

Water statistics: UNSD/UNEP Questionnaire on Environment Statistics – results and uses of the data collection and relevance to SDG indicators

Prepared by Environment Statistics Section,
UNSD for:

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Environment Statistics, 10-19 November 2020**

UNSD UN environment programme

United Nations Statistics Division (UNSD) and United Nations Environment Programme
QUESTIONNAIRE 2020 ON ENVIRONMENT STATISTICS

Section: **WATER**

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Table W5	Population Connected to Wastewater Treatment
Table W6	Supplementary Information Sheet



Outline

- Current status of the UNSD/UNEP Questionnaire on Environment Statistics (water section)
- The Questionnaire and dialogues held with international partners
- SDG indicators related to this Questionnaire
- Observations and future steps

UNSD/UNEP Questionnaire on Environment Statistics



- Since 1999, UNSD has collected water and waste data 9 times biennially, from 160-170 UN member states.
- Questionnaire are sent to National Statistical Offices and Ministries of Environment.
- Questionnaires are not sent to Eurostat and OECD members and candidate members.
- Response rate typically hovers around 50% (2018, 52%).
- The 10th round of questionnaires were sent in Nov 2020 with a deadline of 31 Jan, 2021. No imputation, no estimation.
- Outputs are: the UNSD Environmental Indicator Tables, Country Snapshots, and Country Files. Available at: <https://unstats.un.org/unsd/envstats/index.cshhtml>
- Questionnaires are available at: <https://unstats.un.org/unsd/envstats/questionnaire>

Data

Data collection is implemented through the biennial Questionnaire on Environment Statistics. Data collection started in 1999. UNSD environmental indicators derived from these data, as well as for the eight other themes, are now available.

- [UNSD environmental indicators](#)
- [Country Snapshots](#)
- [Country Files](#)
- [Questionnaires](#)



UNSD/UNEP Questionnaire on Environment Statistics - Water



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UNSD/UNEP Questionnaire on Environment Statistics - Water

- Sent to about 165 countries in November, 2020.
- Per UNSD's experience, increasingly NSOs more so than Ministries of Environment are serving as country focal points.
- Changes in variables being collected in the 2020 collection:
 - Water returned without use;
 - Net freshwater abstracted (both re-appearing for the first time since 2010)
- Changes in scope: Two more countries became Eurostat or OECD candidate or potential candidate countries, and hence moved to Eurostat's or OECD's scope.



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Table W2: Freshwater Abstraction and Use

Line	Category	Unit
1	Fresh surface water abstracted	mio m ³ /y
2	Fresh groundwater abstracted	mio m ³ /y
3	Freshwater abstracted (=1+2)	mio m ³ /y
	<i>of which abstracted by:</i>	
4	Water supply industry (ISIC 36)	mio m ³ /y
5	Households	mio m ³ /y
6	Agriculture, forestry and fishing (ISIC 01-03)	mio m ³ /y
7	<i>of which for:</i> Irrigation in agriculture	mio m ³ /y
8	Mining and quarrying (ISIC 05-09)	mio m ³ /y
9	Manufacturing (ISIC 10-33)	mio m ³ /y
10	Electricity, gas, steam and air conditioning supply (ISIC 35)	mio m ³ /y
11	<i>of which for:</i> Electric power generation, transmission and distribution (ISIC 351)	mio m ³ /y
12	Construction (ISIC 41-43)	mio m ³ /y
13	Other economic activities	mio m ³ /y
14	Desalinated water	mio m ³ /y
15	Reused water	mio m ³ /y
16	Imports of water	mio m ³ /y
17	Exports of water	mio m ³ /y
18	Total freshwater available for use (=3+14+15+16-17)	mio m ³ /y
19	Losses during transport	mio m ³ /y
20	Total freshwater use (=18-19)	mio m ³ /y

UNSD/UNEP Questionnaire on Environment Statistics - Water

- The former (2018) version of table W2.
- Note “Freshwater abstracted”
- Note the formula for line 18:
Total freshwater available for use
- Countries’ footnotes explaining data can help UNSD better understand how countries adapt definitions per their circumstances. Footnotes also help UNSD consider modification of variables.
- Insight offered per footnote received from Belarus regarding line 19, losses during transport: “... includes water losses during transportation, other losses, as well as transit water and mine, mine water not intended for use.”

Table W2: Freshwater Abstraction and Use

UNSD/UNEP Questionnaire on Environment Statistics - Water

- The **new** (2020) version of table W2.
- The re-insertion of: “Water returned without use”: Water discharged into freshwaters without use, or before use. Occurs primarily during mining and construction activities. Excludes discharges into the sea.
- Returns of water replenish the source, as opposed to discharges of water to marine resources which are no longer freshwater.
- The former, “Freshwater abstracted”, is now “Gross freshwater abstracted”
- Lines 4 and 5 are added.
- Line 20 formula now excludes any “water returned without use”
- Following dialogue with key international stakeholders and countries, "Water returned without use" and "Net freshwater abstracted" reappear in Table W2 in the 2020 Questionnaire for the first time since the 2010 version. The variable "Freshwater abstracted" in Table W2 has been renamed "Gross freshwater abstracted", however, the two variables are conceptually identical.

Line	Category	Unit
1	Fresh surface water abstracted	mio m ³ /y
2	Fresh groundwater abstracted	mio m ³ /y
3	Gross freshwater abstracted (=1+2)	mio m ³ /y
4	Water returned without use	mio m ³ /y
5	Net freshwater abstracted (=3-4)	mio m ³ /y
	<i>of which abstracted by:</i>	
6	Water supply industry (ISIC 36)	mio m ³ /y
7	Households	mio m ³ /y
8	Agriculture, forestry and fishing (ISIC 01-03)	mio m ³ /y
9	<i>of which for: Irrigation in agriculture</i>	mio m ³ /y
10	Mining and quarrying (ISIC 05-09)	mio m ³ /y
11	Manufacturing (ISIC 10-33)	mio m ³ /y
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13	<i>of which for: Electric power generation, transmission and distribution (ISIC 351)</i>	mio m ³ /y
14	Construction (ISIC 41-43)	mio m ³ /y
15	Other economic activities	mio m ³ /y
16	Desalinated water	mio m ³ /y
17	Reused water	mio m ³ /y
18	Imports of water	mio m ³ /y
19	Exports of water	mio m ³ /y
20	Total freshwater available for use (=5+16+17+18-19)	mio m ³ /y

Collaboration with partners at international level on Water Statistics

- Regular teleconferences started in 2018 between OECD, Eurostat and UNSD, then involved FAO, and then UN-HABITAT and WHO.
- Similar to what a multi-stakeholder consultation might resemble at national level where NSO can collaborate with line ministries/departments.
 - Streamline data reporting mechanisms for SDG Indicators 6.3.1, 6.4.1 and 6.4.2.
 - Minimize reporting burden for countries.
 - Promote unified concepts and definitions among all water data collection organizations.
 - Identify further demands for SDG indicators and the System of Environmental-Economic Accounting. Identify instances when statistics should be able to be directly aggregated into accounts, and when not so.
- Standing agenda items include: 1. Status of data collections; 2. Forthcoming workshops, capacity development activities, etc.
 - This has included discussion on OECD concept papers for its Working Party on Environmental Information, other international organizations participating and presenting at this EGES.
- In-depth discussion of conceptual terms (e.g. actual evapotranspiration, water use compared to water abstraction, independent wastewater collecting system, etc.)



Results of collaboration with partners at international level on Water Statistics

- Notification to Chief Statisticians in National Statistical Offices, and Heads of Ministries of Environment of this collaboration when sending out Questionnaires to countries; notification of relevant SDG indicators for which the respective data collection may inform (namely, 6.3.1, 6.4.1, 6.4.2)
- OECD’s participation at this EGES; comments made by several organisations for an OECD paper for its Working Party meeting during which it consults countries; UNSD’s participation in FAO’s capacity development activities and vice-versa
- Undoubtedly, a closer harmonization of definitions, as well as the sharing of data and focal points among international organisations, has led to improved reporting from countries.
- FAO’s use of a “Water equivalencies terminologies” document in their data collections (see below).

FAO AQUASTAT	Eurostat/OECD	UNSD-UNEP
WATER RESOURCES	Eurostat/OECD (Table 1)	UNSD-UNEP (Table W1)
Total Renewable Water Resources (Long-term average)	Total Renewable Fresh Water Resources (Long term annual average)	Renewable freshwater resources (Long term annual average)
WATER WITHDRAWALS BY SOURCES	Eurostat/OECD (Table 2)	UNSD-UNEP (Table W2)
In this section, <u>fresh water</u> withdrawals are synonyms and exact equivalent to fresh water abstraction, so most of the variables have an exact equivalent in the 3 compared questionnaires.		
Total freshwater withdrawal	Total Freshwater (surface & ground)	Freshwater abstracted
Surface water withdrawal	Fresh surface water: total gross abstraction	Fresh surface water abstracted
Groundwater withdrawal	Fresh groundwater: total gross abstraction	Fresh groundwater abstracted
Desalinated water produced	Desalinated water	Desalinated water
Produced municipal wastewater	Urban wastewater, total generated	Wastewater generated by households

Water Statistics and the SDG Indicators



- Indicator 6.3.1 (Tier II): Proportion of domestic and industrial wastewater safely treated
 - Custodian agencies: WHO, UN-HABITAT, UNSD
 - Metadata [\[link\]](#) updated September, 2020
 - *Relevant variables from UNSD/UNEP Questionnaire:* Total wastewater generated; wastewater generated (by ISIC industries; households)
- Indicator 6.4.1 (Tier I): Change in water-use efficiency over time
 - Custodian agencies: FAO. Partners: UNEP, IUCN, UNSD, OECD, Eurostat
 - Metadata [\[link\]](#) updated March 2019
 - *Relevant variables from UNSD/UNEP Questionnaire:* Gross freshwater abstracted; Total freshwater use (by ISIC industry; households)
- Indicator 6.4.2 (Tier I): Level of water stress: freshwater withdrawal as a proportion of available freshwater resources
 - Custodian agencies: FAO. Partners: UNEP, IUCN, UNSD, OECD, Eurostat
 - Metadata [\[link\]](#) updated August 2020
 - *Relevant variables from UNSD/UNEP Questionnaire:* Renewable freshwater resources; Gross freshwater abstracted



Observations and future Steps in Water Statistics...

- The current and ongoing teleconferences among OECD, Eurostat, FAO, UN-HABITAT, WHO and UNSD have helped harmonize terminologies, reduce reporting burden for countries.
- In the past UNSD or FAO has held bilateral conversations with countries about coordinating responses to the international data collections. This may be expanded to include other agencies for discussions with selected countries as another means for capacity development.
 - **Would countries be interested in participating?**
- UNSD will be most grateful to the 165 or so member states for making effort to provide a coordinated response to the 2020 UNSD/UNEP Questionnaire on Environment Statistics.
- In addressing demand pertaining to SDG target 6.3 wording, specifically, “to minimize release of hazardous chemicals and materials”, and to “substantially increase recycling and safe reuse”.
 - **Could your country work with UNSD on a wastewater pollutant content and related pilot questionnaire in 2021?**

Thank you

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