



# SEEA revision Process and issues

*Expert Group Meeting on Environmental Accounting  
for the ESCWA Region*

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*Beirut, 14-16 October 2009*



# Outline

- Why the SEEA?
- SEEA revision and elevation to standard
  - Governance
  - Process
  - Issues
- Relationship between the SEEA and its sub-systems and international recommendations



## Why the SEEA?

- Climate change
- Green new deal/ Green economy initiative
- Commission on Economic Performance and Social Progress
- Beyond GDP initiative
- Sustainable development indicators
- MDG indicators



# What is SEEA?

- Integration framework that measures interaction between economy and environment
- Multipurpose framework bringing together information from different sources for deriving indicators and analysis
- Consistent with System of National Accounts (SNA)
  - Common classifications (ISIC, CPC)
  - Common concepts (e.g. residence)
- Expands the analytical capacity of national accounts
  - Enlarged asset boundary (e.g. ecosystems)
  - Includes complementary elements (e.g. physical information)
  - Elaborates aspects that are not explicitly identified in the accounts (e.g. ETS)
- Used to identify more sustainable paths of development (indicators and modeling)



# Environmental-Economic Accounting vs Environment Statistics

Environment statistics:

- Often developed to answer one particular question or problem
- Difficult to figure out if all information is included
- Not always easy to see the whole picture, or how it relates to other things



*Source: Julie Hass*



# Environmental-Economic Accounting vs Environment Statistics

Environmental accounts:

- Help to make sense of the larger picture
- Help to identify pieces that are missing
- Can make connections to other statistics - especially economic statistics

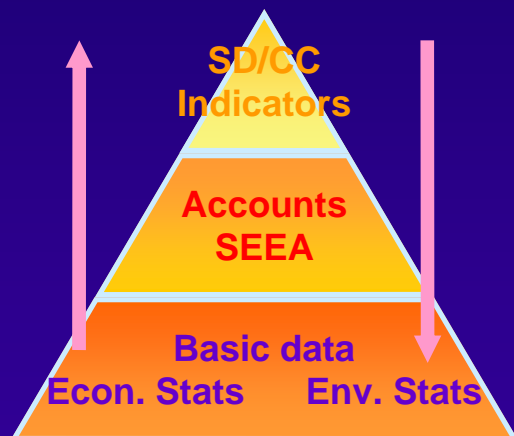


*Source: Julie Hass*



# Why an accounting approach?

policy  
relevance



Inter-linkages -  
underlying causes

Provides **added value**:

- Integrates basic statistics from different sources and links it with other types of statistics
- Improves statistical quality by guaranteeing consistency (checks and balances)
- Provides policy-makers with coherent time series of data, indicators and descriptive statistics for scenario modeling
- Implicitly defines ownership and hence responsibility for environmental impacts



# SEEA modules

- **Asset accounts:** record stocks and changes in stocks (flows) of natural resources such as land, forest, water and minerals
- **Physical and hybrid flow accounts:** provide a systematic physical description of production and consumption processes, including their natural resource inputs, product throughputs and outputs i.e. wastes. Link the physical information to the economic accounts
- **Monetary accounts:** separately identify environmentally- related transactions presented in the existing SNA flow accounts in order to make them more explicit for analysis
- **Environmentally-adjusted aggregates:** combine modules of SEEA to form a full-sequence of accounts from which aggregates such as Green GDP, or Net Saving can be derived.





## 3 main features of the SEEA

- Links flows and stocks
  - ⇒ Impacts of human activities on the state of the environment
- Links physical information on the environment with economic information
  - ⇒ Resource productivity, evaluation of trade-offs and impacts of economic instruments
- Presents all resources in a common framework
  - ⇒ Impacts of deforestation on water resources



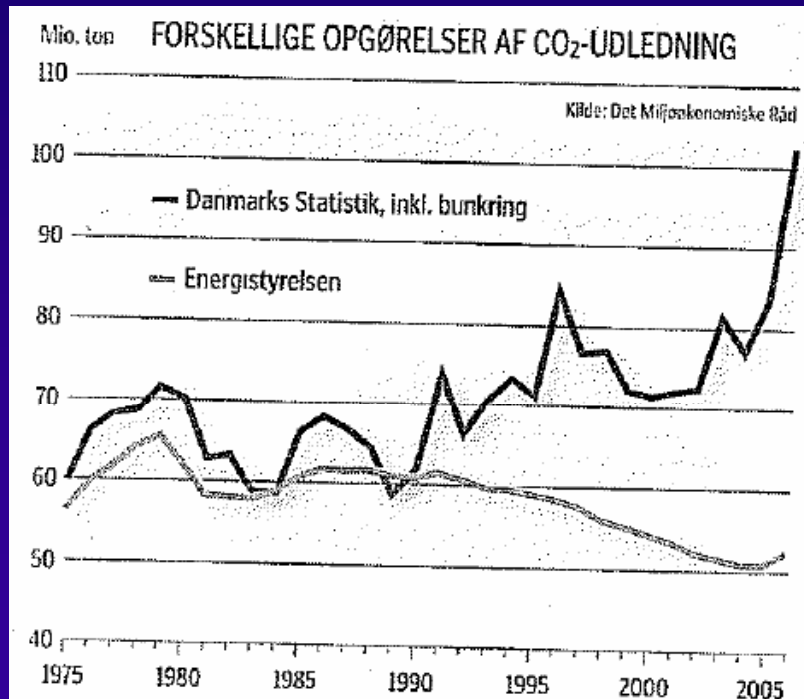
## Example: Climate change

- GHG/aerosol emissions by industry
- Energy/emission intensity by industry (consistently)
- Assess the effectiveness of carbon taxes on energy intensity of industries
- Analyze the effectiveness of emission trading permits
- Assess expenditures on technology and their financing
- Assess the effects of 'carbon leakage' through decomposition analysis of driving forces of emissions
- Calculation of indirect emissions
- Changes in land use
- Carbon sequestration by forest



## Example: Danish newspaper

“Is decoupling a myth?”

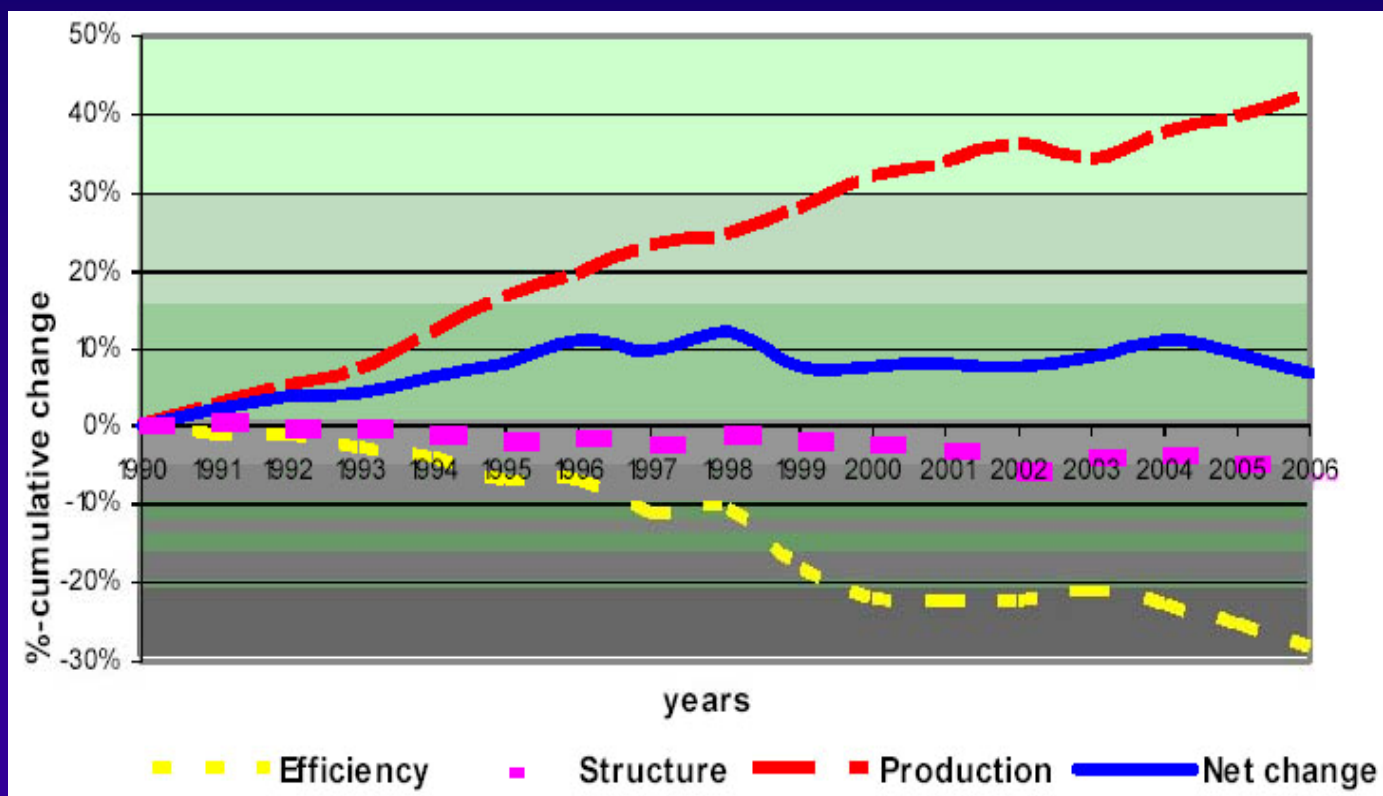


Source: Dagbladet Information

Conceptual  
differences matter  
and are highly  
policy relevant  
for Denmark

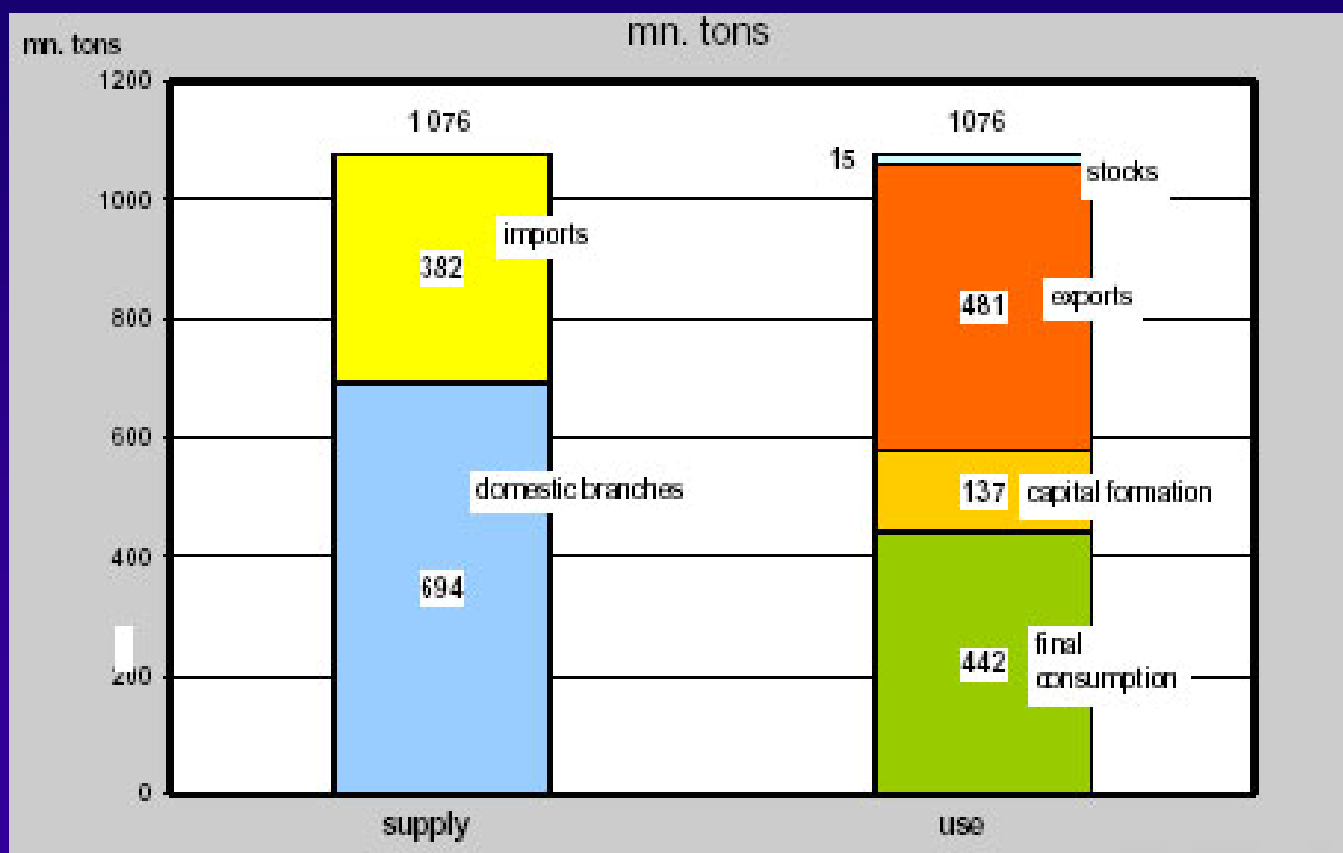


## Global warming emissions - Netherlands



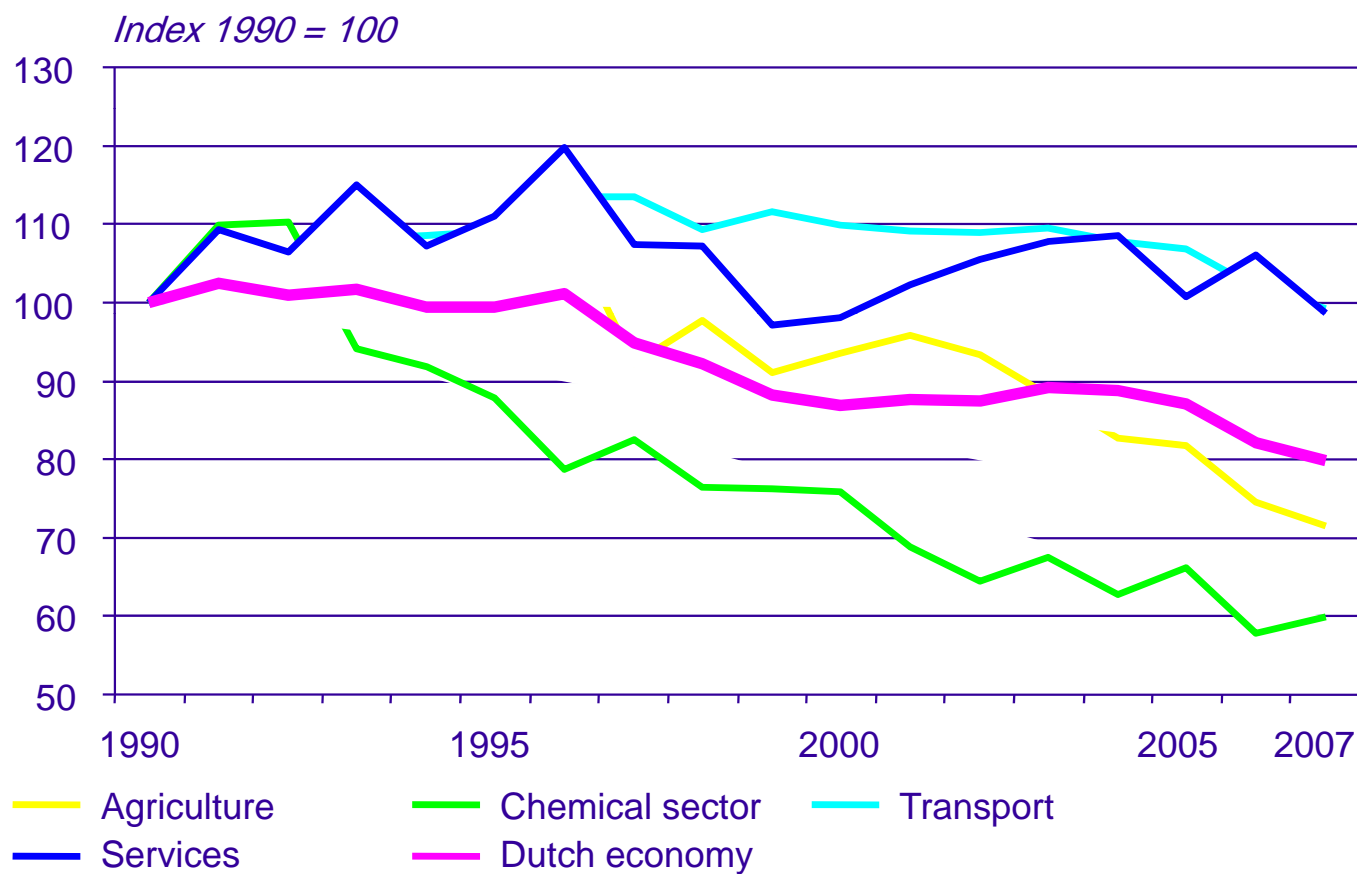


## Embodied CO<sub>2</sub> emissions in Germany





## Energy intensity of industries - Netherlands





# Towards the SEEA standard

The United Nations Statistical Commission considered environmental-economic accounting “mature” enough to be elevated to an international statistical standard at the par with the SNA

SEEA W was adopted by UNSC as an interim international statistical standard in 2007

What is a standard?

- Agreed concepts, definitions, classifications, tables and accounts
- Result of broad consultation and general applicability of the concepts
- Will be followed by :
  - Implementation strategy
  - Data collection
  - Data quality framework



# Revision process

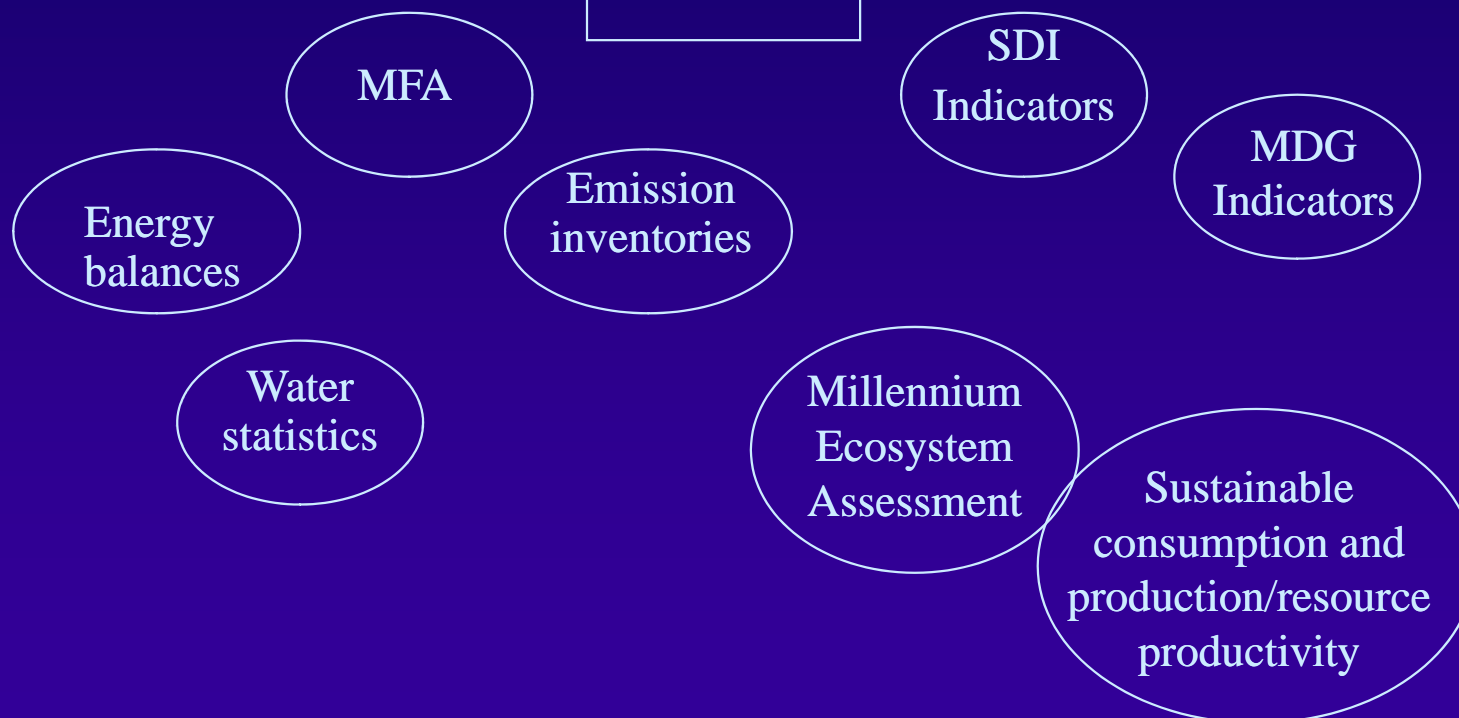
- The United Nations Committee of Experts on Environmental-Economic Accounting (UNCEEAA) was established by the UN Statistical Commission
- Mandate UNCEEAA:
  - (a) Provide strategic vision, direction and coordination to mainstream environmental-economic accounting and env. stat. in national, regional and international statistical systems;
  - (b) Develop normative statistical standards
  - (c) Promote the development of integrated databases
  - (d) Promote the implementation of standards in countries
  - (e) Promote the use of official statistics in scientific and policymaking communities
- Programme of work
  - Revision of SEEA highest priority





# Towards SEEA standard

SEEA





# SEEA and other publications

ISIC, CPC, HS

SEEA

SNA

SEEA-W

SEEA-E

SEEA-MFA

TSA

IRWS

IRES

IRWaste

IRIS

IRTourism

...

Compilation  
guidelines

Compilation  
guidelines

Compilation  
guidelines

Compilation  
guidelines

Data

Data

Data

Data

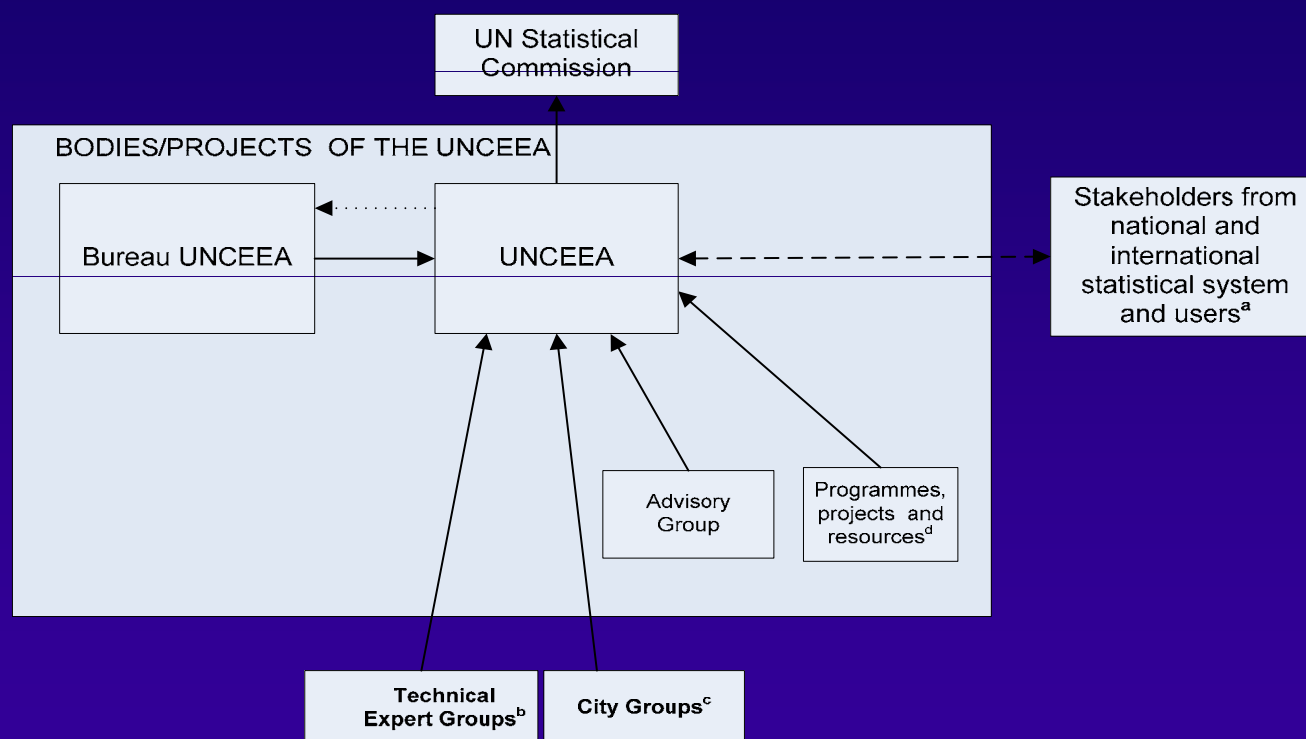
Data

Data quality assessment

Best practices/knowledge base

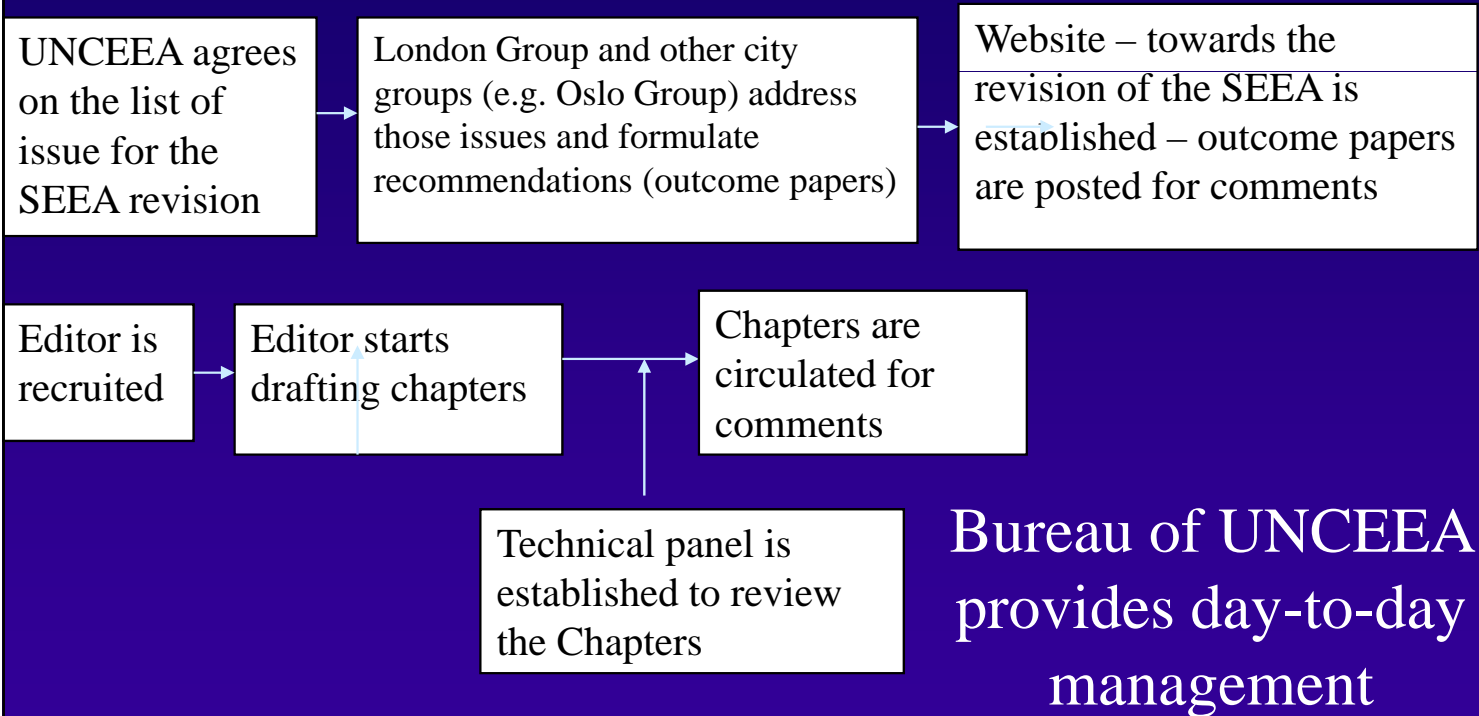


# Governance





# SEEA Project Management Framework (PMF)





# Revised SEEA

- 3 Volumes
  - Volume 1 will cover the standard
    - Agreed concepts, methodologies, classifications, tables and accounts
  - Volume 2 will cover topics that are highly policy relevant but the methodology is not yet mature
    - Ecosystem accounts and related classification of ecosystem services
    - Physical impacts on the environment (weighing of pollutants for toxicity)
    - Valuation of ecosystems
    - Valuation of degradation
  - Volume 3 – Applications of the accounts
    - Climate change
    - Sustainable Consumption and Production/Resource Productivity
    - Sustainability



## Timeline – SEEA revision

- Volume 1 and related parts of Volume 3 to be submitted to UNSC in 2012
- Volume 2 and related parts of Volume 3 – UNSC 2013



# Main issues – towards SEEA standard

- Depletion and depletion-adjusted aggregates
- Valuation of renewable and non-renewable resources
- Agreed classifications
  - Physical flows (i.e. waste, natural resources, etc.)
  - Environmental assets
  - Resource management expenditures
  - Environment industry
- Linking the SEEA framework with existing systems
  - Linking IPCC emission inventories with emission accounts
  - Linking energy balances (by technology) with energy accounts (by economic activity)
  - Linking economy-wide material flow accounts with the economic accounts
- Recording emission permits and permits to access resources
- Carbon sequestration and carbon account



## Main issue – SEEA Vol.2

- Ecosystem accounts
  - Classification of ecosystem services
- Valuation of degradation
- Valuation of ecosystems
- Environmentally-adjusted aggregates