

# Introduction to Environmental-Economic Accounting

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**Training on application of UNFC  
for sustainable resources  
management**

19–20 June, 2019

Nur-Sultan, Kazakhstan

midsummer.ca





# Overview

- Why environmental accounting?
- What is the System of Environmental-Economic Accounting?

# Why Environmental Accounting?



# Good information is essential to good decision making



- Information must be integrated to be useful!
  - Integrated means **structured**, **complete** and **coherent**
- When it comes to environmental information, though...
  - ...there are often problems**



# Environmental information today...

- Is based on many competing theories and concepts
- Is often collected *ad hoc* for specific purposes (e.g., one policy, regulation or indicator)
- Is not easily applied to other uses
- Has few accepted aggregation rules, interpretations or functional relationships

The picture is not clear



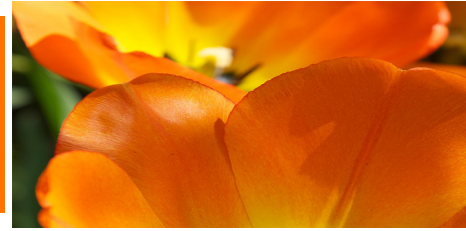


... and is often not up to the measurement challenge

- Sustainable development
- Green economy
- Climate change
- Biodiversity
- Resource productivity
- Pollution
- Consolidated reporting for multi-lateral environmental agreements

That's why we need to  
see the  
**“Complete Picture”**

# A solution: Integrated environmental-economic accounting

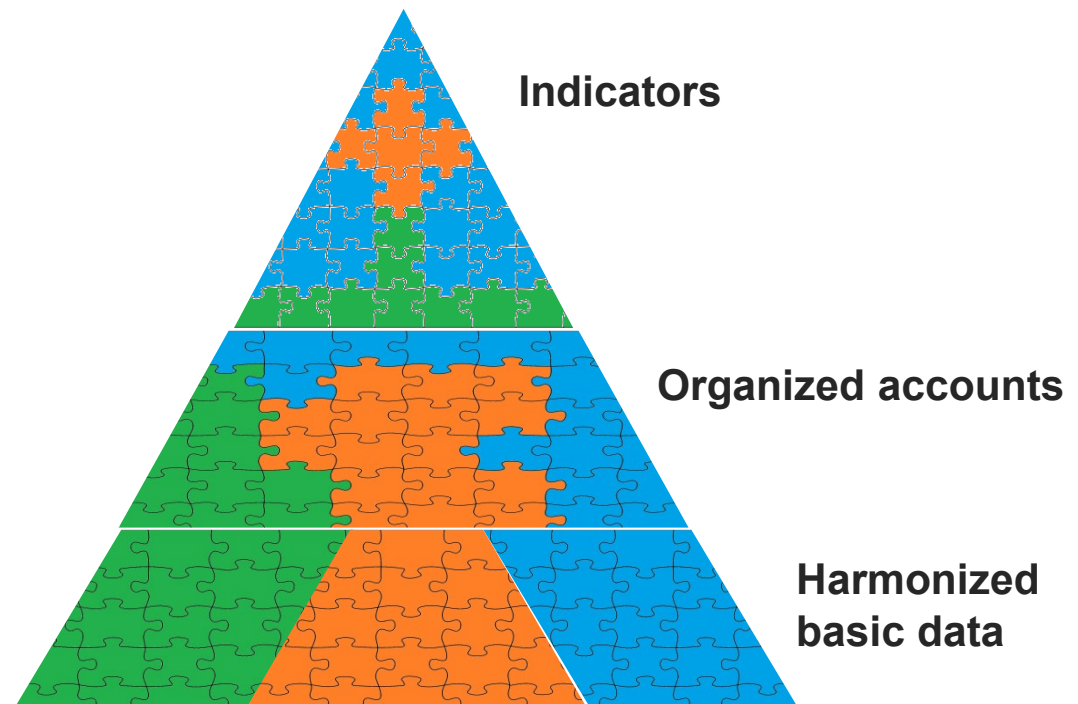


- Environmental-economic accounting allows the complete picture to be seen
- Accounting provides information that is coherent and helps identify data that are missing
- Allows users to better understand the interactions between the environment and the economy



# Benefits of integrated accounting

- Integrated accounting assures:
  - Coherence of environmental data with economic data
  - Exhaustiveness
    - Geographic
    - Sectoral
  - Comparability
    - Over time
    - Across issues





# **The System of Environmental-Economic Accounting (SEEA)**



# What is the SEEA?

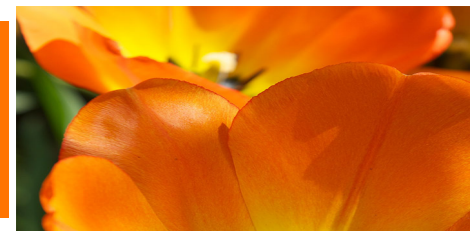


- The *System of Environmental-Economic Accounting 2012* (SEEA) was adopted by the United Nations to promote integrated environmental-economic accounting
- Developed through an inter-governmental process
- Published by the UN, EU, FAO, IMF, OECD, WB

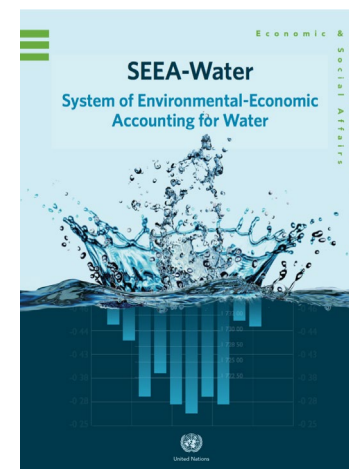
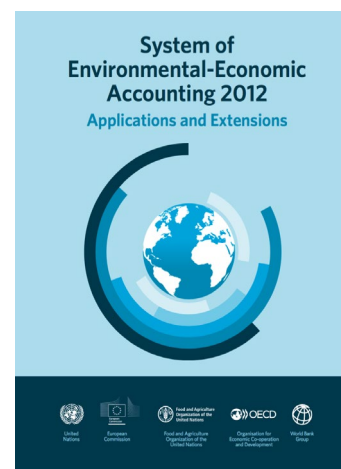
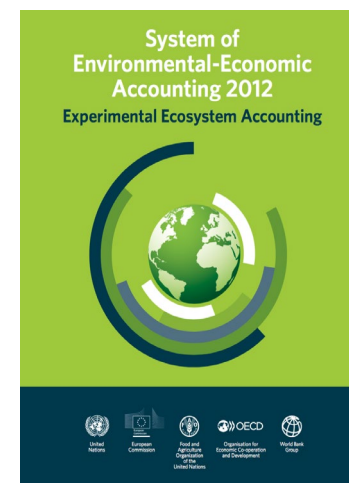
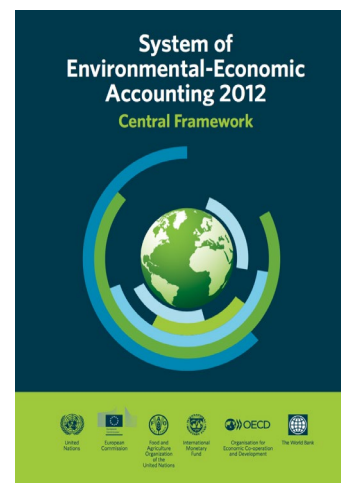
# The SEEA: History

- 1993: First SEEA interim handbook
- 2003: Revised SEEA handbook (set out structure for SEEA-CF)
- 2006: UN decided to elevate SEEA to an international standard
- 2012: SEEA – The Central Framework adopted as international standard
- 2013: SEEA – Experimental Ecosystem Accounting published as “best practices”
- 2013: SEEA – Applications and Policy Uses
- 2019: SEEA ecosystem accounting revision and standardization

# The SEEA handbook suite



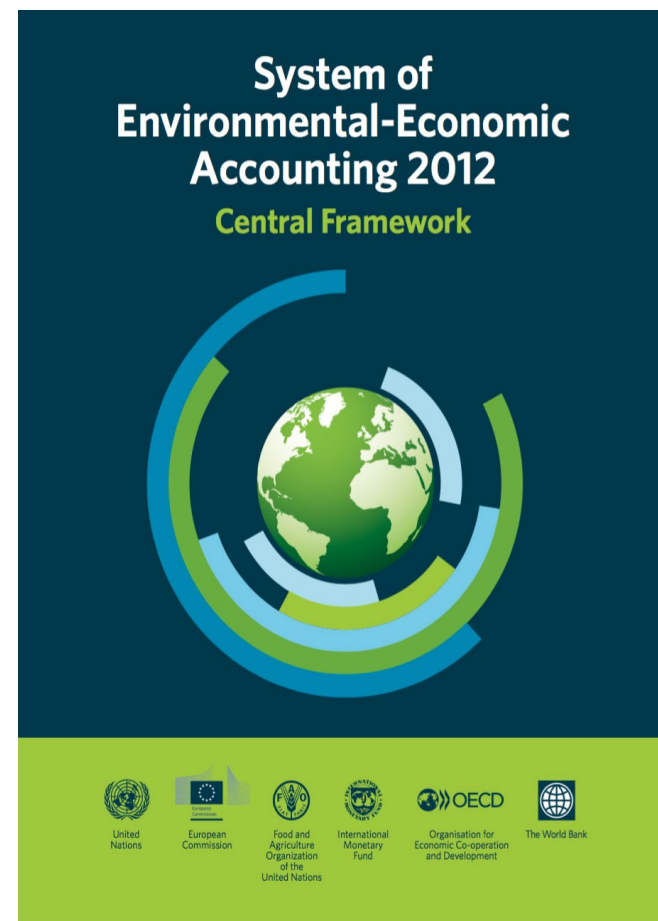
- **SEEA Central Framework (SEEA-CF)**  
The **international statistical standard** for measuring the environment and its relation to the economy
- **SEEA Experimental Ecosystem Accounts (SEEA-EEA)**  
**Best practises** (not a standard) for tracking changes in ecosystems and linking those changes to economic and other human activity
- **SEEA Policy Applications**  
How to use the SEEA Central Framework accounts for decision making, policy formulation and research
- **SEEA Water, SEEA Energy, etc.**  
Specialized handbooks of best practices (not standards) on specific topics



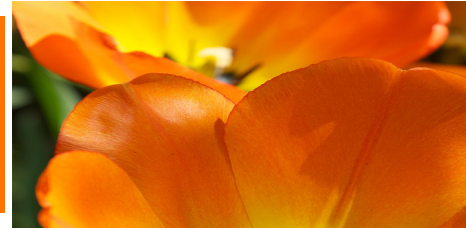
# SEEA-CF as statistical standard



- Countries are “encouraged to implement the standard”
- International organizations have obligations to assist countries in the implementation
- Implementation strategy was adopted by the Statistical Commission in March 2013



# The SEEA-CF comprises three main accounts



- **Flow accounts:** supply and use tables for products, natural resources, ecosystem inputs and residuals or wastes from economic activities.
  - Physical and/or monetary values
- **Stock accounts** for environmental assets: natural resources, land and ecosystems.
  - physical and/or monetary values
  - Use the UNFC to classify assets
- **Activity / purpose accounts** that explicitly identify environmental transactions already existing in the SNA.
  - e.g., Environmental Protection Expenditure (EPE) accounts

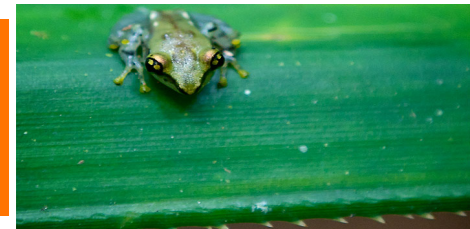
# SEEA Experimental Ecosystem Accounting



- Complements the SEEA-CF
- Integrated statistical framework for accounting for ecosystem assets and associated services
- Important first step in development of statistical framework for ecosystem accounting
- UN encourages countries to test the framework
- Currently being revised and elevated to an international standard



# SEEA Applications and Extensions



- Companion document to SEEA Central Framework
- Highlights potential of data from SEEA accounts to be
  - Applied to policy and research questions
  - Extended to integrate with data in other domains
- Provides bridge between compilers and analysts





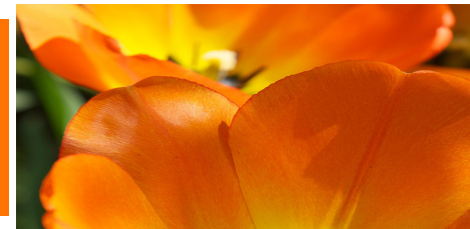
# Applications

- Indicators for environmental analysis
  - Resource use and efficiency
  - Production, employment and expenditure relating to environmental activities
  - Environmental taxes and subsidies
  - Natural resource depletion
- Environmentally extended input-output tables

# Extensions

- Extension of SEEA to household sector
  - Household access to natural resources
  - Linking household activity and environmental pressures
  - Linking SEEA to tourism
- Geospatial analysis

# Some reference material



- Briefing notes:
  - Briefing note on SEEA Central Framework:  
<http://unstats.un.org/unsd/envaccounting/Brochure.pdf>
  - Briefing note on SEEA Experimental Ecosystem Accounting:  
[http://unstats.un.org/unsd/envaccounting/workshops/int\\_seminar/note.pdf](http://unstats.un.org/unsd/envaccounting/workshops/int_seminar/note.pdf)
- Methodological publications:
  - SEEA Central Framework: [http://unstats.un.org/unsd/envaccounting/White\\_cover.pdf](http://unstats.un.org/unsd/envaccounting/White_cover.pdf)
  - SEEA Experimental Ecosystem Accounting:  
<http://unstats.un.org/unsd/statcom/doc13/BG-SEEA-Ecosystem.pdf>
  - SEEA Applications and Extensions:  
<http://unstats.un.org/unsd/statcom/doc13/BG-SEEA-AE.pdf>
- Library – searchable library of publications (e.g. country case studies, methodological publications, etc.)
  - <http://unstats.un.org/unsd/envaccounting/ceea/archive/>
- Research agenda accompanying SEEA-Experimental Ecosystem Accounting
  - <http://unstats.un.org/unsd/statcom/doc13/BG-SEEA-ResearchAgenda.pdf>

# Thank you

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