



Forest Development Planning for Climate Change Resilience and Poverty Reduction

**(PROFOR: Assessing the Role of forests in reducing poverty
and enhancing climate resilience in the Philippines)**

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Outline of Presentation

- I. Natural Wealth of the Philippines
- II. 2011-2016 Philippine Development Plan (PDP):
Chapter 9 on Sustainable and climate – resilient
ENR
- III. Natural Capital Accounting (NCA)
- IV. Phil-WAVES vis-à-vis PROFOR
- V. Utility of NCA to Policy, Planning and Programming
Processes: Results of Phil-WAVES and PROFOR
- VI. Moving Forward on NCA

I. Natural Wealth of the Philippines

\$ per capita (2010 estimates)

Total Wealth 34,172

Produced Capital 5,049

Natural Capital 6,337

Intangible Capital 23,090

Net Foreign Assets (305)

Source: World Bank interim
estimates, 2014

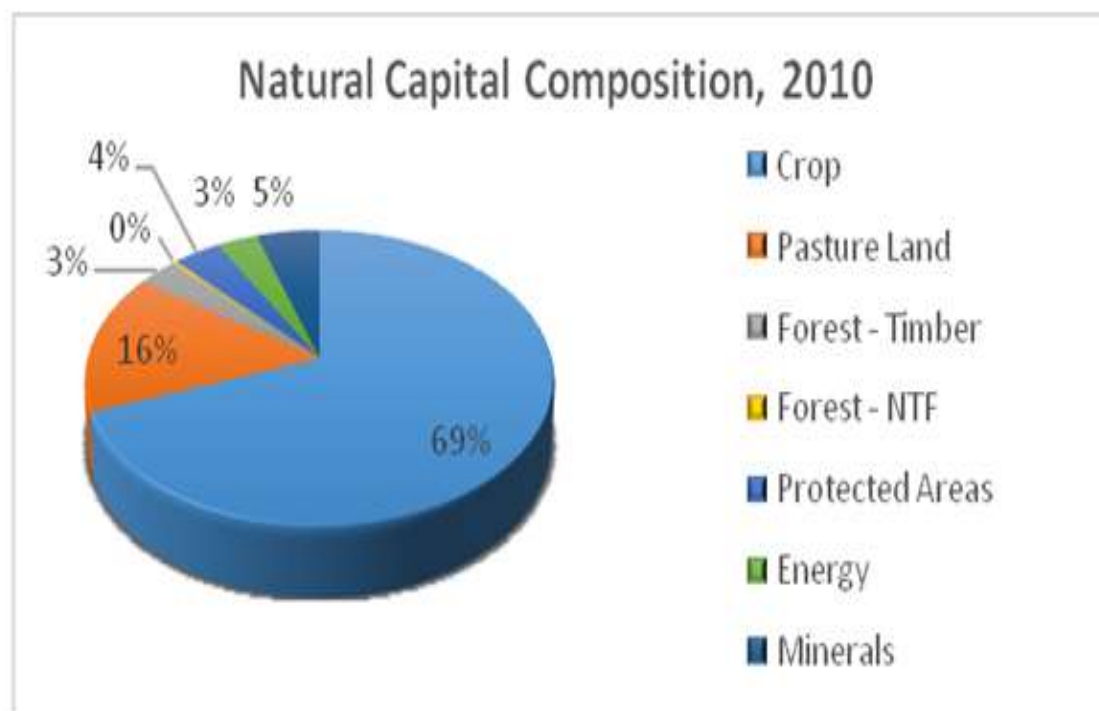


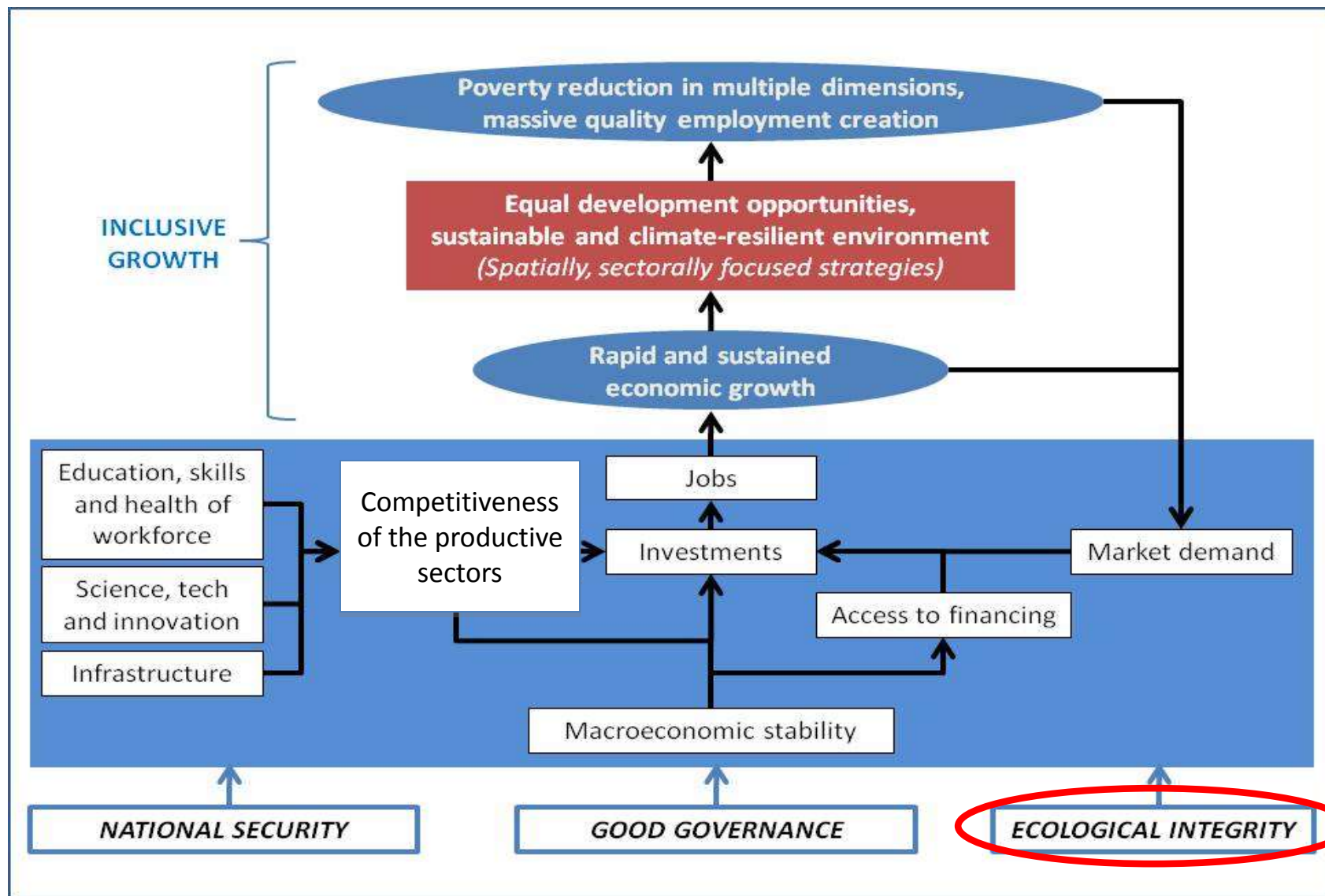
Figure 1. Wealth of the Philippines (\$ per capita, 2010 estimates)

II. 2011-2016 PDP Midterm Update



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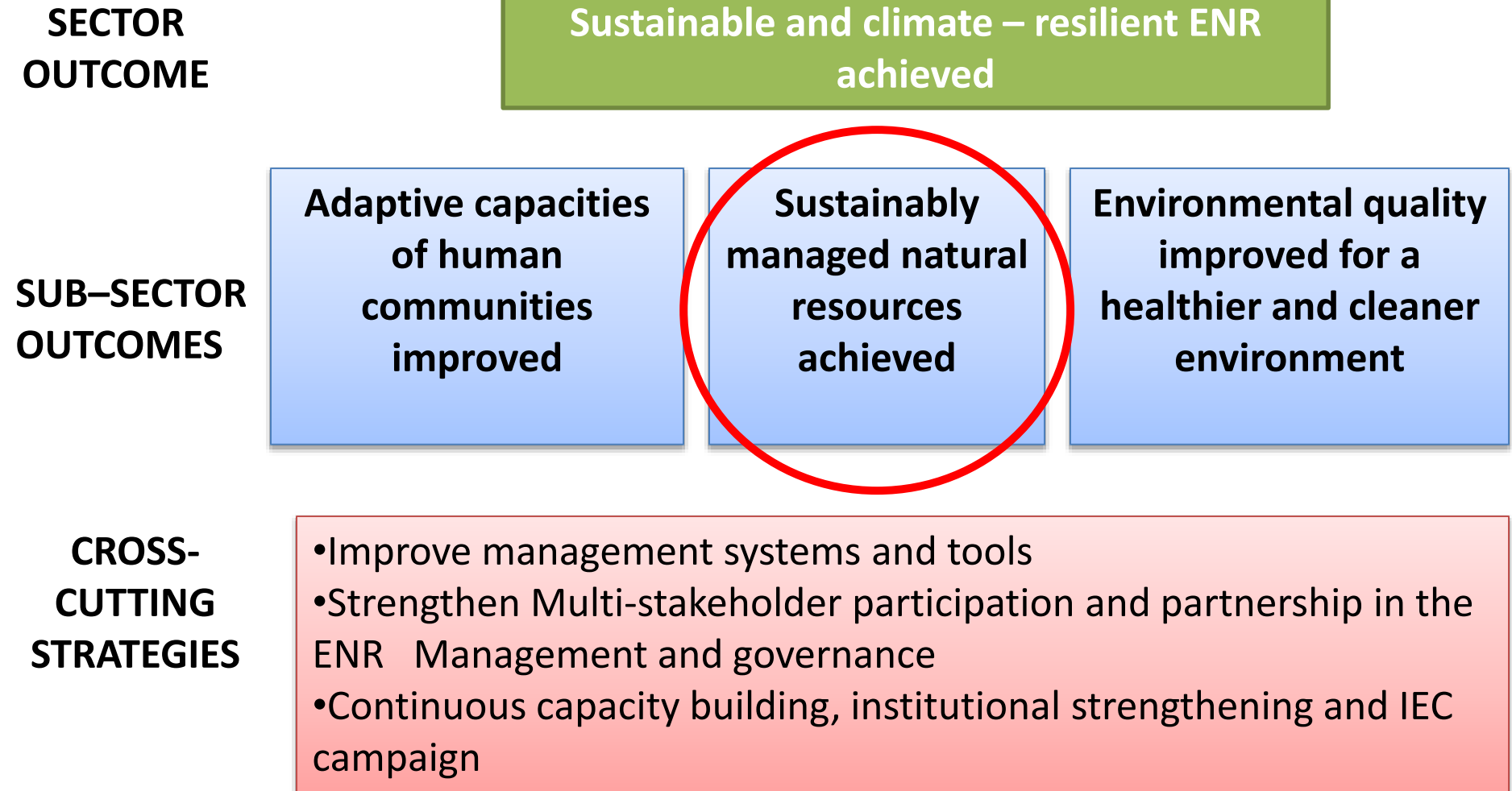
Strategic Framework



II. 2011-2016 PDP Midterm Update



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III. Natural Capital Accounting (NCA)

GDP estimation does not include what happens to Natural Capital, as follows:



Wear and tear and depreciation resulting from using produced assets like factories, roads, and bridges.



Loss of natural areas that provide ecosystem services to the economy, like pollination.



Extent to which renewable resources like forests and fisheries are being depleted.



Depletion of minerals and mineral fuels.

Future losses resulting from greenhouse gas emissions – sea level rise, extreme weather, and agricultural losses.



Future economic losses when pollution leads to premature deaths and chronic disease.

IV. Phil-WAVES vis-à-vis PROFOR

| Focus | Phil-WAVES | PROFOR |
|-------------------------------|--|---|
| 1. Pilot Sites | <ul style="list-style-type: none">• National for mineral and mangroves• Two pilot sites in Southern Palawan and Laguna de Bay | Three study sites namely: Upper Marikina Libmanan-Pulantuna Watersheds and Agusan River Basin |
| 2. Methodology | • System of Environmental-Economic Accounting 2012 | |
| 3. Model/ Mapping Tools | <p>Land - ArcGIS</p> <p>Water- Hydrology and Hydrodynamics Model of the LLDA Decision Support System (DSS), Hymos 4, Delft 3D Model</p> <p>Ecosystem Condition- Water Mondriaan Model, Bathymetry model, Waste load model, Revised Universal Soil Loss Equation (RUSLE), Look-up Tables (LUT) and ArcGIS model Builder</p> <p>Ecosystem Service - SedNet Model, Simple spreadsheet model, Hydrologic Engineering Center - Hydrologic Modeling System model (HEC-HMS)</p> | <ul style="list-style-type: none">• Soil and Water Assessment Tool (SWAT) in ArcGIS (ArcSWAT)• SedNet Model• PRECIS model |

III. Phil-WAVES vis-à-vis PROFOR

| Focus | Phil-WAVES | PROFOR |
|------------|--|--|
| 4. Outputs | <ul style="list-style-type: none">• Macroeconomic indicators• National Asset Accounts for Minerals and Mangrove (physical and monetary)• Ecosystem Accounts for Southern Palawan and Laguna Lake Basin (physical and monetary) | <ul style="list-style-type: none">• Forest use analysis• Ecosystem Service Modelling• Ecosystem Services Valuation |
| | Scenario Analysis under Policy Analysis | Scenario Analysis of different development options |
| | Training on System of National Accounts (SNA), SEEA, Ecosystem/Environment Accounting | Training on Ecosystem /Environment Accounting |
| | Communication Strategy | Stakeholder engagement |



Ecosystem Services: WAVES and PROFOR

Thematic Accounts

Land cover

Water

Ecosystem Condition

Terrestrial ecosystem:
soil loss, hazards, key
biodiversity areas

Lake/coastal
ecosystem:
lake depth, water
pollution, water quality

Ecosystem Asset

Water asset for surface
water, ground water,
soil water

Cropland:
Irrigated paddy fields
and coconut
plantations

Ecosystem service supply and use account

Crop production: rice, corn,
coconut and oil palm

Fishery production

Carbon sequestration and
storage

Water regulation by forest

Erosion control

Sediment/Flood control

Water Purification

Timber Provision

V. Utility of NCA in Policy, Planning and Programming Processes

☐ **Guide the formulation of development plans and policies towards sustainable development**

- Provides assessment of the effectiveness of policy instruments/issuances on forest resources management (e.g., EO 23 – Logging Moratorium, EO 26 – NGP EO 193 – NGP expansion)
- Provides possible recommendation on management strategies to address gaps in forest resources management, particularly focusing on the gaps identified in the assessment of the implementation of the National Greening Program (NGP)
 - Provides criteria for selection of NGP sites (e.g., inclusion of highly vulnerable areas and match species and spacing)

☐ **Guide proper valuation of resources**

- Provides an evidence-based/quantitative analysis of the value of forest ecosystem services with respect to its contribution to poverty reduction and employment generation of resource-dependent communities

☐ **Guide identification of development options/activities vis trade-offs**

- Guide future investments in forestry

VI. Moving Forward on NCA

1. Need to harmonize and consolidate the results from studies and programs/projects on NCA, ecosystem/environment valuation and natural resource assessment in terms of methodology in accounting and valuation and coordinate its results with PSA:

- Ecotown Project in Upper Marikina River Basin
- Capturing Coral Reef & Related Ecosystem Services (CCRES)
- Economic Evaluation of Tropical Forest Land Use Options: A review of methodology, applications and lessons (Chokkalingam, 2006)
- Cost Benefit Analysis (CBA) of Reforestation Farming in Leyte, Island, Philippines (Kiffner 2005)

2. Institutionalization of Results

- linking the results of programs, projects and studies to national database through PSA, which will be improved over time
- standardization/harmonization of accounting/valuation methods

3. Continuous Capacity building on SEEA, SNA, NCA and valuation methods



Thank You