



WAVES – accounting for sustainability

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Riga 15 January 2020



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Outline – from WAVES to GPS

- 1) Beyond GDP – context for NCA and WAVES
- 2) What WAVES is about? – WAVES to GPS
- 3) Why NCA?
- 4) Results from natural capital accounts and influencing policy
- 5) Some lessons from WAVES

Credits: Presentation include content from recent WBG and UNSD (Bram Edens) presentations.

Disclaimer: The presentation and content is not officially representing the World Bank but reflecting the views of the presenter.



...“You can’t manage what you don’t measure”
and
...“What we measure affects what we do”

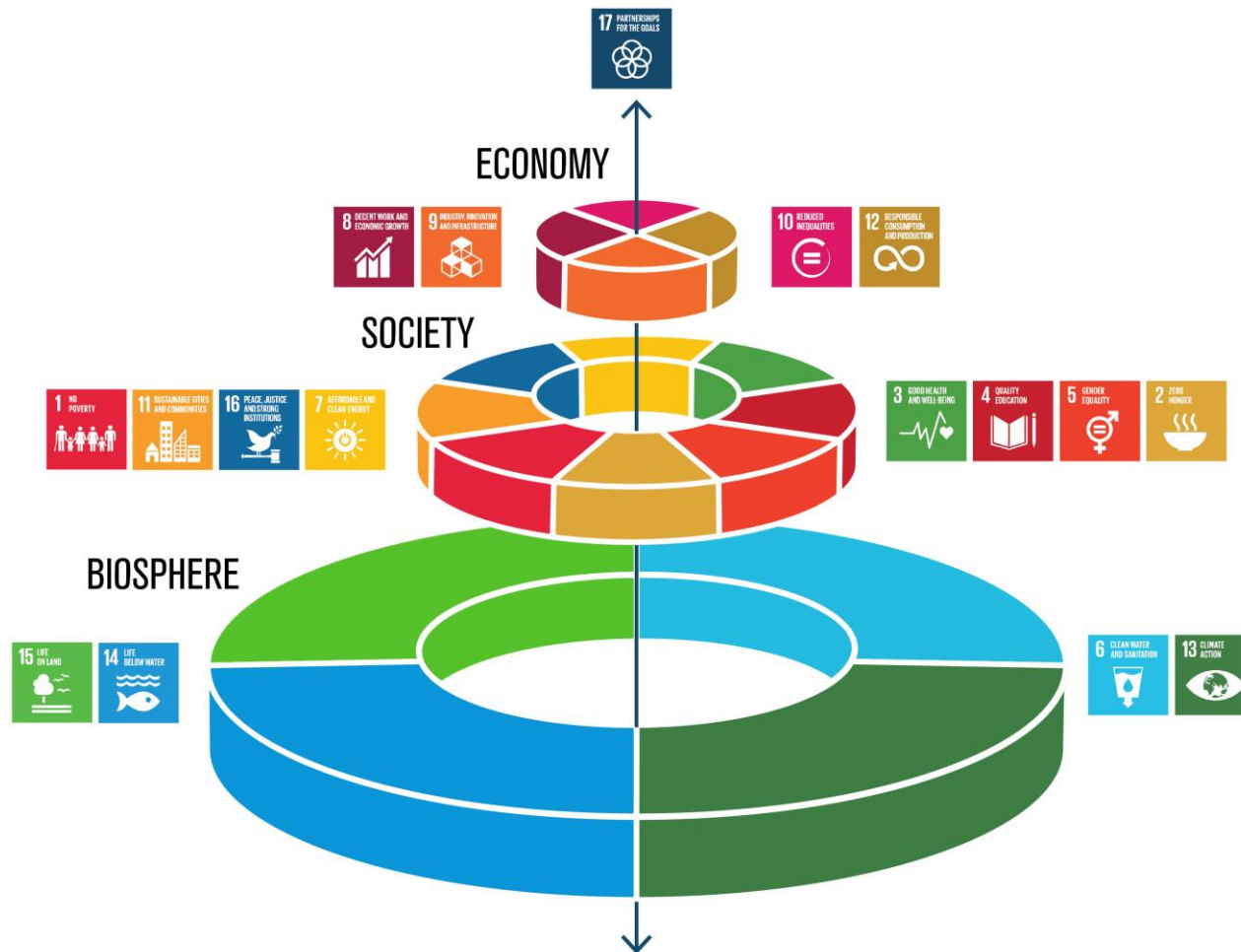
“What we measure affects what we do.

*If we focus only on material wellbeing – on, say, the production of goods, rather than on health, education, **and the environment** – we become distorted in the same way that these measures are distorted”*

Joseph E. Stiglitz, Nobel Laureate
in Economic Sciences



Development Context: Nature as a foundation for sustainable development ...



Graphics by Jerker Lokrantz/Azote



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The economic context - the space for WAVES

Long Term Prosperity and Well-Being

National Income / GDP

Total Wealth



World Bank. 2018. Changing Wealth of Nations 2018:
<https://openknowledge.worldbank.org/handle/10986/29001>

The Changing Wealth of Nations 2018



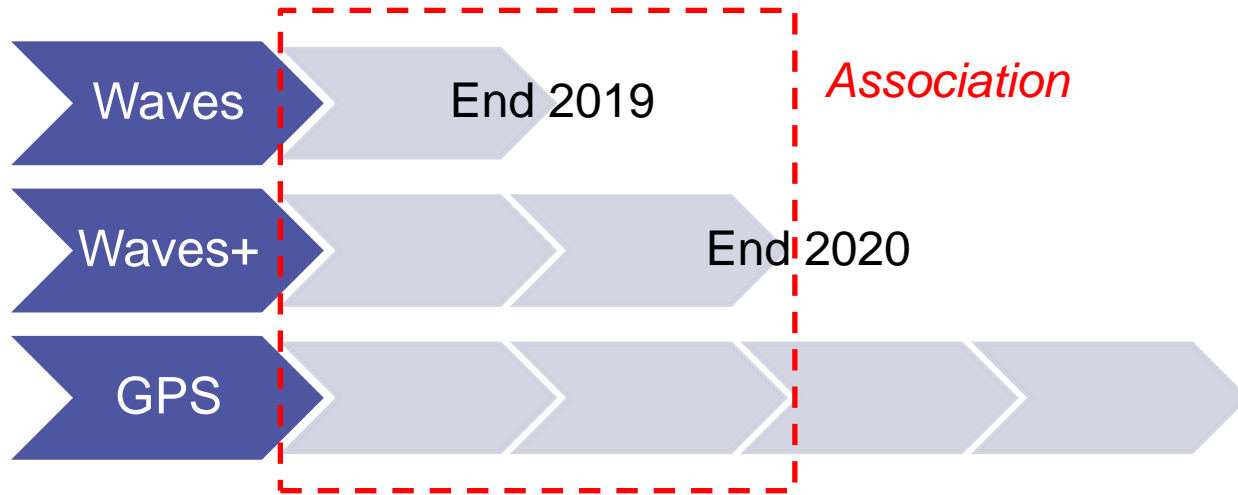
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From WAVES to GPS – the WBG



Global Program for Sustainability 2017 -



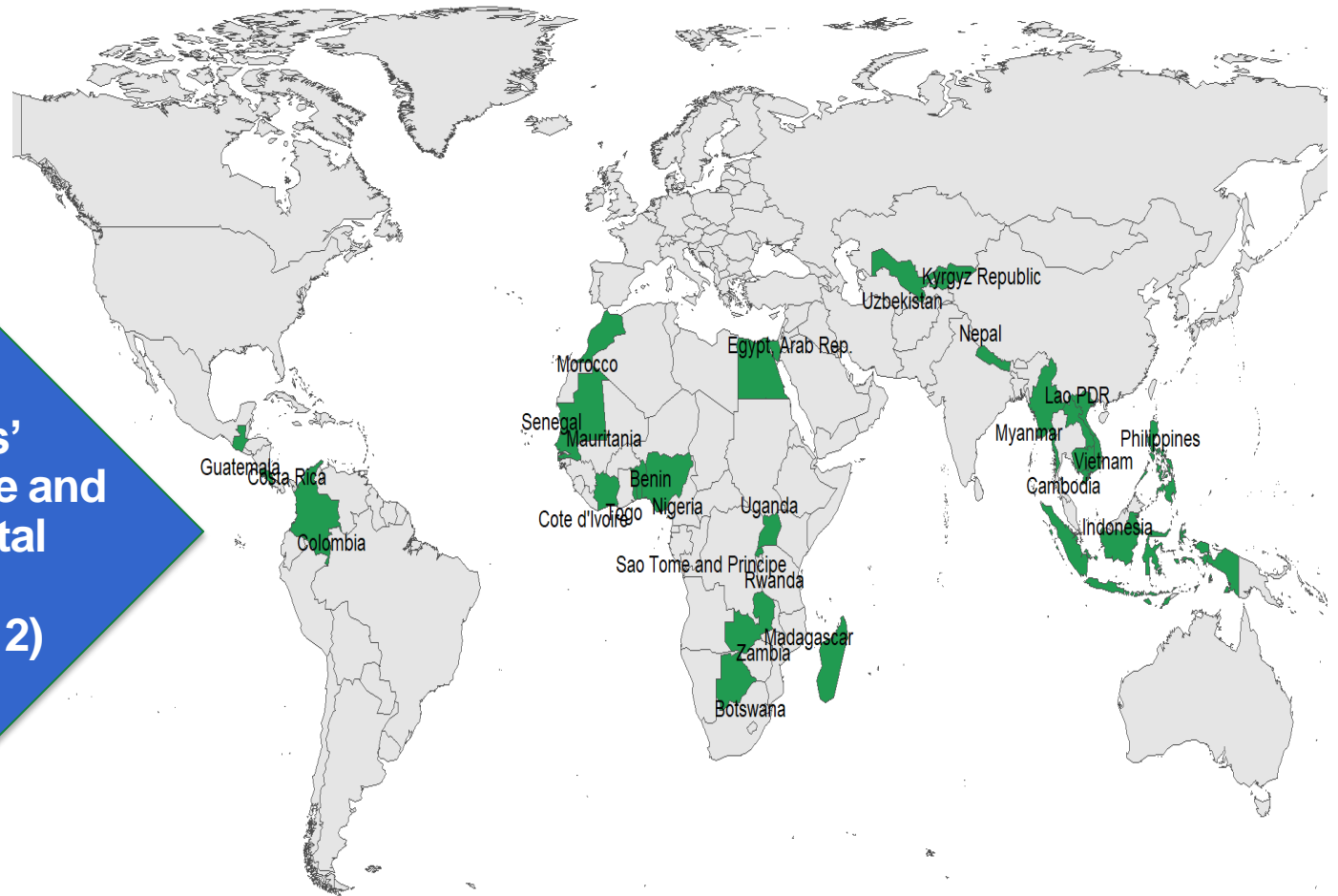
WAVES/WAVES Plus donors

*WAVES/
GPS
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WAVES Global Partnership – Countries

Build countries' capacity to produce and use natural capital accounting (now GPS Pillar 2)



How can NCA help?

Monitoring

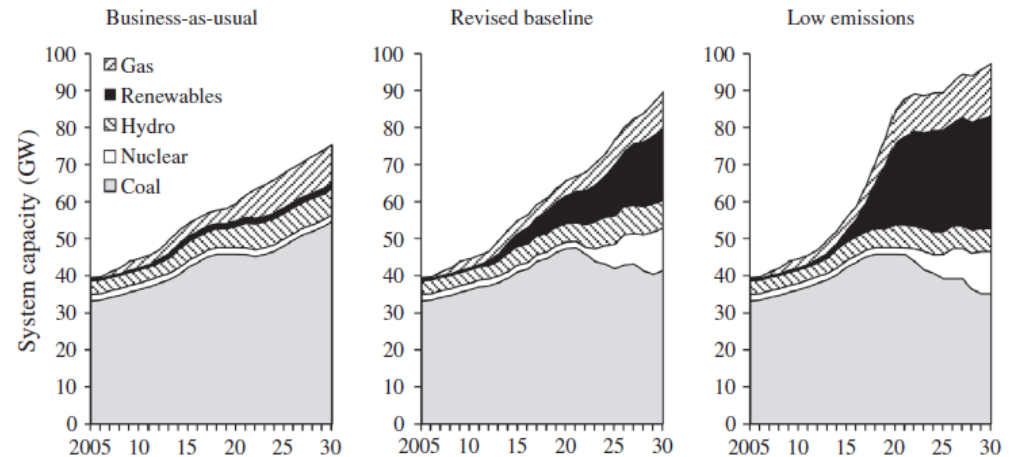
- Consistent data and statistics

Projections

- Modelling & scenarios

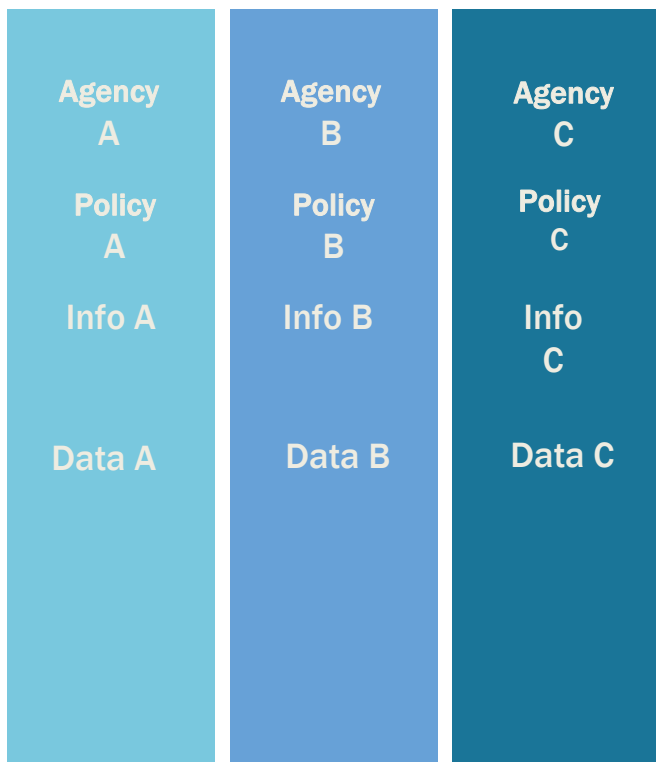
Policy analysis

- NCA role in sectoral & national development, policy and decision-making

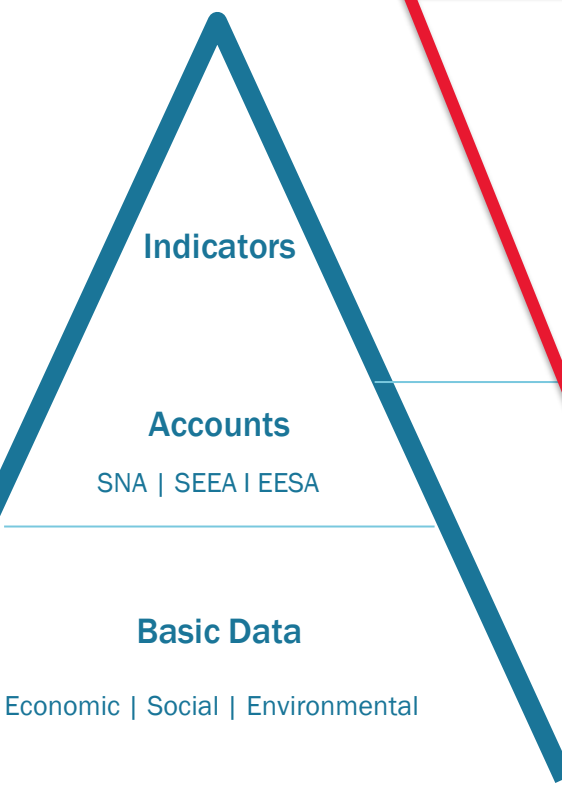


From data silos to integrated information

Data generators



Information users



Information generators



Catchment management for hydro-power

Case: Himachal Pradesh, India

1. Targeting of soil conservation

- Information to introduce PES in HP
- Better targeting of management investment in forested watershed.

2. Testing models for prioritizing investments

- Comparing models for linking management to water yield and sedimentation
- Provide a framework and valuation assessing ES contribution to the hydro sector.
- Models tested RIOS, SWAT, InVEST



Source: Managing Catchments for Hydropower Services, Technical Report (WAVES)



SOME RESULTS

- **Only a small decrease (< 1%) in water yield (annual average)**
 - Seasonal flow have significant impact on hydropower production and value and InVEST annual model cannot capture this.
 - Depends on the quality of original forest (storing and slow release)
 - Useful for PES in targeting priority areas and setting PES targets
- **Accurate assigning of economic value to watershed services (ES) would require capturing seasonal changes in water yield.**
 - SWAT is able to do this but data, parameters, calibration, model complexity and technical capacity demands are high.
- **Models showed significant decrease in sediment loads (up to 44%)**



CHALLENGES

- **Availability of high-quality, locally vetted data is critical**
 - Often global and external data sets are rejected by decision-makers
- **Understanding data availability and sharing data is critical**
 - This is a major issues in most countries where data is held by different institutions and is a source of institutional power
 - NCA is a way to systemically address this (data consistency).
- **Connecting GIS capacity with hydrological and modeling experience is a necessity.**
 - The focus is often only on the data. Data providers and modelers (biophysical, economic, policy) are often separated in different institutions and their skills are quite different
- **Connecting decision-makers with the different data and scenario providers is most important**
 - Need to identify policy and decision-making entry points (and yet it can fail)



Case: Philippines Ecosystem Accounts



Laguna Lake (Metro Manila)

What is the flood risks & the changes?

Water quality, how this affect fisheries?

Changes in watershed forest cover?

Southern Palawan ‘the last remaining forest frontier

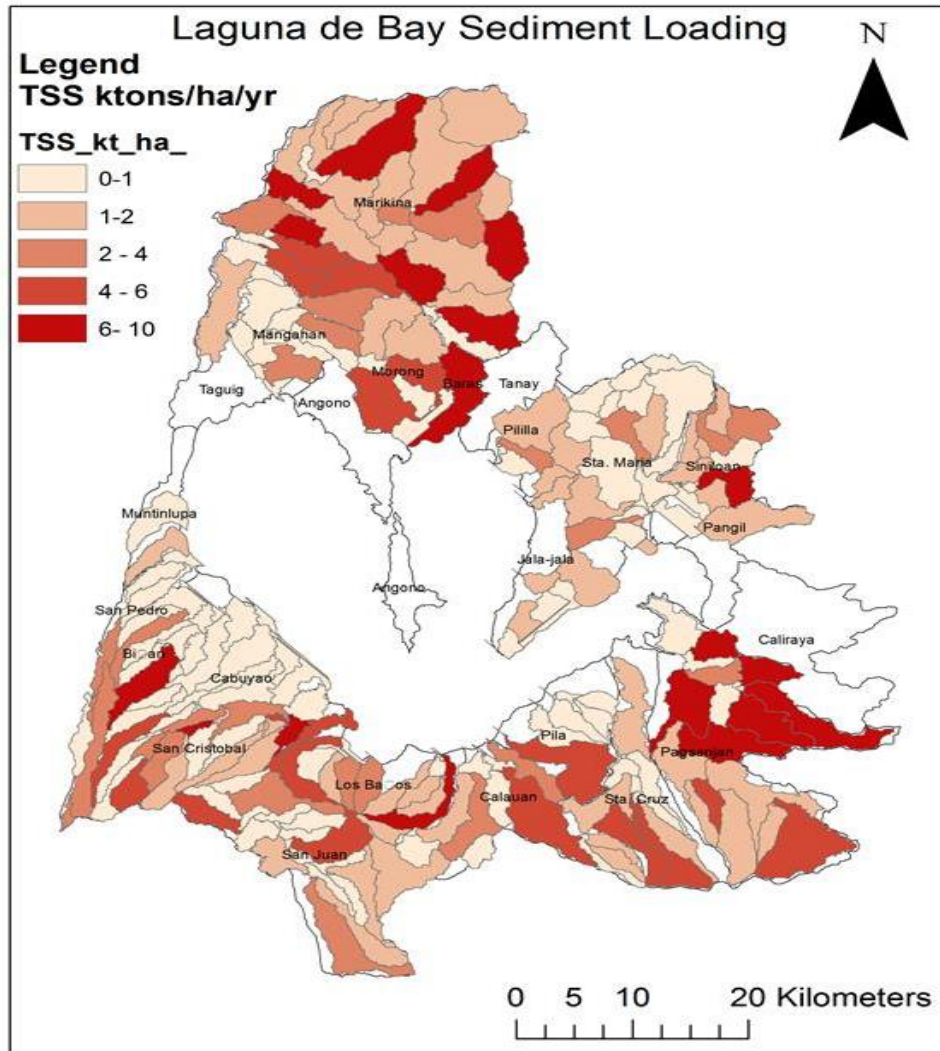
Economic development while maintaining natural resources?

How to improved and use planning?

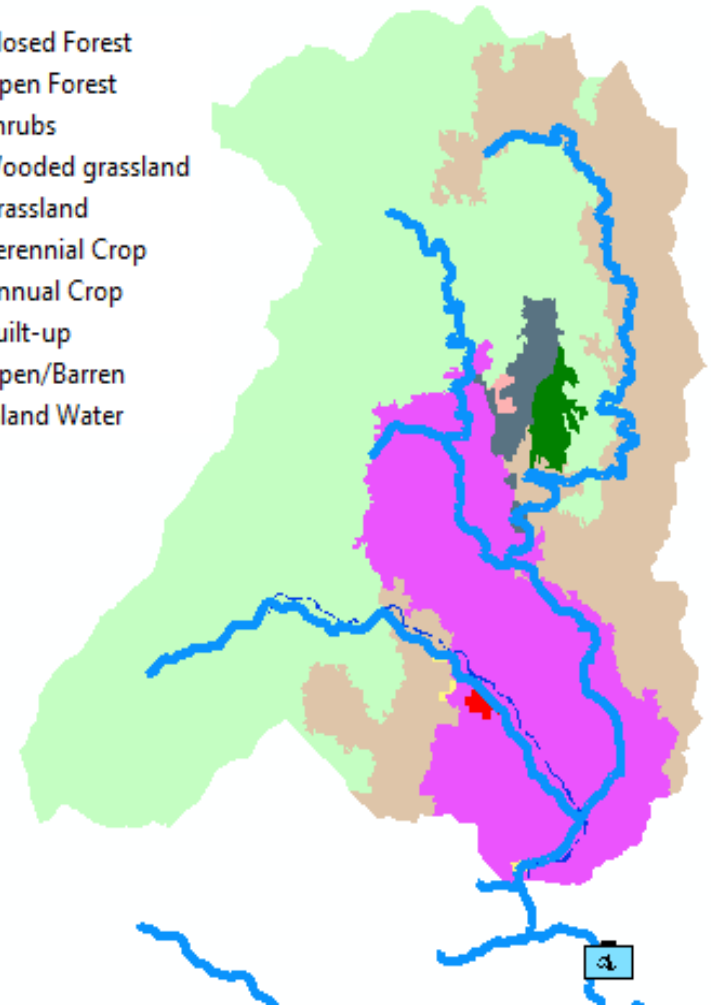
Changes to biodiversity including coastal resources?



Policy applications and insights



- Closed Forest
- Open Forest
- Shrubs
- Wooded grassland
- Grassland
- Perennial Crop
- Annual Crop
- Built-up
- Open/Barren
- Inland Water

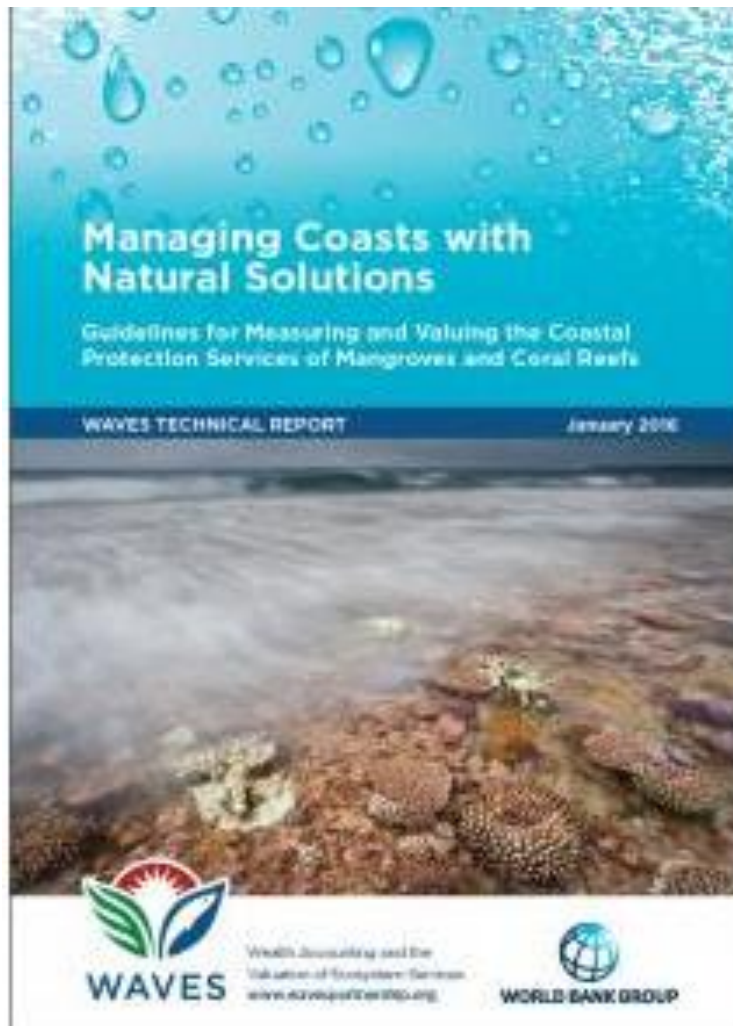


Success factors and lessons learned

- The ES accounts need to be developed by national / local institution (support from international experts?)
- It 2 to 3 years to develop accounts (data, capacities, modelling, analyses)
- Require strong government ownership (policy demand)
- Communication keeps the data producers and data users engaged
- Need to enhance cost-effectiveness to scale up



WAVES – tools, testing, analytics



- Based on work in the Philippines.
- Role of natural solutions as an alternative to grey infrastructure in coastal protection.
- Developed the valuation of reefs and mangroves in managing and protecting coasts.
- Adapting established insurance sector valuation approaches

WAVES – institutional strategy

Develop NCA experience & capacity by SEEA CF accounts in a few environment sector of economic priority

- SEEA standard expanding boundaries of the National Accounts
- Long-term, consistent data linking environmental statistics to economics
- Water, forests, minerals, energy...

Exposure to the use of experimental ecosystem accounting

- Future; including ecosystem services; From Experimental to Standard
- More strategic engagement? Framework and gaps?

Linking (CF or EEA) accounts to macro-economic frameworks

- Integration with SNA; Generate key sector indicators;
- SDG monitoring; OECD accession / Green Growth Indicators

Outline measures required for effective policy impact



How to achieve policy impact?

1. Identify the necessary **steps** and the **analytics** required to translate **structured statistics** (accounts) into **information** that informs and can be used by decision-makers
2. Identify the specific **policy issues and entry points** and what information is required and what phase in the **policy cycle** the accounts or analytics serve
3. Identify the **institution(s)** in the data-decision-making interface tasked with the policy analytics which is translating statistics to information for decision-making



Then some lessons from WAVES

- Successful institutionalization and national NCA dialogue, including in developing a range of accounts

But

- NCA takes **much longer time** than anticipated
- Requires “**NCA readiness**” (data and capacity)
- Better identification of and focus on **policy entry points**
- From **sequential to parallel** policy engagement
- Focus on using **existing information and data coordination** mechanisms and frameworks
- Management of accounts **production process and analytics** to ensure timely information and use of NCA
- **Stronger links** to national accounts, macroeconomic indicators, economic and development frameworks



...lessons from WAVES

- What is the **purpose** of accounts (issue, national, local, short-term issues or long-term systemic?)
- Ecosystem accounts add a **spatial dimension** (the use?)
- Often only 1 - 2 accounts and once – no **systemic impact**
- Focus on **national priorities** – e.g. water (Botswana, Colombia), land (Rwanda), minerals (Philippines), land use trade-offs (Philippines, Colombia); OECD application (Costa Rica, Colombia); Green economy policy (Colombia)
- Better use of **SNA opportunities** – e.g. national balance sheets
- **Consistent data** and statistics for analytics



NATURAL CAPITAL ACCOUNTS

Tools to inform decisions and trade-offs

Do I really give up development if I conserve natural capital?



How much development tomorrow do I forego if I deplete today my natural capital?

NCA is not the solution but can be the contribution



THANK YOU



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nationalparks.fi
excursionmap.fi



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