

SEEA-Central Framework an overview

Roel Delahaye



Statistics
Netherlands

SEEA: System of Environmental Economic Accounting



- Multi-purpose statistical framework that describes the interaction between the economy and the environment (stocks en flows)
- Integration of various types of statistics: economic statistics; energy and environment statistics
- The SEEA consists of a coherent, consistent and integrated set of tables and accounts
- Flexible system adapted to countries priorities
- Satellite account to the SNA
- International standard

Towards SEEA 2012

- 1993** Handbook – interim publication
- 2003** Updated SEEA handbook – manual of best practices
- 2006** Decision by UNSC to revise SEEA-2003 handbook into a statistical standard
- 2012:** **Vol 1: SEEA Central Framework**
Recognized as **statistical standard** by UNSC
UN agencies, World Bank, IMF, OECD and the European Commission
- Ch 3: Physical flow accounts
 - Ch 4: Environmental activity accounts
 - Ch 5: Asset accounts
 - Ch 6: Integrating and presenting the accounts
- 2013** Implementation strategy adopted by Statistical Commission



SEEA volume 2 and 3

2013: SEEA Experimental Ecosystem Accounting

Not a statistical standard but conceptual framework for testing by countries



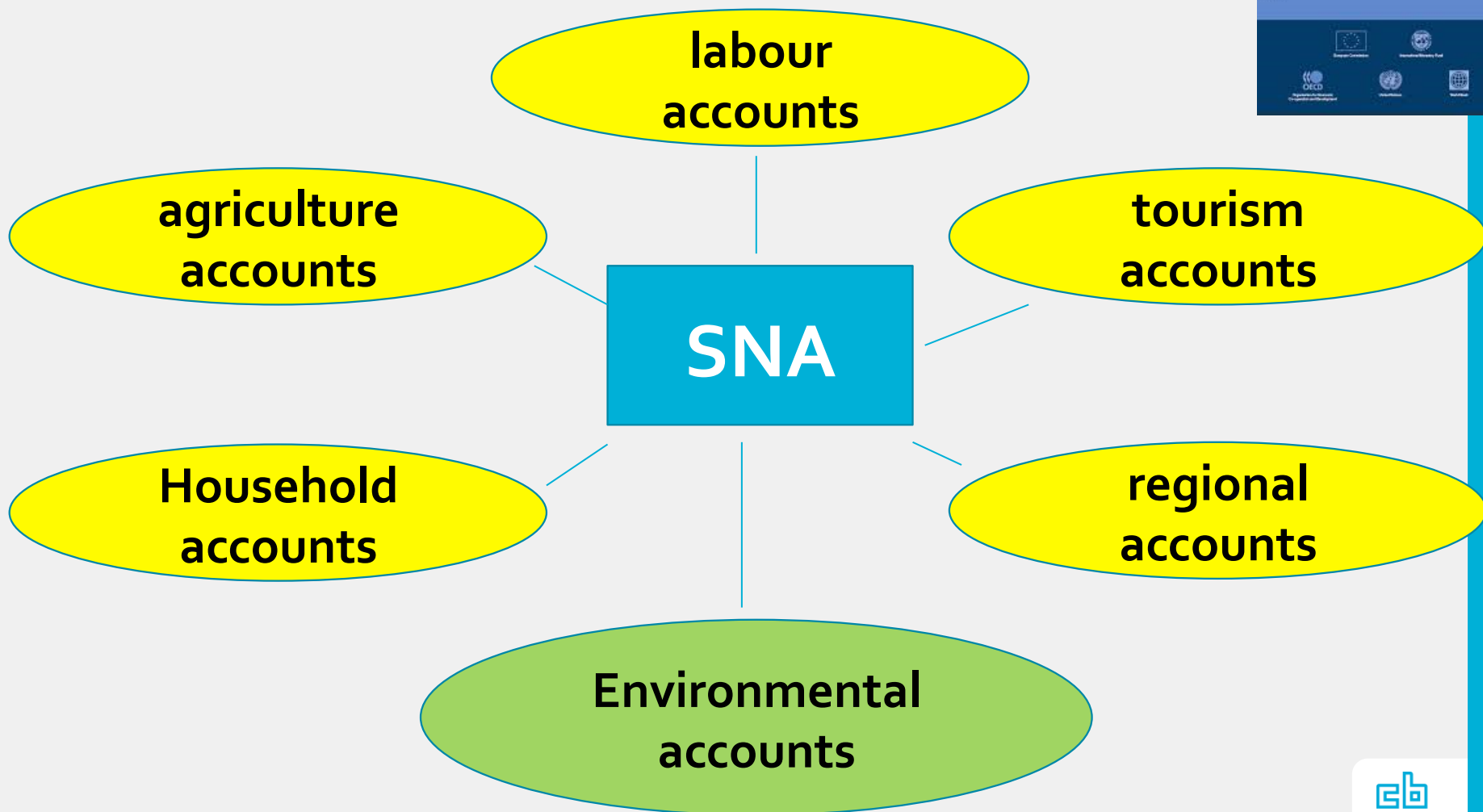
2013: SEEA Extensions and applications

Analyses, applications, indicators of SEEA-CF data



Satellite accounts

System of
**National
Accounts**
2008



SEEA builds on SNA



Satellite account of SNA:

- Use of accounting approach
- Use of same concepts, definitions and classifications

Extensions / modifications

- Physical dimension: stocks and flows
- Addition of non-monetary flows
- Additional classifications and definitions : for example classification for environmental activities, natural resources etc.
- Extension of scope: extended asset boundary

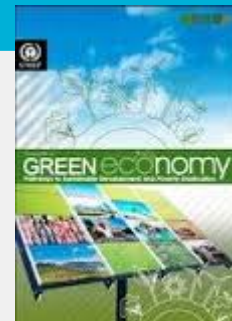
Why SEEA?



- Economic prosperity depends on the ability of the environment to supply natural resources and to absorb pollution.
- The development of the SEEA has been driven by a desire of policy makers to have more complete and robust information on the economy and the environment and to better understand the interactions between the two.

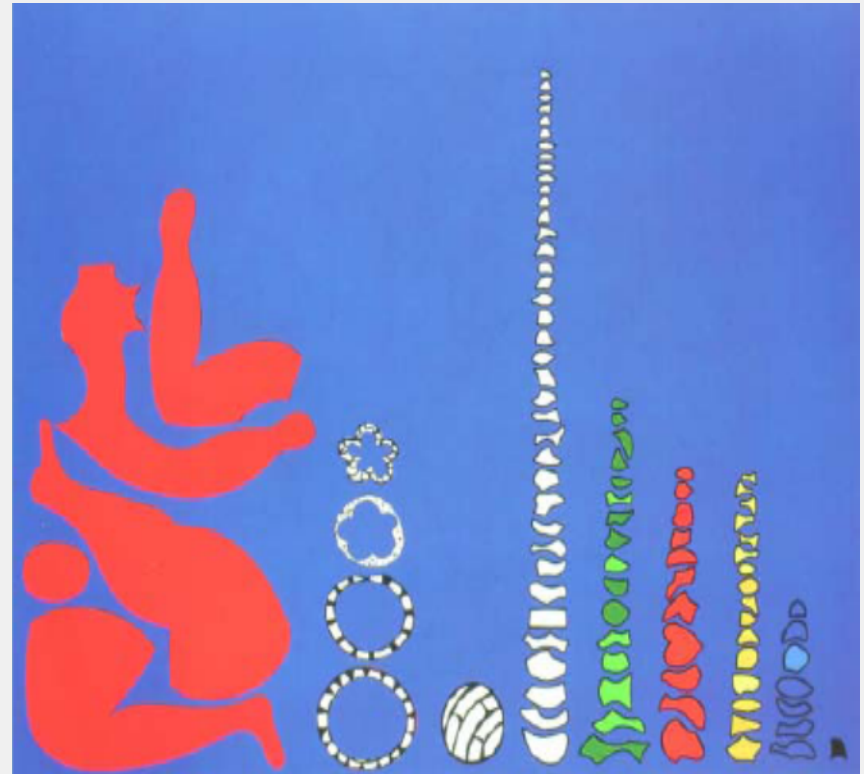
Policy background

- Post-2015 UN development agenda/SDGs
- Green Growth/Green Economy
- Broader measures of progress/Beyond GDP
- Natural Capital Accounting/ WAVES
- TEEB
- Well-being indicators/Measuring progress
- Wealth accounting
- Europe 2020
- Convention on biodiversity
- National policies



Single statistics: Information silos

- Lot of diversity; developed independently to address a particular issue
- Not always easy to see the whole picture, or how it relates to other statistics
- Correlation is difficult; (different definitions, concepts, updates etc)



SEEA: Integrated information

- Single design were single parts fit together
- Still room for diversity and individual outputs.
- Consistent information and identification of data gaps
- Interconnections between economy, environment and society



Accounts of the SEEA-CF

1. Physical flow accounts



2. Asset accounts



3. Environmental activity accounts



4. Combined physical and monetary accounts



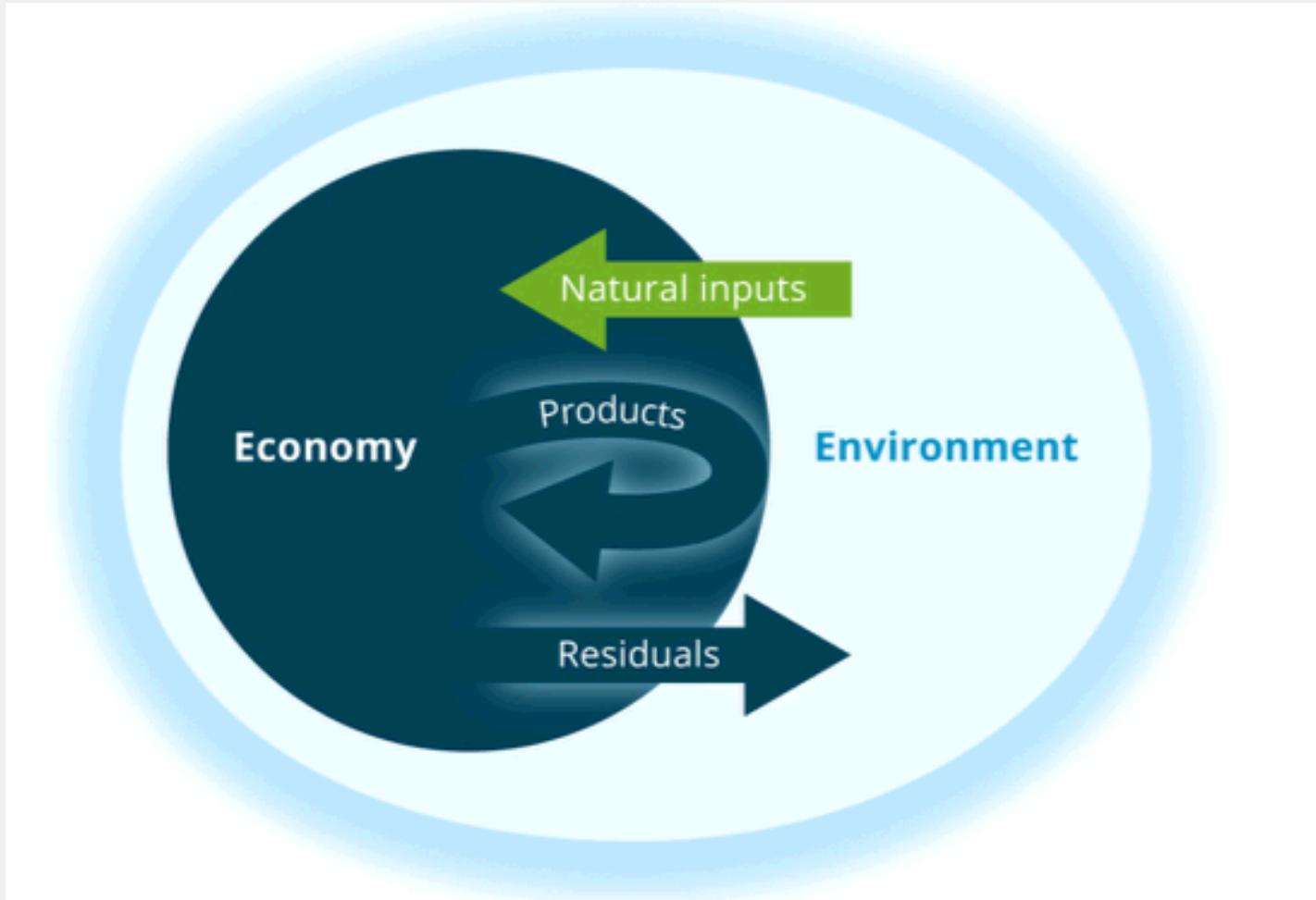
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1. Physical flow accounts (PSUT)



Supply and use tables



	Industries	Households	Accumulation	Rest of the world	Environment	Total
Supply table						
Natural inputs					Flows from the environment	Total supply of natural inputs
Products	Output			Imports		Total supply of products
Residuals	Residuals generated by industry	Residuals generated by final household consumption	Residuals from scrapping and demolition of produced assets			Total supply of residuals
Use table						
Natural inputs	Extraction of natural inputs					Total use of natural inputs
Products	Intermediate consumption	Household final consumption	Gross capital formation	Exports		Total use of products
Residuals	Collection and treatment of waste and other residuals		Accumulation of waste in controlled landfill sites		Residual flows direct to environment	Total use of residuals

Examples of indicators physical flow accounts



- Decoupling
- Efficiency
- Dependencies
- Environmental impact
- Footprint analyses
- Input/output analyses
- Circular economy
- Biobased economy

2. Asset accounts



Environmental assets: the naturally occurring living and non-living components of the earth that may provide benefits to humanity

The **scope of environmental assets in the SEEA-CF** is defined through a focus on the individual components that comprise the environment.

➔ Energy reserves, timber, fish etc.

Why asset accounts: Measure depletion and degrading of environmental assets as a result of economic activity.

Physical scope is not limited to those assets with economic value.

Accounting structure



Opening stock of environmental assets

Additions to stock

Growth in stock

Discoveries of new stock

Upward reappraisals

Reclassifications

Total additions of stock

Reductions of stock

Extractions

Normal loss of stock

Catastrophic losses

Downward reappraisals

Reclassifications

Total reductions in stock

Revaluation of the stock*

Closing stock of environmental assets

* Only applicable for asset accounts in monetary terms

Examples of indicators asset accounts



- Wealth of natural resources
- Development both monetary and physical resources over time
- Where and when the benefits and costs of natural resource use accrue
- Depletion adjusted income and (genuine) saving

3) Accounts for environmentally related activities and transactions



- Environmental expenditure; environmental goods and service sector; emissions permits; environmental subsidies; taxes
- Explicitly identify environmental transactions already existing in the SNA
- Classification according to environmental activity (CEA)

Examples of indicators for environmental activities and transactions

- National expenditure on environmental protection
- Environmental versus other taxes
- Green value added (as share of GDP) and Green jobs (as share of total employment)



Data sources for environmental accounts



1) Existing statistics and accounts

→ National accounts

→ Economic statistics (international trade statistics, production statistics)

→ Energy statistics (energy balances, data on renewable energy)

→ Environmental statistics (emission inventories, waste, nutrient balances)

→ Nature and agricultural statistics (extraction biomass, land cover)

→ Other: transport statistics, price statistics, consumption statistics etc.

2) Survey data

3) Administrative data

4) External sources (expert reports, government reports, etc.)

Compilation

- Collection of data sources
- Putting the data in the accounting structure
- Correcting for SNA / SEEA concepts: for example correction for residence principle
- Applying SEEA classifications
- Confront data from different sources and make adjustments
- Identify and fill data gaps



Summary: why SEEA ?

Relevance

- Taking the environment into account
- Monitoring the interactions between the economy and the environment with a consistent set of indicators to support policy makers
- Can also be used with a limited set of information

Consistency and reliability

- Provides checks and balances (supply = use)
- Ensures data are internally consistent
- Allows various types of disaggregation: activity (ISIC), sector, region, purpose etc.)
- Allows comparisons in time and between countries

Efficiency

- No additional surveys needed
- Environmental accounts can also be used to strengthen national accounts