Natural capital accounting for policy:
Session 5 - SEEA regional workshop

Presentation by: Juan-Pablo Castaneda
Environmental Economist, ENR GP, World Bank

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WAVES

Wealth Accounting and the Valuation of Ecosystem Services
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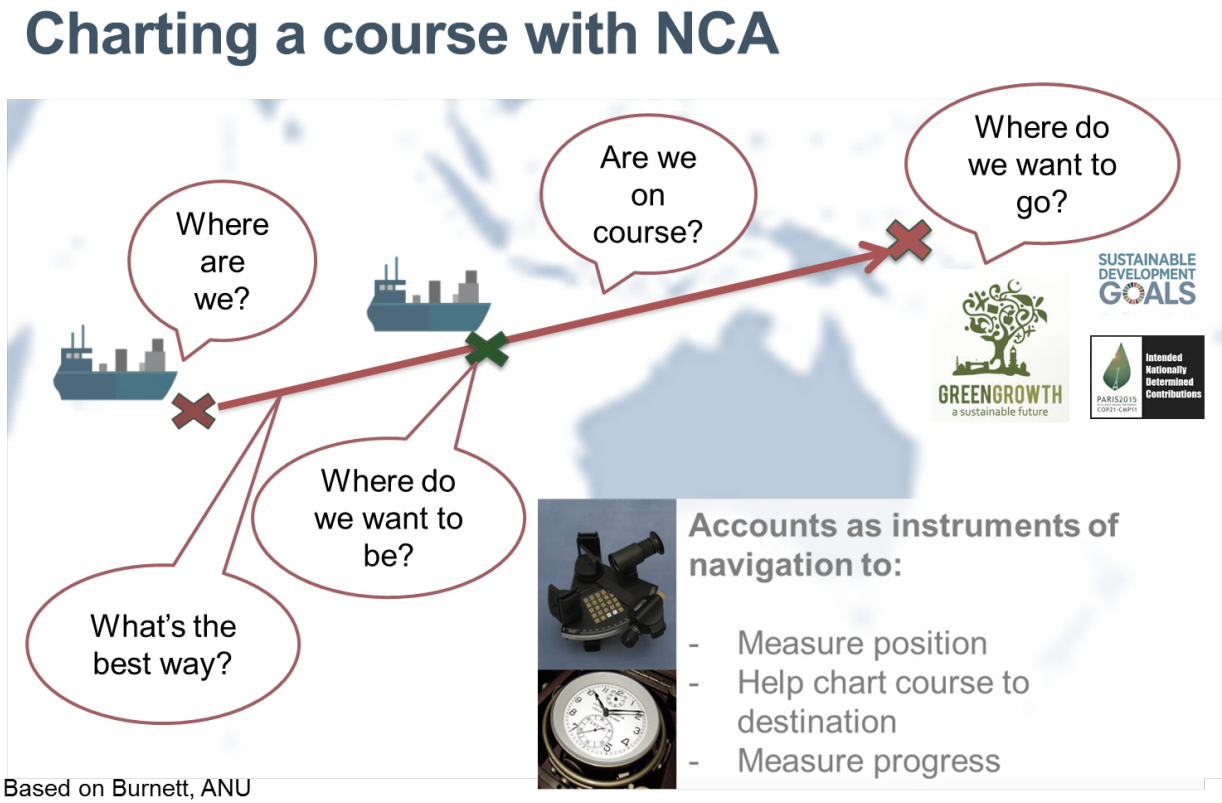
First part

We have accounts…
Now what?

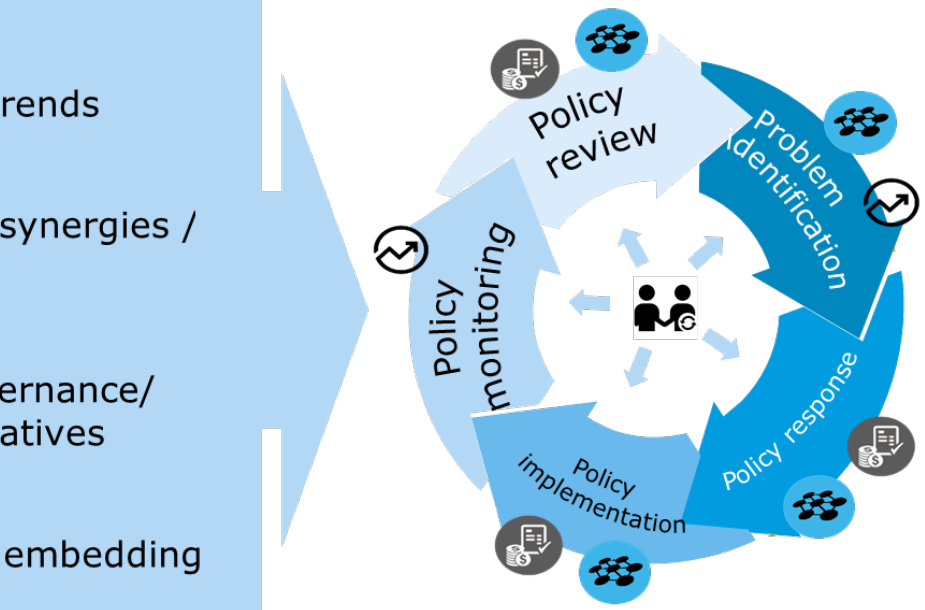


Based on Burnett, ANU

Second part

Accounts are useful in all aspects of the policy cycle and relevant for many policy fields (but not all)

- Status and trends
- Understand synergies / trade-offs
- Analyse governance/ policy alternatives
- Institutional embedding



Mapping NCA in the policy cycle

Policy use	Decision makers' questions	Information system (data, accounts, and analytical tools)	Types of answers
Identification of issues	• How are we doing? What h… th… e… development, how will we fare in the future?	• Accounts data and …indicators, simple …ons …tput analysis, …nental-economic … scenario …g, spatial analysis, footprint analysis	• Interpretations from the data on past and present state • Scenarios for future development of economy and environment
Policy response	• If we want to change the curren… future … do? … in poli… • Who bears the costs of producing these benefits?	• Accounts data and derived …ut-output …putable …brium …vironmental- …dels, …deling, cost-benefit analysis, integrated assessment	• Economic and environmental effects of restrictions on scenarios to achieve policy targets • Ex ante assessment of the policies' effects on the economy and environment

1. NCA provides objective information on issues and facilitates stakeholder communication by providing data on current and potential issues

2. NCA supports the detailed design and assessment of policy options

Mapping NCA in the policy cycle

Policy use	Decision makers' questions	Information system (data, accounts, and analytical tools)	Types of answers
Policy implementation	• How can we target the po co • Wh do • What price should be put on natural resources?	• Accounts data, derived , environmental- modeling, alysis, industry ost-benefit usiness case	• Detailed assessment of all the pros and cons of the policy interventions
Policy monitoring	• Are the policies making progress toward goals and targets?	• Accounts data and derived indicators	• Ex durante assessment of policy progress and evaluation of the need to adjust policy instruments
Policy review	• existing effective to a goals and tar • Are there any consequences of the policy response? • Do we need different policy responses?	erived tric	• Ex post policy evaluation of effectiveness and efficiency of policy instruments

3. NCA can help deliver existing policies more efficiently

4. NCA can help monitor and assess effectiveness and impact

A new opportunity: Accounts and SDGs

Account	2 ZERO HUNGER	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	14 LIFE BELOW WATER	15 LIFE ON LAND
Land	sustainable agriculture					land use, built up area		protected areas	green cover index
Energy			energy access / intensity		energy intensity		fossil fuel subsidies		
Water		sanitation services, water use							
Materials		water bodies with quality problems	carbon intensity	resource productivity	material use per VA	solid waste collected	material footprint, recycling	nitrogen use efficiency	
Aquatic resources								sustainable fish stock	
Agric., forest. and fisheries	production per labour unit							fisheries as % of GDP	
Environm. Activities						budget for natural heritage	fossil fuel subsidies	fishery subsidies	
Ecosystems		change in wetland extent							land degradation
SNA	agricultural orientation	water use efficiency	energy intensity	GDP from tourism	energy intensity, CO_2-emission		fossil fuel subsidies		

Levels of integration to the decision making processes

Increasing levels of integration

Decision making phase	1. Identification of issues	2. Policy response	3. Policy implementation	4. Policy monitoring	5. Policy review
Indicators					
Network analysis					
Trend analysis					
Extrapolations					
Footprint analysis					
Scenario Analysis					
Integrated assessment					
Business case					
Cost-Benefit Analysis					
Econometric analysis					
Input Output Analysis					
Partial Equilibrium models					
General equilibrium models					

10 living principles for making NCA fit for policy

Comprehensive

1. Inclusive

2. Collaborative

3. Holistic

Purposeful

4. Decision-centred

5. Demand-led

Trustworthy

6. Transparent and open

7. Credible

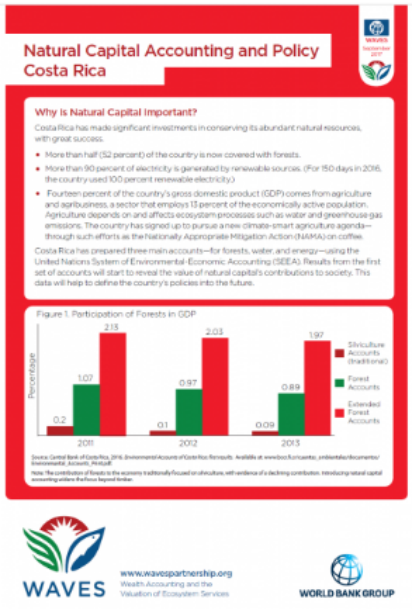
Mainstreamed

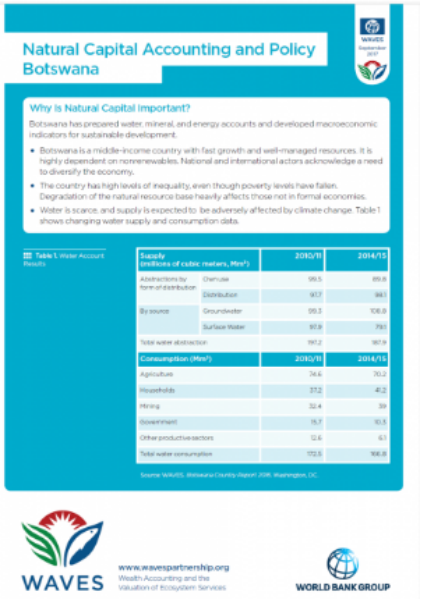
8. Enduring

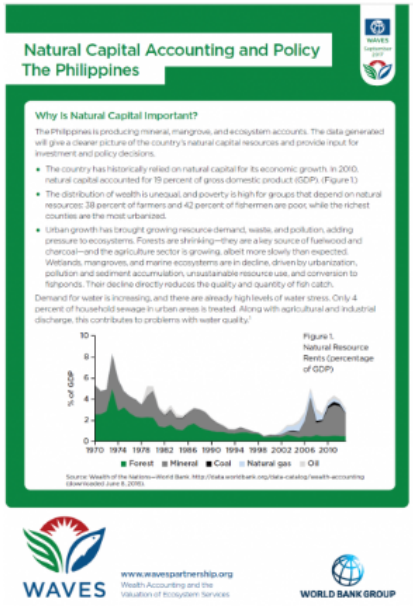
9. Continuously improving

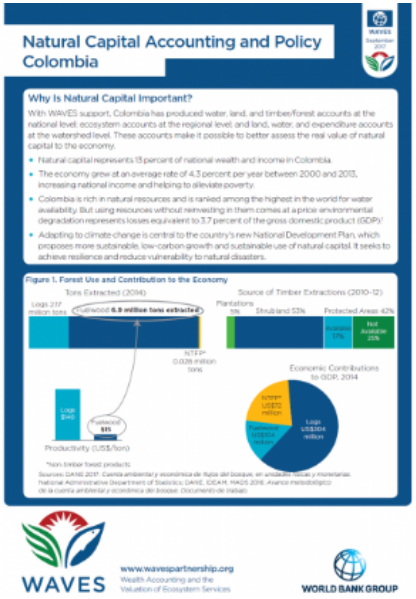
10. Embedded

Case study









Series on NCA and policy uses

https://www.wavespartnership.org/en/natural-capital-accounting-and-policy

Case study:
NCA Implementation in Guatemala

The construction of the accounting system was carried out thanks to a public-academic partnership that provided resources, credibility, stability, and projection to the process.

Several integrated accounts where produced:

12 | Implementing Natural Capital Accounting in Developing Countries: Public-Academic Partnerships and Policy Uptake in Guatemala

Juan-Pablo Castaneda, Environment and Natural Resources Global Practice, World Bank
Fernando Coronado Castillo, Vice Minister of Natural Resources and Climate Change, Ministry of Environment and Natural Resources, Guatemala
Ismael Matias, Deput

Summary

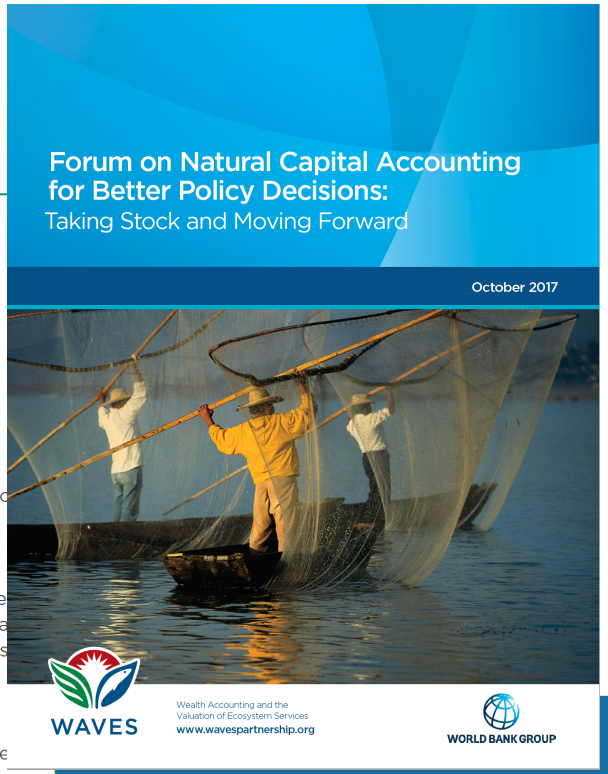
This paper presents
the System of Envir
frameworks that ar
(SNA). Implementa
in the policy contex
the policy cycle. Th
characteristics like
basic statistics (par
and analysis is that
data frameworks th
Guatemala shows t
can overcome reso
This in turn sets the

13 | The Integrated Economic-Environmental Modeling Platform: An Application to Guatemala's Fuelwood and Forestry Sector

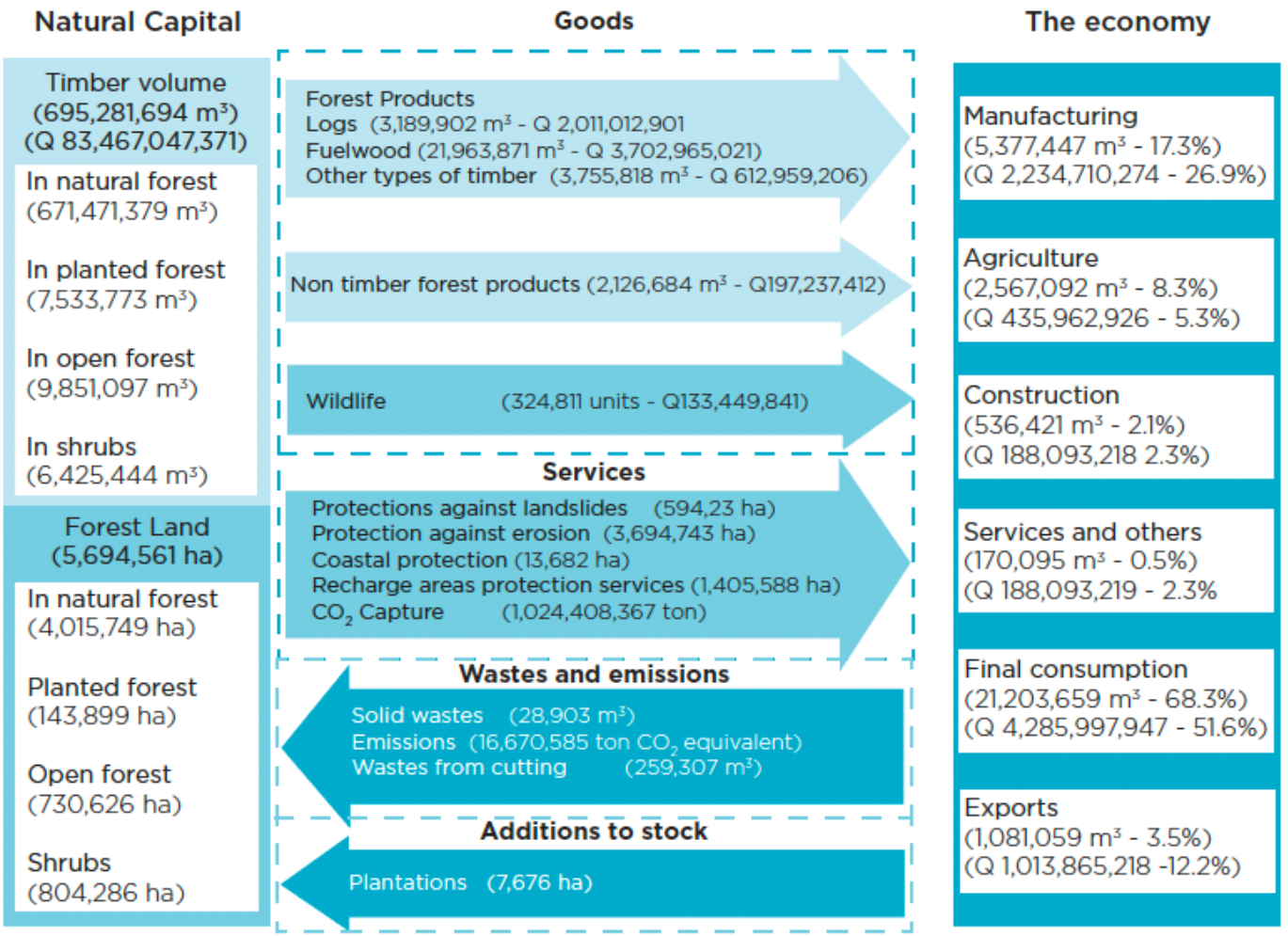
Onil Banerjee, Inter-American Development Bank, Environment, Rural Development, and Disaster Risk Management Division
Martin Cicowiez, Universidad Nacional de la Plata, Facultad de Ciencias Económicas,
Renato Vargas, CHW Research
Mark Horridge, Victoria University

Summary

This chapter presents the Integrated Economic-Environmental Modeling (IEEM) platform. IEEM advances the state of the art in decision-making frameworks, enabling policy makers to understand the full range of economic and environmental implications of public policy and investment alternatives. IEEM utilizes data organized under the international System of Environmental-Economic Accounting (SEEA), which is compatible with the economywide frameworks that are regularly used to measure economic performance. While conventional economic impact analysis quantifies the effects on standard indicators, such as gross domestic product, income and employment, IEEM goes one step further, capturing impacts on indicators reflecting stocks of environmental resources, environmental quality, and wealth, such as genuine savings. While a country's natural capital accounts present a snapshot of past natural capital use, IEEM is the first forward-looking platform that integrates natural capital accounts and enables us to ask "what if" questions to estimate how the economy and environment will be impacted. To demonstrate IEEM capabilities, we apply it to Guatemala's fuelwood and forestry sector, where fuelwood accounts for 57 percent of the nation's energy consumption, and its current levels of unsustainable use are causing deforestation and environmental degradation.



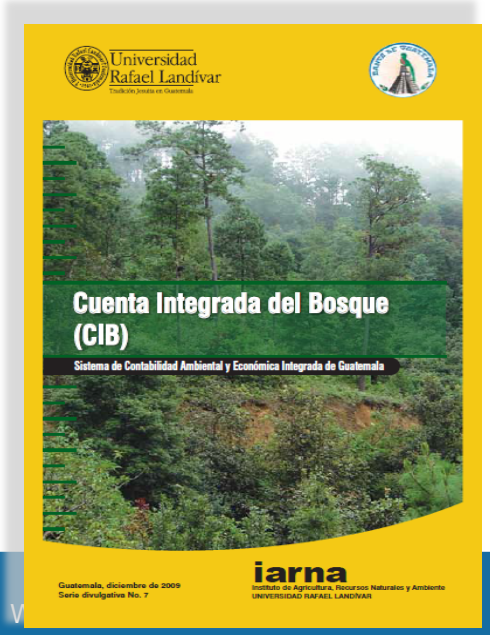
Case study:
Linking forest and the economy in Guatemala

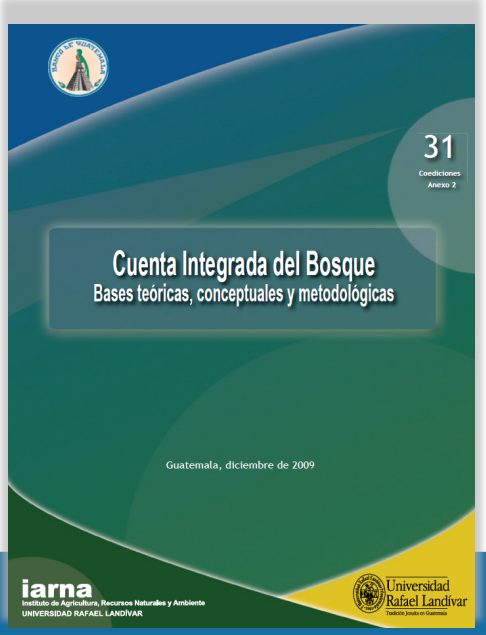


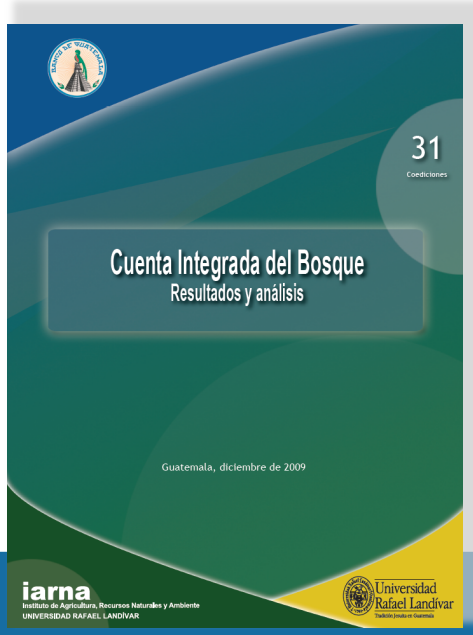
Case Study:
How accounts were used?

System of Environmental Economic Accounting → Forest accounts → Sectoral studies → National strategies → Institutional strengthening → Financial instruments

- Sectoral studies: Modeling deforestation; Supply and demand for fuelwood in Guatemala; Non controlled logging in Guatemala – the impact on the economy and on forests
- National strategies: National Strategy for Production and Use of Fuelwood; National Strategy for Control of Illegal Logging
- Institutional strengthening: Institutional restructuring of National Forest Institute
- Financial instruments: Eg ProForest – extending forest incentives to 30 years and to forest restoration and agroforestry systems







Thank you!

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