Introduction to the SEEA Central Framework and Experimental Ecosystem Accounts

Project: Advancing the SEEA Experimental Ecosystem Accounting

United Nations
UNEP
Convention on Biological Diversity
NORWEGIAN MINISTRY OF FOREIGN AFFAIRS

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Policy Demand: International Context

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- Rio+20 outcome document
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  - OECD's Green Growth Strategy, WAVES, VANTAGE, UNEP-led Green Economy programme, CBD Aichi Targets, TEEB

Statistics for Sustainable Development

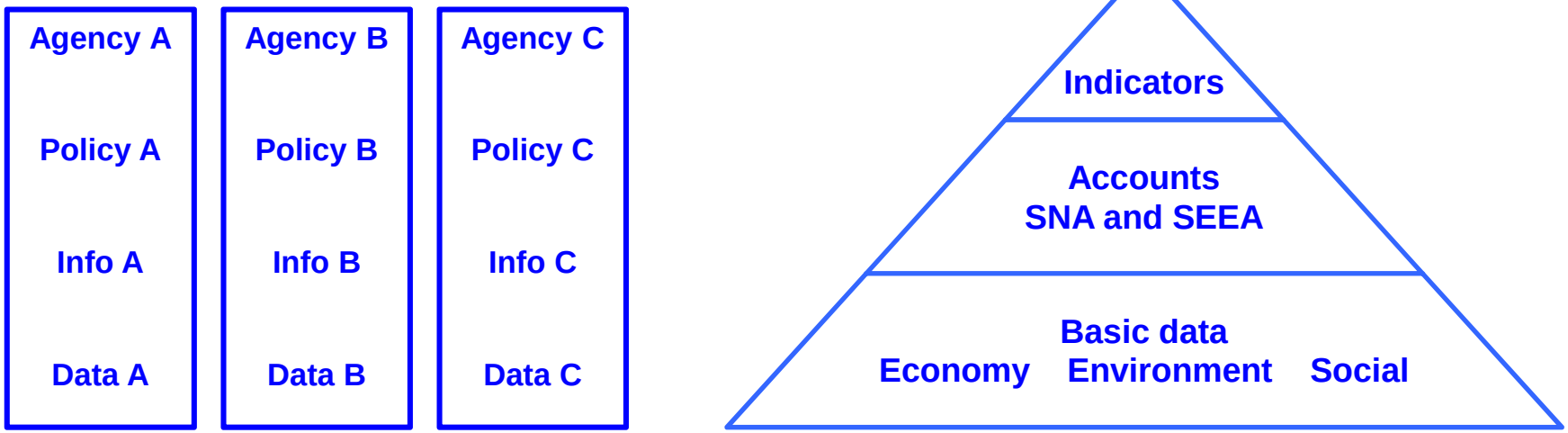
Increasing recognition that Sustainable Development Policy should:

1. Be based on Evidence: Policy should, to the greatest extent possible, be informed by rigorously established evidence
2. Take an Integrated Approach: Policy should be based on a better understanding of interactions and tradeoffs between the different realms of sustainability

Implication: An information system is needed to support policy analysis and decisions, which provides information on;

- The multiple issues relevant to sustainable development
- The interconnections between these issues

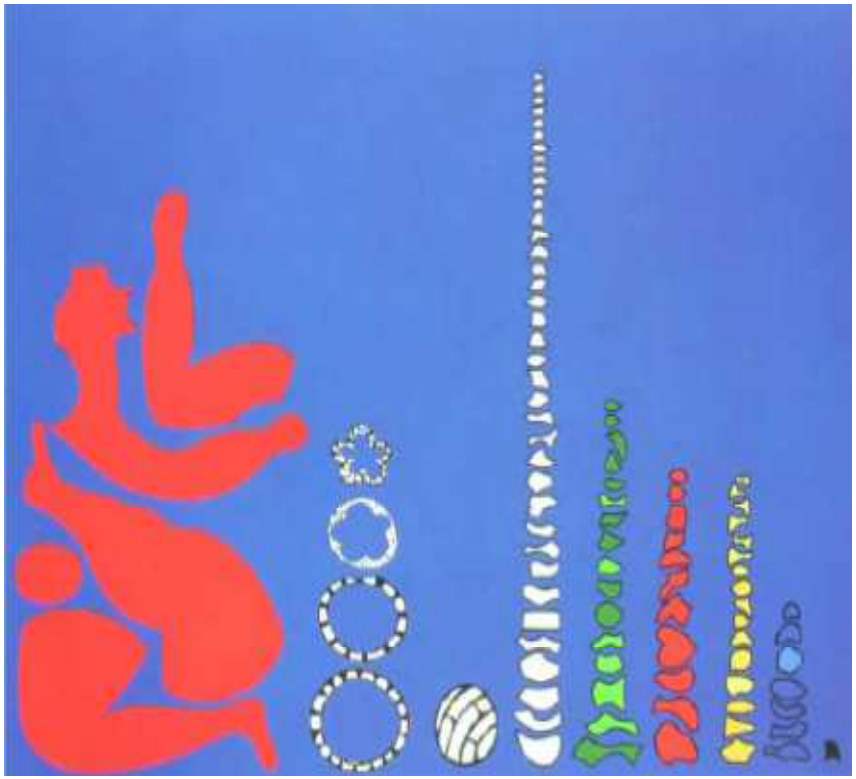
Silo Approach → Integrated Statistics



Accounts to integrate statistics:

- Linking policy needs and statistics
- Understanding the institutional arrangements
- Integrated statistical production process/chain and services
- Consistency between basic data, accounts and tables and indicators

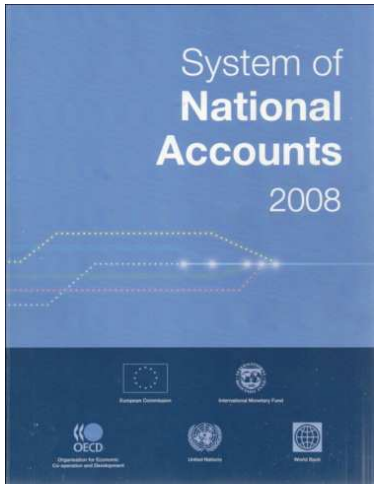
Silo Approach → Integrated Statistics

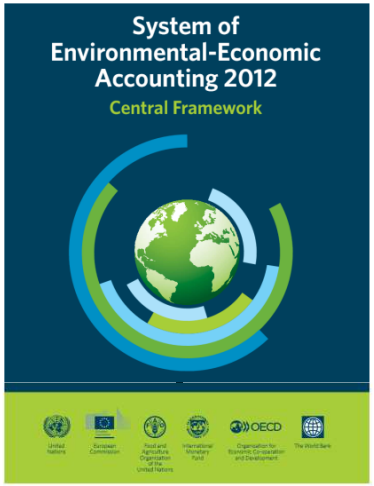


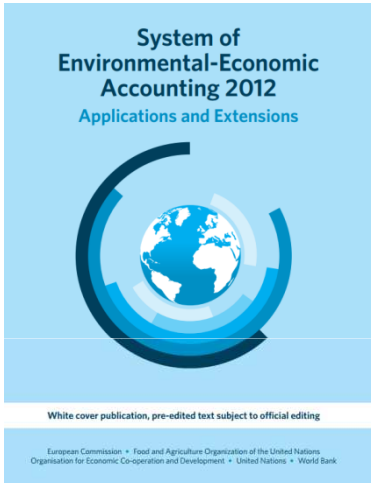
The System of Environmental Economic Accounting (SEEA)

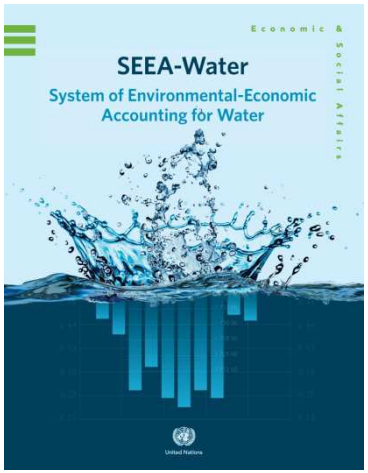
- An internationally agreed statistical framework to measure the environment and its interactions with economy
- The **SEEA Central Framework** was adopted as an international statistical standard by the UN Statistical Commission in 2012
- The **SEEA Experimental Ecosystem Accounts** complement the Central Framework and represent international efforts toward coherent ecosystem accounting

The SNA and SEEA: Systems of integrated information









SEEA-

Energy

(forthcoming)

SEEA-

Agriculture, Forestry and Fisheries

(forthcoming)

Others

(forthcoming)

One Environment: Two Perspectives

SEEA Central Framework:
Individual Environmental Assets/Resources

- Timber
- Water
- Soil
- Fish

SEEA Experimental Ecosystem Accounts:
Ecosystem Assets (spatially based)

- Forests
- Lakes
- Agricultural areas

Ecosystem Assets are environmental assets viewed from a systems perspective

The SEEA Central Framework Accounts

1. **Flow accounts**: supply and use tables for products, natural inputs and residuals (e.g. waste, wastewater) generated by economic activities.
   - physical (e.g. m^2 of water) and/or monetary values (e.g. permits to access water, cost of wastewater treatment, etc.)

2. **Stock accounts** for environmental assets: natural resources and land
   - physical (e.g. fish stocks and changes in stocks) and/or monetary values (e.g. value of natural capital, depletion)

3. **Activity / purpose accounts** that explicitly identify environmental transactions already existing in the SNA.
   - e.g. Environmental Protection Expenditure (EPE) accounts, environmental taxes and subsidies

4. **Combined physical and monetary accounts** that bring together physical and monetary information for derivation indicators, including depletion adjusted aggregates

SEEA Experimental Ecosystem Approach

An integrated measurement framework for ecosystem stocks (assets) and flows (services) to measure the contributions of ecosystems to economic activity:

- Ecosystem Assets and Condition
- "Final" Ecosystem Services (Production):
  - Provisioning services: products that can be harvested or extracted from ecosystems
  - Regulating services: regulation of biological, hydrological and climate processes
  - Cultural services: non-material benefits of ecosystems e.g., tourism or cultural experiences

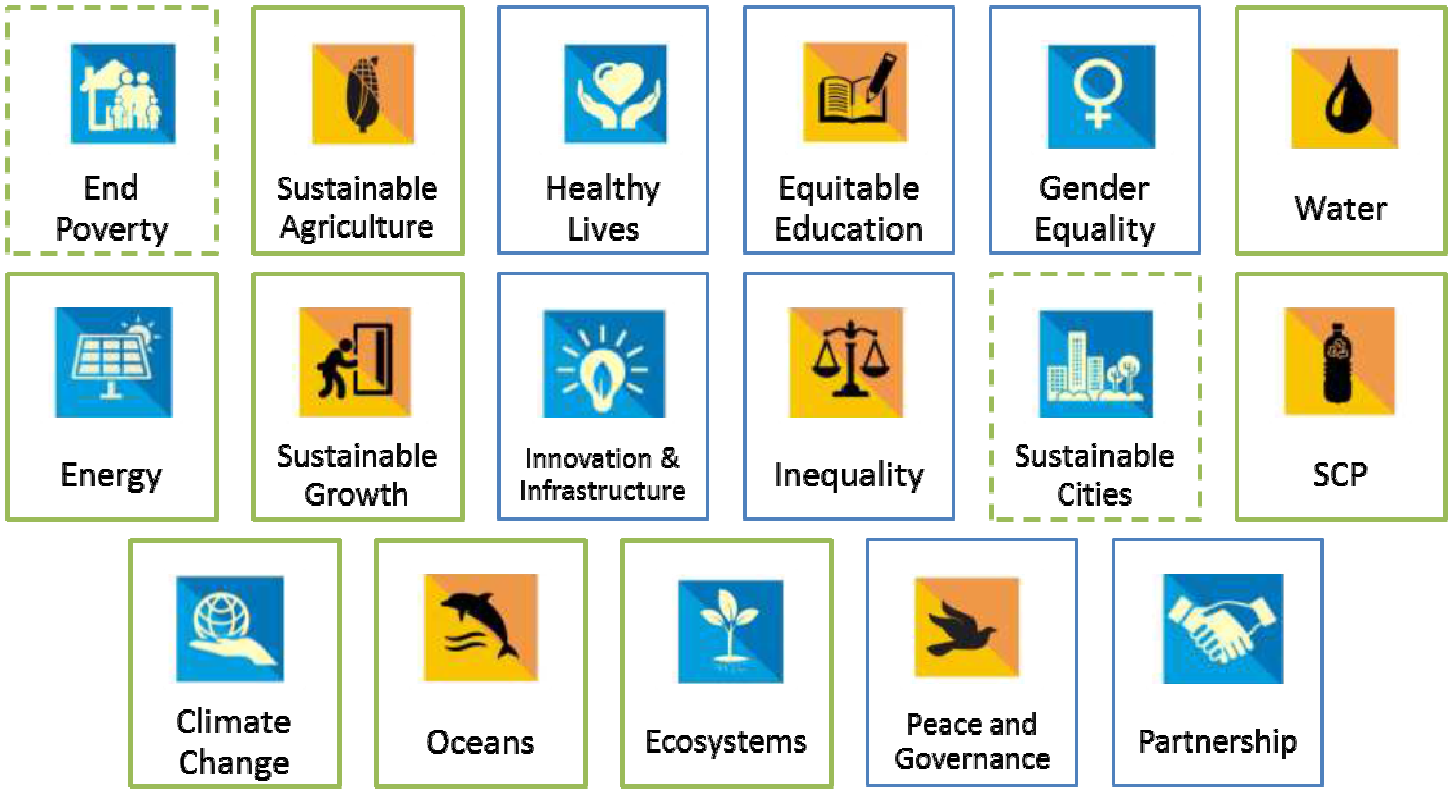
A synthesis of current knowledge on ecosystem services, ecosystem condition and related concepts

SEEA: A Statistical Standard

1. Countries are “encouraged to implement the standard”
2. International organizations have obligations to assist countries in implementation
3. Implementation strategy adopted by Statistical Commission in March 2013
4. Data reporting mechanism will be established

SDG Indicators and the SEEA

The SEEA is an important statistical framework for monitoring the SDGs in an integrated way:



SEEA based SDG Indicators

Using the SEEA to calculate SDG indicators can result in higher quality indicators in terms of;

1. **Policy Relevance and Utility:** Presentation of highly relevant environmental-economic information;
   - Aggregates and indicators as headline numbers to frame discussions
   - Descriptive statistics offering a richer understanding of policy issues
   - Coherent Data for environmental-economic modelling
2. **Analytical Soundness:** A vehicle for harmonization of environment statistics to ensure methodological coherence of
3. **Measurability and Practicality:** A vehicle to achieve an integrated production process for indicators by consolidating data collection and compilation

SEEA Core Tables and Reporting

- **Technical Notes** being prepared to provide implementation support for compilers of the accounts
- **Core Tables** represent a simplified form of the key accounts, which will serve as the basis for eventual reporting;
  - The tables present concise, highly relevant information (often in an aggregated format compared to the SEEA-accounts)
- Core Tables will be aligned with information requirements from the SDGs such that they can support the derivation of indicators
- Aligned with existing SEEA based tables collected by Eurostat and OECD

Thank-you