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## AREA C: Establishing global SEEA-related databases - The case of water accounts<sup>1</sup>

### 1. Introduction

#### *Background on global SEEA-related databases*

At its 10<sup>th</sup> meeting in June 2015, the UNCEEA considered the dissemination of SEEA-based data at the international level as an important step in the promotion and implementation of the SEEA, and agreed to work towards the establishment of global SEEA-related databases to showcase the SEEA. At its 11<sup>th</sup> meeting in June 2016, the Committee agreed to focus its efforts on a *small set of priority accounts* for which data could easily be brought together and disseminated, i.e. energy accounts, air emission accounts, material flow accounts, as well as land accounts, and possibly also *water accounts*. The aim is to provide coherent data sets that can inform integrated policy making and analysis at the national and international levels, and that can also be used to monitor and analyse progress towards the SDGs and the 2030 Agenda.

The *approach* taken is pragmatic and cost-efficient. It draws as much as possible upon existing global datasets and on established international arrangements, applying the subsidiarity principle and adopting a layered approach, to minimise the response burden on countries. To ensure that the different work streams and the required data transfers are efficient, modern data exchange and dissemination formats and technologies are used (including SDMX and DSDs).

#### *Current status of activities supporting global SEEA related databases*

Since the 2016, important progress has been made with:

- The elaboration of estimation methods to fill data gaps and populate accounts for which national data are not yet available (air emissions: OECD; energy: UNSD).
- The preparation and updating of manuals: global manual on material flow accounting by UN Environment with Eurostat and OECD; updated Eurostat handbook “*Economy-wide material flow accounts (EW-MFA) handbook – 2018 edition*”; internationally harmonised methodology for estimating demand-based material flows (OECD with Eurostat and UN Environment; work in progress)
- The development of global DSDs (Eurostat, OECD).
- The availability of databases on air emissions (Eurostat, OECD) and material flow accounts (Eurostat, UN Environment, OECD).

Progress has also been made with data on land cover derived from earth observation (FAO and OECD databases) that could be a first step towards global land accounts (under review).

Access to related databases is given through the statistical platforms, data portals and other dissemination tools of the international agencies involved. It has also been proposed to provide access on a dedicated page on the SEEA website.

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<sup>1</sup> Note prepared by the OECD in consultation with Eurostat and UNSD.

## 2. The case of water accounts

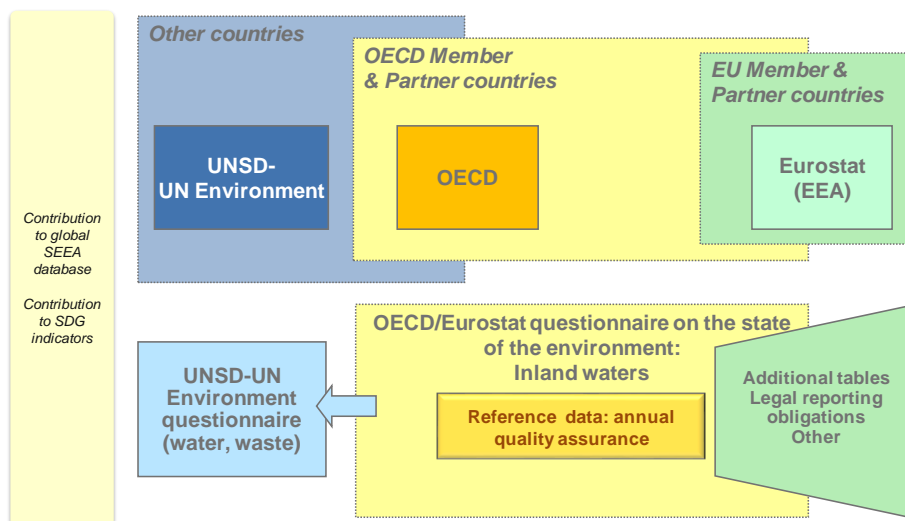
Unlike other priority accounts, work on *water accounts did not progress*. While the collection and provision of data on water is well established globally, the establishment of specific water accounts has so far proven to be difficult, mainly due to data availability and quality problems and a lack of interest in water accounts in some countries.

### *The OECD, Eurostat, UNSD questionnaire*

International water data are collected regularly from countries since the early 1980s. The main vehicle for official data collection is the OECD/Eurostat questionnaire on inland waters, and the coordinated UNSD/UNEP questionnaire, which together provide a quasi-global country coverage.

The data are collected using a *layered approach* so that each country only replies once to one institution. They benefit from well-established quality assurance and validation processes with close involvement of countries and effective international work sharing arrangements (Figure 1). Continuity in the work by the agencies involved is guaranteed. Co-operation with other international agencies is ensured.

**Figure 1. Collecting water data through questionnaire: a layered approach at international level**



*Note:* Eurostat focuses on EU Member States, countries of the European Free Trade Association (EFTA), and EU candidate countries. The OECD focuses on its non-EU members, on its accession countries and on selected partner countries. UNSD sends the UNSD/UN Environment Questionnaire to the rest of the world. Since 2018, the FAO also collects water-related data from countries through questionnaire.

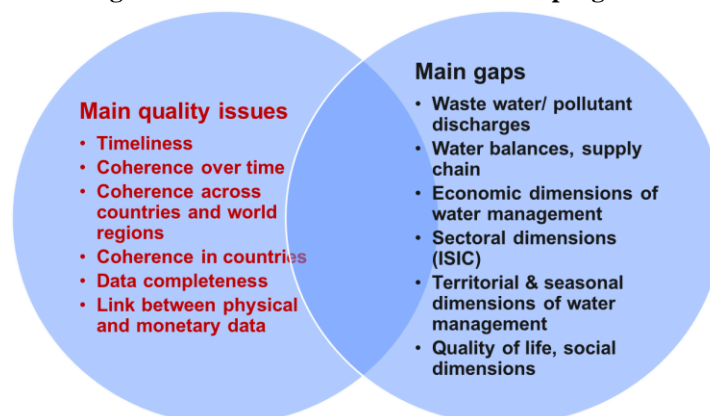
The *data requested* take stock of available water resources in countries, showing changes in water use and quality, and revealing efforts made to restore and maintain water availability of appropriate quality for specific uses in countries. They relate to freshwater resources, abstractions and use; wastewater treatment (population connected to a treatment plant, etc.); wastewater and pollutant discharges into the environment (after or without treatment); and the quality of rivers and lakes.

Though not fully consistent with the SEEA, several questionnaire tables are based on the *principles of water accounts* and collect data with an ISIC breakdown (e.g. freshwater resources and abstraction, water supply and use, wastewater generation and discharge).

### *Data gaps and quality issues*

Although all OECD countries, EU countries and many other countries in the world produce data on water, **important gaps remain** and, despite continued efforts, the quality of the data currently available at international level is insufficient to effectively support policy work and the calculation of indicators (Figure 2). Compared to these longstanding data gaps and quality issues, the coherence of the current data collection with the SEEA appears to be a rather minor issue.

**Figure 2. Water information – Areas for progress**



Source: OECD.

### *Ongoing efforts to improve data quality*

Efforts are underway to **improve the data collected** in close cooperation with countries, and to further harmonise them at international level. Some of the **gaps could be filled** by making **better use of existing national data** sources that are often spread among different administrations and institutions. Other gaps could be filled by encouraging countries to use **new data sources** (e.g. **earth observation** data for surface water resources, land covered by water, and selected quality parameters), or by encouraging international organisations to exploit these new data sources directly in their work. Doing so would also facilitate links with ecosystem accounts. The specific potential of earth observation for providing a statistical basis for water accounts however needs to be further examined.

The **questionnaire is currently being reviewed** by OECD with Eurostat and UNSD<sup>2</sup> to:

- Ensure that the data collected from countries can be used to calculate the corresponding **global water related SDG indicators** (e.g. 6.4.1 water use efficiency and 6.4.2 water stress). This only requires small amendments, plus a redefinition of reporting priorities and the collection frequency. It concerns mainly the questionnaire tables on available resources, abstractions, supply, and discharges. Similar amendments would be made to the UNSD/UN Environment questionnaire to ensure global coherence. Amendments would only be made after the completion of the currently ongoing review of the global SDG indicator set and the adoption of a revised indicator set by the UN Statistical Commission in spring 2020.

<sup>2</sup> The review was welcomed by the OECD Working Party on Environmental Information (WPEI) at its 2018 meeting, and the Eurostat Working Group on Water Statistics at its meeting early 2019. Specific proposals for amendments will be discussed at the WPEI meeting in November 2019.

- Re-assess the *consistency with the SEEA* Central Framework and SEEA Water. This is particularly important for tables with an industry breakdown and other tables on water resources and use (available resources, abstractions, supply, discharge) that could be used to populate SEEA core tables. Remaining differences with SEEA concepts and definitions have been identified and will be documented; adjustments could be proposed as appropriate.

Consultations also take place with the FAO to discuss arrangements for future data collections (possible joint questionnaire; layered collection; co-ordinated timelines)<sup>3</sup>. The aim is to “collect once and use for multiple purposes” (e.g. calculate SDG and other international indicators, populate SEEA water accounts, support policy work).

These efforts could pave the way for improving the availability and quality of data on water abstraction, supply and use by industry, and providing internationally harmonised “*SEEA friendly*” water data.

### 3. Proposed way forward

Given the quality issues described above, the availability of coherent source statistics for populating SEEA water accounts is not yet guaranteed, and establishing a global SEEA database on water accounts is currently premature. The proposal hence is to adopt a pragmatic step-wise approach to advance the measurement agenda and progressively move towards the establishment of water accounts. This would include the following:

- Strengthen ongoing efforts to improve the availability and quality of water data already collected and harmonised through the OECD/Eurostat and UNSD/UN Environment questionnaire (fill gaps, improve completeness and coherence over time, improve documentation and metadata, ...). (continued work by the agencies involved)
- Identify those variables in the questionnaire that would enable the construction of relatively simple SEEA core tables with focus on physical supply and use tables by industry and on data that underlie international indicators, including SDG indicators. Possibly identify additional variables that would need to be covered (in 2020).
- Construct simple pilot accounts for selected countries (as of Q3-Q4 2020-2021).
- Depending on the results obtained, consider developing a method to adjust existing water data to the SEEA principles (in 2021).
- Re-assess the feasibility of establishing a global SEEA database on water accounts (in 2022).

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<sup>3</sup> In 2018, the FAO developed a new questionnaire to collect water data from countries to populate the AQUASTAT database and calculate the SDG indicators for which the FAO is the custodian. This new questionnaire overlaps with the OECD/Eurostat and UNSD/UN Environment questionnaire, and duplicates the longstanding data collection. The agencies involved have since been working together to find ways to coordinate and avoid double work.

#### 4. Questions for discussion

1. Does the UNCEEA agree with the assessment that it is currently premature to establish a global database on water accounts, and that a step-wise approach is required to improve the availability of coherent source data?
2. What are the views of the UNCEEA on the proposed steps for progressively improving data quality and testing the feasibility of establishing a global SEEA core database on water accounts?
3. What are the views of the UNCEEA on current efforts to improve international water-related data and harmonise their collection with the aim to “collect once and use for multiple purposes”?