



Wealth Accounting and Valuation of Ecosystem Services

29 March, 2011
Washington, DC

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Why do we need WAVES?

MEA: undervaluation of natural capital a major cause of ecosystem degradation and biodiversity loss

Progress with valuation: wide support in the environment community (TEEB),

How do we convince Ministries of Finance, Planning agencies that they have a stake in sustainable mgmt of natural capital

→ bring natural capital into the national income accounts to show the link between natural capital and long-term growth, sustainable development

Long-term growth depends on the wealth of a nation, including natural capital

WAVES Conceptual framework for sustainable development:

Comprehensive Wealth Approach to sustainable development where wealth includes all assets

- Manufactured capital, Natural capital, Human & Social capital

Development is a process of building wealth and managing this portfolio of assets

World Bank: Leading conceptual work and providing global estimates (*The Changing Wealth of Nations*)

WB natural capital accounts include agr land, subsoil assets, forests, and protected areas

But ecosystem services are not explicitly represented in the value of these assets

WAVES deepens and expands accounts for natural capital

Implementing green accounting: the SEEA

WAVES Methodological framework for implementation: System of Environmental and Economic Accounting (SEEA)

SEEA is a comprehensive accounting framework, like the System of National Accounts (SNA), that includes both indicators for evaluation performance as well as detailed statistics for management:

- asset accounts (physical & monetary);
- flows of energy, material, pollution;
- environmental taxes/subsidies & expenditures;
- macroeconomic indicators

Developed under the UN Statistical Commission by national & international statistical agencies over the past 20+ years

Statistical standard for some parts of the SEEA by 2012

Accounting for ecosystems is relatively undeveloped in the SEEA, but is a major focus of current and future work

WAVES: “Greening” the National Accounts to fill critical gaps for Natural Capital

Ecosystem services	Representation in the National Accounts (NA)
Provisioning services—food, fuel, fiber, etc.	Mostly identifiable in the NA because they have prices, but some poorly measured
Cultural & recreational services	Mostly identifiable in the National accounts
Regulating & supporting services, e.g., Forests: <ul style="list-style-type: none">- water regulation and sediment control services- pollination services- grazing services for livestock Wetlands: flood protection services	Mostly in the National Accounts, but ‘invisible’ due to lack of prices

Major Components of WAVES

1. Implementation of natural capital accounting in 6-10 countries:
Colombia, Mexico, Uganda, Madagascar, Philippines, India
Norway, UK (Australia, Canada, Japan)
2. Incorporate natural capital accounts in policy analysis and development planning
3. Contribute to methodology for ecosystem accounting for the SEEA
4. Promote adoption of natural capital accounting beyond the pilot countries

Natural Capital Accounting

Components include

- Monetary value of ecosystem services produced annually and cost of degradation
- Distribution of benefits and burden of degradation among different stakeholders
- Value of natural capital assets and Comprehensive Wealth accounts

Issues:

- Scaling up to national level
- Maintaining spatial characteristics

Valuation Techniques:

- Market prices for provisioning & recreational services
- Other techniques for regulating services, drawing on models such as ARIES and InVest



Overcoming obstacles from past environmental accounting initiatives

- Identify policy links early on
- Identify strong ‘champion’ within a country to lead a cross-sectoral national steering committee
- Technical support, capacity building & training
- Credibility/internationally endorsed approach
 - Link to the SEEA to provide credibility on the accounting to Ministries of Finance, statistical offices
 - Technical Experts Group for scientific and methodological credibility

Policy Priorities for Natural Capital Accounting

1. Is GDP growth sustainable or are we “living off our natural capital?”—Comprehensive Wealth Accounts
2. How important is natural capital to the economy & how much should be invested in Environment & Natural Resource (ENR) sectors?
3. How much revenue can ENR sectors raise, for sector management and government revenue?
4. Are we using our natural capital (forest-fisheries-tourism resources, etc.) in the best way?
 - Maximizing income, supporting livelihoods
 - Creating incentives for sustainable mgmt. by sharing benefits with local stakeholders

WAVES Implementation & funding

Partnership with UNEP, donors, partner countries, NGOs and others

UNEP—GEF Project for Ecosystem Services

Building on initiatives like The Economics of Ecosystems and Biodiversity (TEEB), Poverty-Environment Initiative (UNDP-UNEP)

2 phases:

- 1-year preparation phase (\$750,000), through Dec 2011
- 3-4 year implementation phase (\$15 million), through 2015

Milestones:

2012: Preliminary report to Rio+20 Summit

2015: Report to the MDG review, proposal regarding environment
MDG



PHASE I: Preparation of the global partnership

- Establish the Global Partnership
- Assemble Technical Experts Group to develop methodology for ecosystem accounting
- Feasibility & planning studies for 6 pilot countries

Country feasibility & planning studies: expected outcomes

Institutions

- Identify lead agency to champion ecosystem accounting
- Identify key agencies to form a national advisory group

Technical Feasibility & Capacity

- Evaluate data availability and data gaps, both physical and monetary data
- Preliminary assessment of the capacity of local institutions to participate in the project

Contribution to policy

- Identify priority ecosystem services for natural capital accounting
 - Forest services: water volume regulation and sediment control, recreation
 - Coastal/marine ecosystem services: shore protection and habitat services of mangroves, recreation
 - Mineral and energy asset accounts
- Identify how ecosystem accounting could inform strategy and policy, at the national or sub-national level

Develop detailed work plan for implementation phase