336,942,547,489	7,487,612,166	392,172,161,190	8,714,936,915	100%

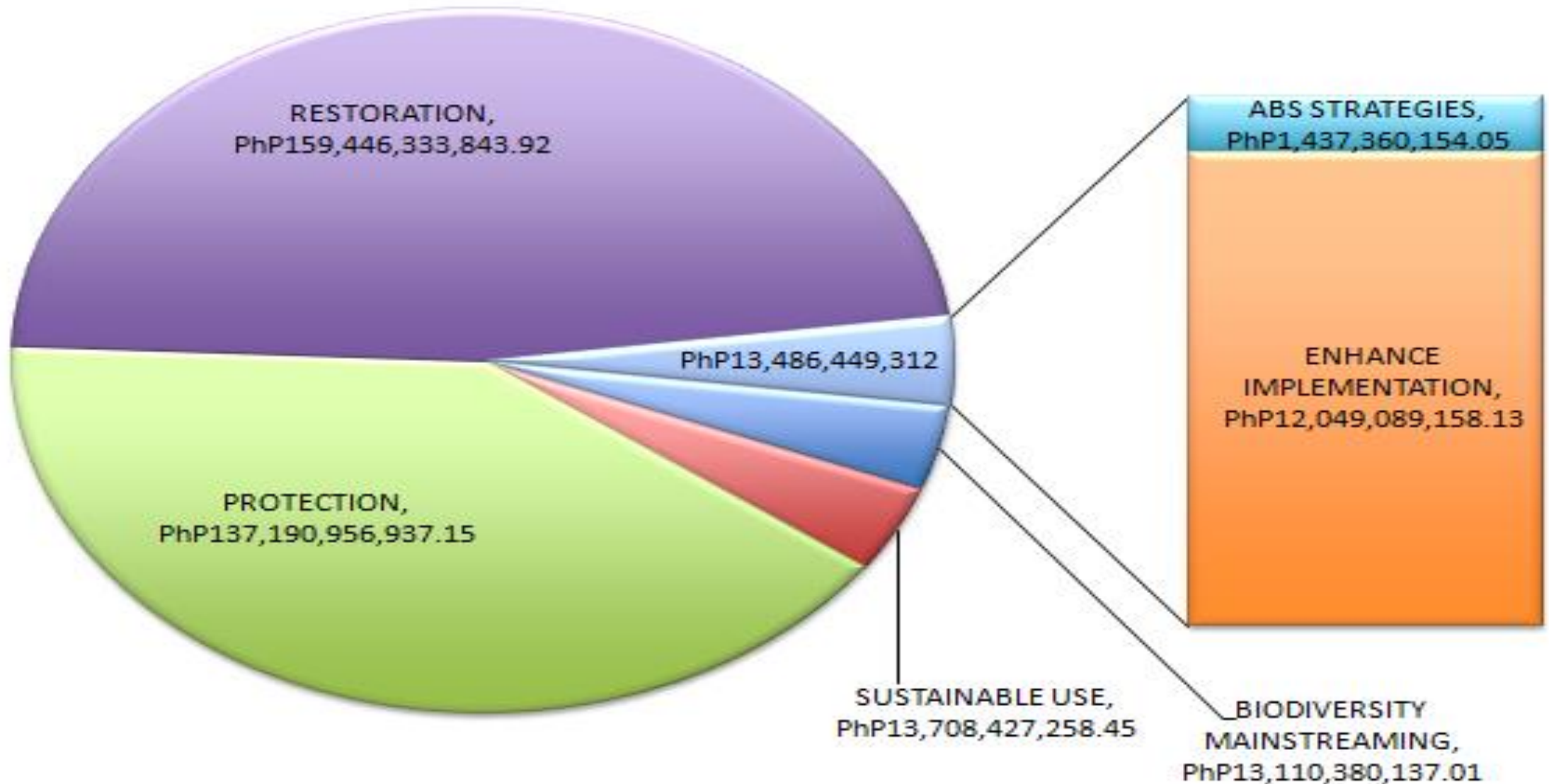


Estimated Cost of Implementing PBSAP

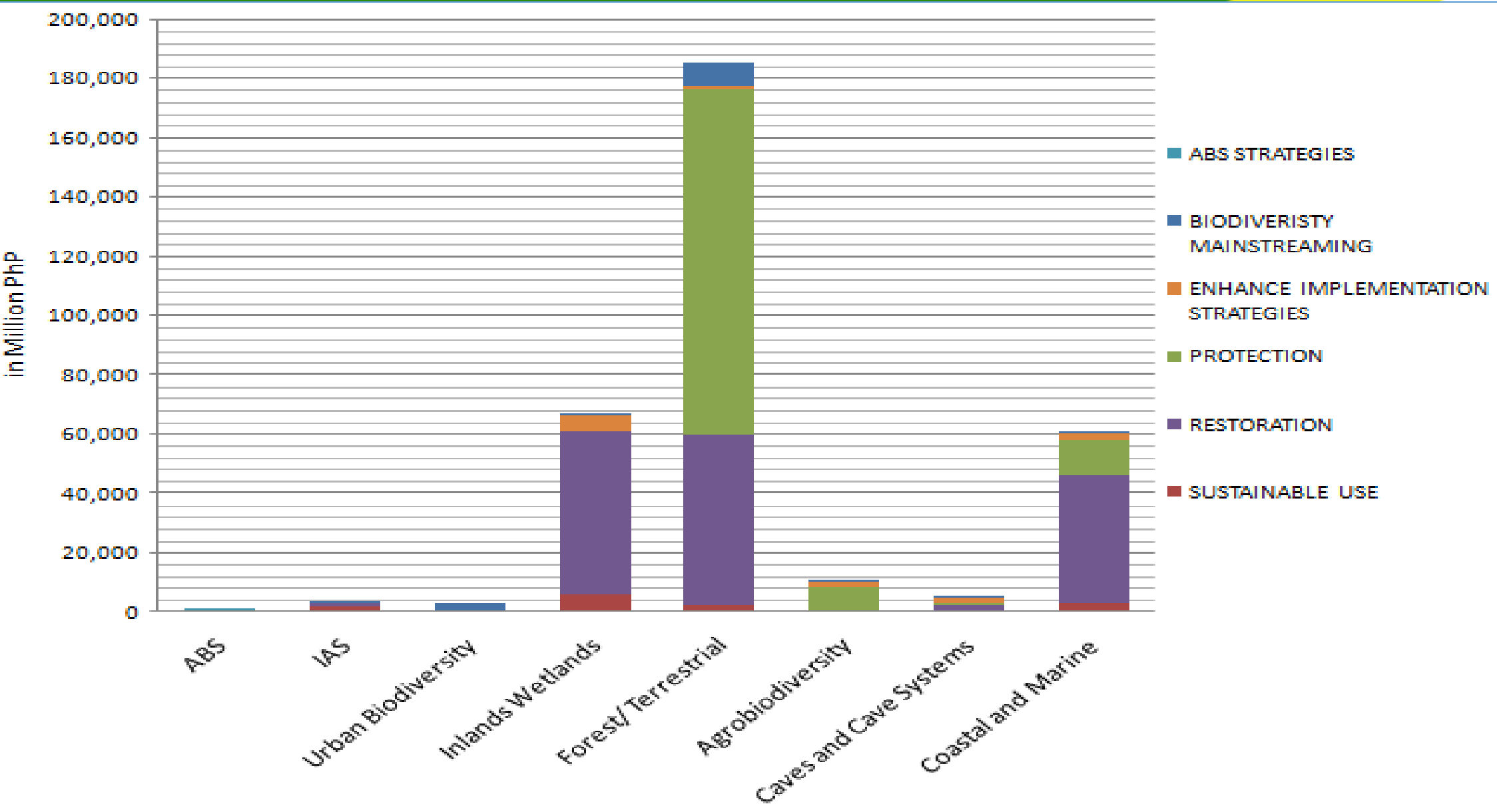


Estimated Cost of Implementing PBSAP

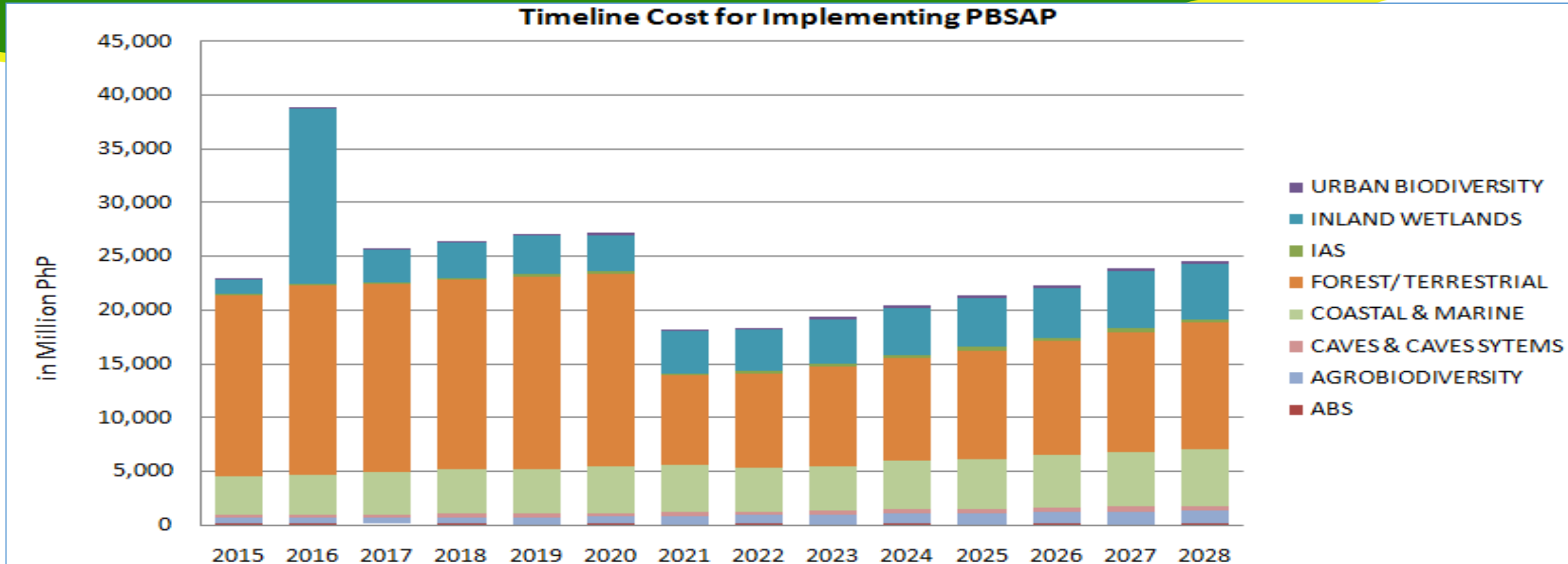
Estimated Cost of PBSAP According to Aichi Targets (Low)



Estimated Cost of Implementing PBSAP



Estimated Cost of Implementing PBSAP



An average of **PhP24 Billion pesos** (USD 534 million) is required on a yearly basis from 2015-2028 (Low Scenario)



Estimated Cost of Implementing PBSAP

THEMATIC AREA	Ave. Annual Cost (Low)	Ave. Annual Cost (High)
	PhP	PhP
ABS	102,668,582	130,185,372
IAS	245,017,290	299,332,219
URBAN BIODIVERSITY	198,532,854	266,188,888
INLAND WETLANDS	4,792,811,507	5,553,223,422
FOREST/ TERRESTRIAL	13,238,448,292	15,291,309,913
AGROBIODIVERSITY	777,135,870	935,135,109
CAVES & CAVES SYTEMS	383,441,046	544,766,083
COASTAL & MARINE	4,329,269,378	4,992,156,221
Ave. Annual Cost, PhP	24,067,324,821	28,012,297,228

Estimated Cost of Implementing PBSAP

AICHI TARGETS	Ave. Annual Cost (Low)	Ave. Annual Cost (High)
	PhP	PhP
BIODIVERSITY MAINSTREAMING	936,455,724	1,239,129,102
SUSTAINABLE USE	979,173,376	1,311,443,293
PROTECTION	9,799,354,067	11,193,909,382
RESTORATION	11,389,023,846	13,077,953,784
ABS STRATEGIES	102,668,582	130,185,372
ENHANCE IMPLEMENTATION	860,649,226	1,059,676,295
Ave. Annual Cost, PhP	24,067,324,821	28,012,297,228



Cost of Selected Actions per Thematic Area

COASTAL AND MARINE	TOTAL (PhP)	AVE. ANNUAL COST (PhP)
Restore/rehabilitate degraded coastal and marine ecosystems using site-appropriate methods (R)	42,233,456,526	3,016,675,466
Increase coverage of effectively managed MPAs/sanctuaries and network of PAs across marine habitats such as coral reefs, mangroves and seagrass beds based on the KBA identification process (P)	11,323,879,752	808,848,554
Build capacity of LGUs to Implement ecosystems-based climate change adaptation (SU)	20,079,654	1,434,261



Cost of Selected Actions per Thematic Area

FOREST/TERRESTIRAL	TOTAL (PhP)	AVE. ANNUAL COST (PhP)
Ensure implementation of priority legislation and policies in PAs and other critical habitats (P)	60,680,842,364	4,334,345,883
Restore degraded habitats, where technically appropriate (R)	57,501,911,324	4,107,279,380
Formulate and implement an expanded and gender-sensitive national program for protection and management of PAs (P)	41,471,879,070	2,962,277,076



Cost of Selected Actions per Thematic Area

URBAN BIODIVERSITY	TOTAL (PhP)	AVE. ANNUAL COST (PhP)
Establish models of urban biodiversity conservation and enhancement as part of overall local environmental governance (BM)	2,631,431,490	187,959,392
Establish a City Biodiversity Index adapted to Philippine conditions (based on agreed upon international framework e.g. Singapore City Biodiv index) to guide LGU actions	148,028,467	10,573,462



Understanding

the cost of

PBSAP



Why invest in biodiversity?

Biodiversity Finance Gap

NBSAP Cost Country Comparison

Preliminary analysis of the financing gap of the Philippines



Poaching: More fun in the Philippines?



SEIZED BOATS. A Chinese fisherman sits atop one of the 3 seized Chinese fishing boats at the military port in southern Zamboanga City in March 2007. AFP PHOTO/THERENCE KOH

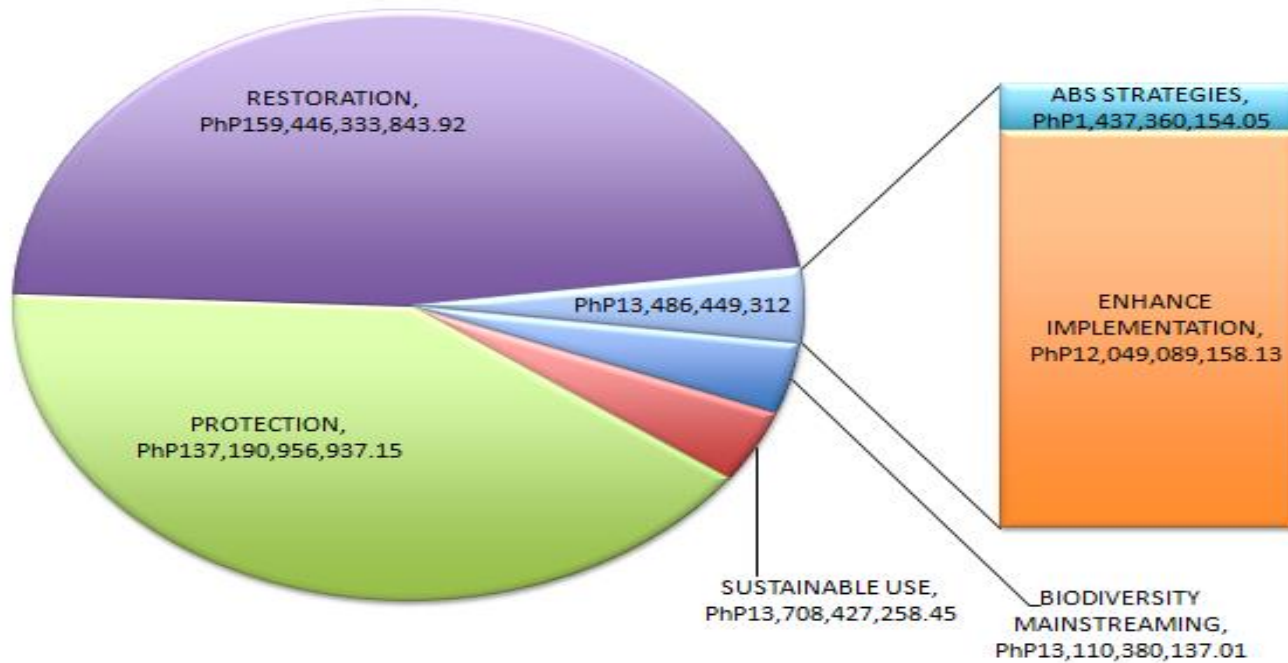
In Region 2 alone, the Bureau of Fisheries and Aquatic Resources (BFAR) estimates an annual economic loss of USD37,000 to USD75,000 per foreign fishing vessel

Estimated annual loss from IUUF USD 1 billion dollars (Alinio, 2002).

This does not include yet the value of losses from inland wetlands, agriculture and forest resources.

Why invest in biodiversity?

Estimated Cost of PBSAP According to Aichi Targets (Low)



Total cost for Protection measures from 2015-2028 is estimated at USD3 billion or \$217 million annually.

Protection measures can result to preventing an annual loss USD 1 billion dollars from IUUF alone





BIODIVERSITY FINANCE GAP



The High Level Panel on Biodiversity Finance estimated a cost of \$150 – 450 billion (PhP6.7-20 Trillion) annually through 2020 to achieve the Aichi Targets.

ONLY \$3 -6 billion (PhP135-270 billion) per year is the ODA for biodiversity = **1.3%**

By 2020, the Philippines **should have financed a total of USD3.4 billion of PBSAP activities** or 2% of the predicted total annual global budget. And additional USD3.7 billion from 2021 to 2028





AGENCY	2013 NEP (PhP)	USD
DENR	17,963,175,000.00	399,181,667
DA	55,287,340,000.00	1,228,607,556
Total	73,250,515,000	1,627,789,222

BUREAU	2013 NEP (PhP)	USD
BMB	604,000,000	13,422,222
BFAR	4,609,672,000	102,437,156
Total	5,213,672,000	115,859,378





BUREAU	2013 NEP (PhP)	USD
BMB	604,000,000	13,422,222
BFAR	1,152,418,000	25,609,289
Foreign Assisted Projects	1,690,989,000	37,577,533
Total	1,756,418,000	39,031,511

Assume:

BMB = 100%

BFAR = 25%

FAPs = 100%



In summary

	Global	Philippines	Remarks
Biodiversity Financing	PhP6.7-20 Trillion	PhP 336 billion	Cost of PBSAP is ONLY 1.7% of the needed global biodiversity financing
ODA/ Foreign Assisted Projects	PhP135-270 billion	PhP1.69 billion	FAPs is ONLY 1.25% of the total global ODA
Government Funds		PhP 1.76 billion	Philippines need to raise at least 93% or PhP22 billion (annually) to support implementation of PBSAP

Huge gap based on estimated PBSAP funding requirements



What we learned from the Costing Exercise

- Using government accounting structures facilitated incorporation of some activities into annual budgets
- Demand for valuation information increased
- Costing allowed for an iterative process by which the NBSAP was improved
- Engagement of key sectors, including non traditional partners in BD conservation enabled identification of possible internal funding windows for the PBSAP, generate more support and a lot more.



Next Steps

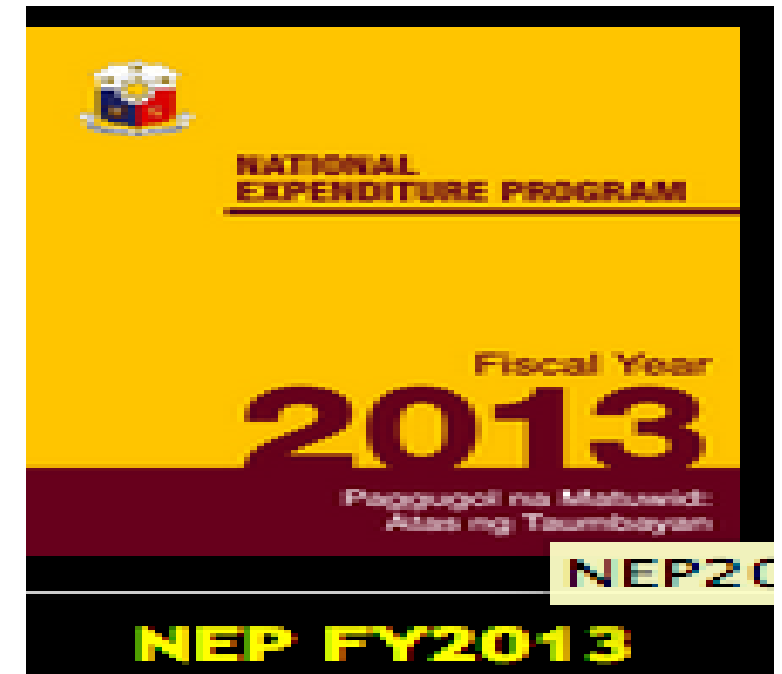
- Determine the actual financing gap (after completion of the PPER)
- Prioritization of strategies
- Drafting of the resource mobilization plan



General Appropriations Act FY 2013

**Republic of the Philippines
Republic Act No. 10352
General Appropriations Act
Fiscal Year 2013**

- 70 public sector agencies including specific bureaus
- 2 provinces (Cebu and Palawan); 2 municipalities (San Vicente and Alcoy); 1 City (Cebu)
- NGOs
- Corporations



Public and Private expenditure review





Thank you!

Biodiversity Management Bureau
Department of Environment and Natural Resources
Ninoy Aquino Parks and Wildlife Center
Diliman, 1100 Quezon City
T. +(63 2) 9246031-35
F. +(63 2) 9240109
www.bmb.gov.ph
bmb@bmb.gov.ph

