



# AREA C

## Development of Global Databases for SEEA

UNCEEA meeting  
Virtual, 20-21 June 2023

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SEEA





# Moving towards 2025 objectives

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- Progress made
- Way forward
- Discussion



PROGRESS MADE

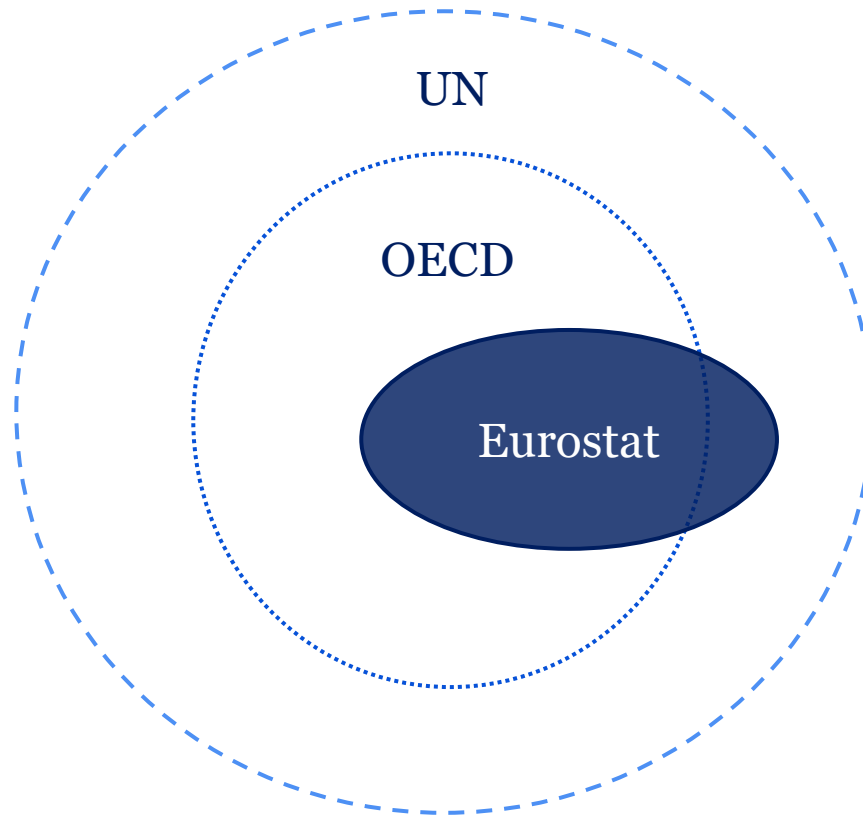


# Where do we stand today?

Priority SEEA accounts	Agencies involved	Geographical scope	Time coverage
<b>Air emissions</b>			
Annual - Reported or estimated by IOs	<i>Eurostat, OECD, UNSD</i>	~50 economies	Up to <b>2021</b>
Quarterly - Estimated by IOs	<i>Eurostat, OECD, IMF</i>	Macro-Regions + EU	Up to <b>2022Q4</b>
Air transport CO <sub>2</sub> emissions	<i>OECD</i>	<b>Global</b>	2019M1- <b>2023M03</b>
Maritime transport CO <sub>2</sub> emissions		<b>Global</b>	2019M1- <b>2022M12</b>
<b>Physical Energy Flows</b>			
	<i>Eurostat, IEA, UNSD</i>	~60 economies	2008- <b>2020</b>
<b>Economy-wide material flows</b>			
Demand-based (footprint)	<i>Eurostat, UN Environment (and IRP), OECD</i>	<b>Global</b>	1970- <b>2020</b> ( <b>2021 EU</b> )
<b>Land cover (&amp; land use)</b>			
	<i>FAO, OECD, UNSD ARIES (EEA, JRC)</i>	<b>Global</b> <i>(countries, macro-regions, special groups)</i>	1992- <b>2020</b> (cover) 1961- <b>2020</b> (use)
<b>Water (resources, use)</b>			
	<i>Eurostat, OECD, UNSD, UN Environment, FAO (+ WHO, UN-Habitat)</i>	Selected countries <i>depending on data availability</i>	1970- <b>2020</b>



# 1<sup>st</sup> Global data collection (2023)



## Objectives

### – Coverage

- AEA & PEFA, annual data

### – Completeness & comparability

- Common questionnaire
- Webinars and video for national compilers

### – Timeliness

- Validated and disseminated by the end of the 2023/ early 2024

**Close cooperation with DGI-3**



# Maritime Transport CO<sub>2</sub> emissions: OECD database (June 2023)

## Global coverage

140 economies disseminated

## Granular

20 types of vessels

## Timely

up to 2022M12

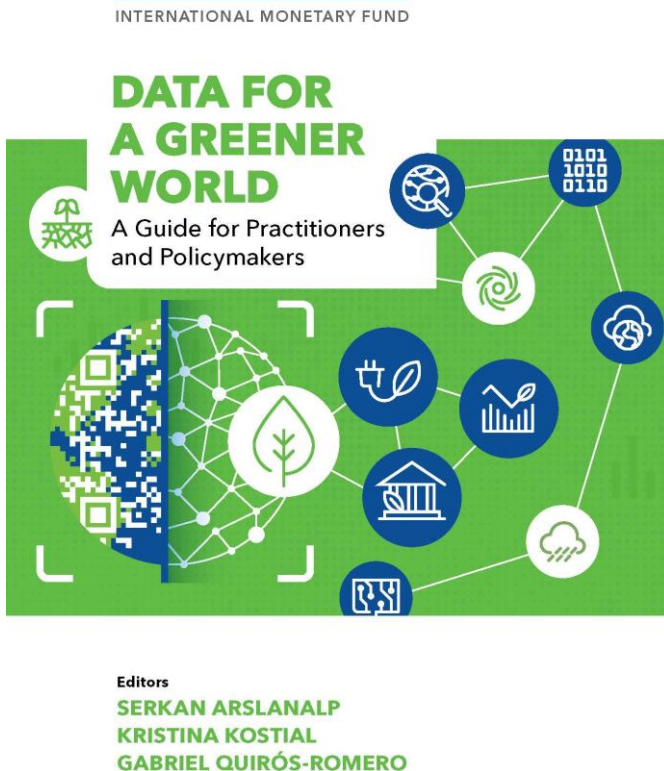
## Frequent

Monthly





# Data for a Greener World: A Guide for Practitioners and Policymakers (April 2023)



## Presents

structured discussion of measuring the key economic and financial dimensions of climate change.

- **Q-GHG emissions by economic activity (Chapters 1)**
- CO<sub>2</sub> Emissions embedded in international trade and domestic demand(Chapters 2),
- Physical risks (Chapters 3-4)
- Transition risks (Chapters 5-7)
- Cross-border dimensions of climate risks (Chapters 8-9).

<https://www.imf.org/en/Publications/Books/Issues/2023/04/04/Data-for-a-Greener-World-A-Guide-for-Practitioners-and-Policymakers-522462>



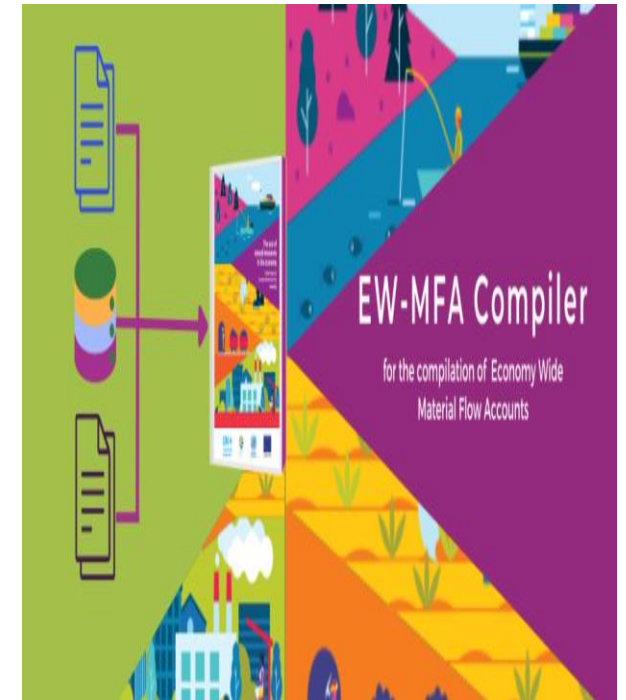
# Compiler for Economy-Wide Material Flows Accounts

(March 2023)

## Tool to support countries in building EW MFA

UNEP (in consultation with CSIRO)

1. Introduction, brief description of tables and definitions (green set);
2. Basic tables
  - Domestic Extraction
  - Imports/Exports
  - Material Outflows and Balancing Items
  - Headline indicators
3. Tools to convert available statistics into the required MFA categories,



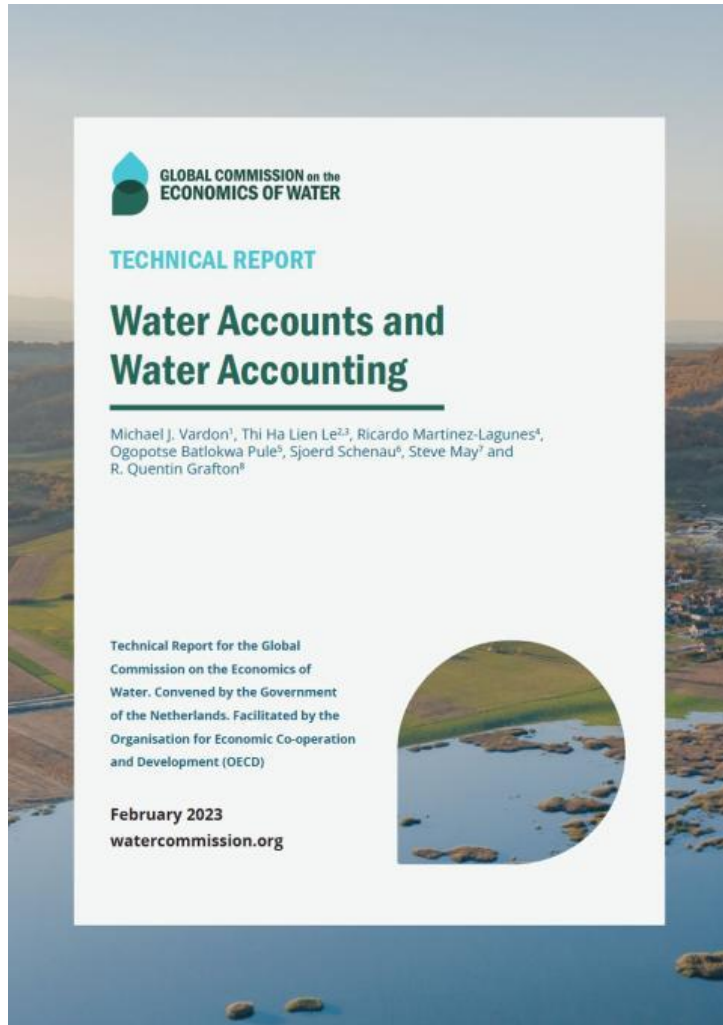
<https://wedocs.unep.org/handle/20.500.11822/41948>





# Water Accounts and Water Accounting - Technical Report

(February 2023)



## Explains

Importance water accounting, with multiple examples

## Shows

How water accounting is a key information tool needed by all water decision makers

<https://watercommission.org/publication/water-accounts-and-water-accounting/>



## Data



For more information

**Visit**

<https://seea.un.org/content/data>

### National Data

Dozens of countries in all regions of the world compile SEEA accounts on a regular basis. The accounts compiled vary based on the priorities of the countries, as well as the available data. The SEEA library contains accounts published by countries over the years and can be accessed [here](#). A summary of the current status of the SEEA implementation can be found in the results of the [2020 Global Assessment](#).

### International Databases

The [UNCEEA](#) has been tasked by the UN Statistical Commission to explore the the creation of global databases for various SEEA Central Framework and SEEA Ecosystem Accounts. A number of international organisations, including Eurostat, FAO, OECD and UN Environment, are working in close collaboration with the UNCEEA and UNSD on compiling global databases. Global data structure definitions for the select SEEA Central Framework accounts have been established and can be found [here](#).

Progress is ongoing, but currently the following databases are available for the SEEA Central Framework:

- The [UN Environment International Resource Panel Global Material Flows Database](#) for global material flows
- Regional databases for the European Union, which are compiled by Eurostat. Databases exist for [air emission](#), [physical flow accounts for energy](#), [material flows and resource productivity](#), [environmental taxes](#), [environmental protection expenditures](#), and [environmental goods and services sector accounts](#).
- [Air emission accounts](#), compiled by OECD

### CURRENT EVENTS

#### London Group on Environmental Accounting, 29th Meeting

📅 11 September 2023 to 14 September 2023

#### 18th Meeting of the UN Committee of Experts on Environmental-Economic Accounting

📅 20 June 2023 to 21 June 2023

#### Regional Training Workshop on the SEEA Ecosystem Accounting for Asia and the Pacific

📅 05 June 2023 to 08 June 2023



# WAY FORWARD



# Air Emissions Account: way forward



## Data

- A-AEA maintain global data collection and related databases
- Q-AEA
  - explore closing the gap with Q-GDP (2 months after the end of the quarter)
  - explore dissemination of national breakdown
- Maritime transport: bridge residence-territory

## Methodology

- A-AEAs: estimation methodology for non-Annex I countries of UNFCCC
- LULUCF (in the context of a possible SEEA-CF rev.)
- Road transport



# Physical Energy Flow Accounts: way forward

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## **Data**

Maintain regular data collection and implement a global databases

## **Methodology**

Further exploration of estimation methodologies for accounts derived from energy balances





# Economy-Wide Material Flows Accounts: way forward



## Data

- UNEP/IRP global material flow database
- Progressively integrate national data using a common data template (a pre-filled EW-MFA questionnaire for SDGs, UNEP)
- Reconcile national data with international estimates (UNEP-IRP)
- Continue capacity building in countries (UNEP)

## Methodology

- Further develop and test the harmonised estimation method for demand-based material flows (OECD with Eurostat & UNEP)



# Land Accounts: way forward

3<sup>rd</sup> Technical Expert Meeting

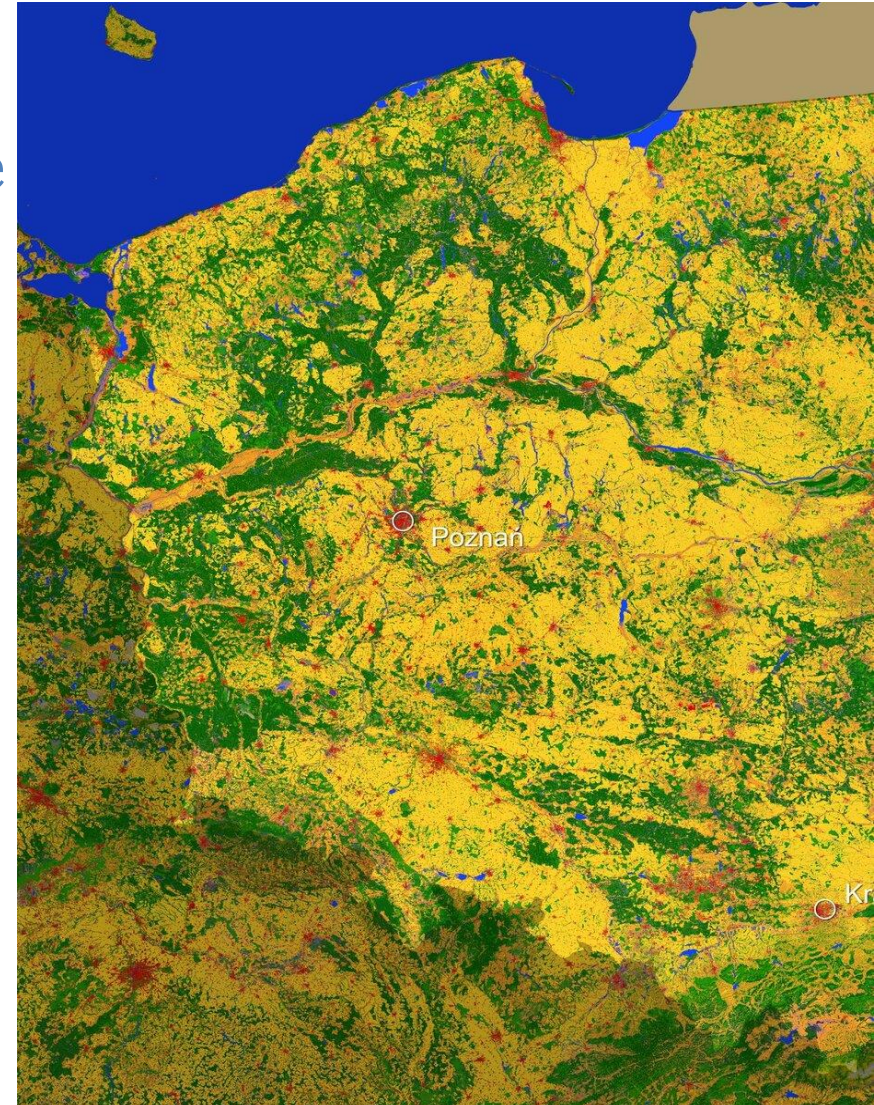
## Towards a global land cover SEEA database

(Scheduled for H2 2023 tbc)

### Objectives


- i. Develop an ontology of LC classes that would help meet the various information needs, while promoting harmonization;
- ii. Identify a minimum common list of classes
- iii. Continue reviewing coherence between existing databases and data collection – FAO, OECD, UNCCD: structure and content, data sources, and related methodology
- iv. Establish regular data collection [validation by countries] and develop a reporting template (FAO; UNSD/ARIES for SEEA; OECD; others)

*[To be pilot tested]*





# Land Special Issue on "Advances on Land Cover/Land Use Ontologies for Innovative Production/Utilization of Land Information."



**land**  
an Open Access Journal by MDPI

IMPACT FACTOR 3.905 CITESCORE 3.2

Advances on Land Cover / Land Use Ontologies for Innovative  
Production / Utilization of Land Information

**Guest Editors**  
Dr. Antonio Di Gregorio, Dr. Matieu Henry

**Co-Guest Editors**  
Chris T. Hill, Prof. John Latham, Prof. Dr. Mohammed Abed Hossain, Dr. Khalid Mahmood, Dr. Foster Mensah

**Deadline**  
30 September 2023

**Special Issue**  
Invitation to submit

mdpi.com/si/139068

The submission deadline is **30 September 2023**.

Papers regarding, but not limited to, the following topics are invited for this Special Issue:

- innovative ways to define/characterize land cover/land use ontologies;
- multi-disciplinary research that investigates the intrinsic relationship between land cover and land use;
- use of new standards and new methodologies for the functional integration of earth observation data, field data, remote sensing and other ancillary information;
- automatic comparison and similarity assessment of existing different land cover ontologies using ISO standard (ISO 19144-2).LCML (Land Cover Meta Language) to assure semantic interoperability and harmonization of data sets from national to global level;
- role, importance and use cases of land information for Sustainable Development Goals, climate action (SDG 13) and life on land (SDG 15).





# Water Accounts: way forward

## Goal

### Populate simple SEEA water accounts

- Water resources, water supply and use
- Timeline depends on countries' measurement efforts

### Pragmatic approach

- Based on existing questionnaires and continued efforts to improve data availability and quality:
  - OECD/Eurostat questionnaire section on inland waters
  - UNSD/UNEP questionnaire on water statistics
  - *FAO Aquastat and questionnaire*
- Based on SEEA Technical Note
- Based on earlier Eurostat work
- Review of country replies to questionnaire
  - Remaining gaps and ways to address them

### Technical Expert Meeting (Q4 2023, tbc)

- IOs, selected country experts





# DISCUSSION



The committee is requested to comment on:

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- 1. The progress for the five priority accounts**
- 2. Way forward: objectives and priorities**  
**including what improvements should be prioritized**  
**to increase the relevance of priority accounts**  
(geographic coverage, length of time series, timeliness, granularity, ...)



Thank you for your attention!

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