UNSD

UN environment programme

United Nations Statistics Division (UNSD) and United Nations Environment Programme

QUESTIONNAIRE 2024 ON ENVIRONMENT STATISTICS

Section: WATER

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INTRODUCTION

The biennial data collection which is a joint activity of the United Nations Statistics Division (UNSD) and the United Nations Environment Programme (UNEP) contributes to the development of the UNSD International Environment Statistics Database. The data will be analyzed and consolidated by UNSD for use in international work and will be made available to users at UNSD's website.

The data requested in this questionnaire may be initially collected or compiled by different institutions in a country. The national statistical offices or ministries of environment are asked to bring together the data from these different sources.

Where a country has provided data to previous UNSD/UNEP Questionnaires on Environment Statistics, the 2024 Questionnaire has been pre-filled with these data. Countries are requested to add data for later years and to check the time series for consistency.

The definitions are listed in order of appearance of the variables. Where variables are repeated, the definition can be found where the variable first appeared.

Copies of the questionnaire are available online at:

https://unstats.un.org/unsd/envstats/questionnaire

Data from previous data collections are available at:

https://unstats.un.org/unsd/envstats/qindicators

The water questionnaire asks for key information concerning water resources management in a country. The tables cover renewable freshwater resources, freshwater abstraction and use, the water supply industry (ISIC 36), wastewater generation and treatment, and population connected to wastewater treatment.

Because of the complex nature of water-related environmental issues, countries are asked to provide additional information that assists the analysis and interpretation of the data in the Supplementary Information Sheet (W6).

A useful reference against which water resources data can be compared is the FAO Aquastat database:

http://www.fao.org/nr/water/aquastat/data/query/index.html?lang=en

A data validation section is added next to each table. It includes two validation table types: time series validation and coherence validation. It will help both the country and UNSD to validate the data provided.

Diagrams have been developed by UNSD to demonstrate the relationships between variables in Tables W1, W2, W3 and W4. Respondents are encouraged to use the diagrams for clarifications on the concepts underlying the data requested in this questionnaire.

Changes from the UNSD/UNEP Questionnaire 2022 on Environment Statistics:

Edits have been made to nine of the definitions used in this Questionnaire. All edits are very minor and will not cause any break in time series. A side by side comparison of the edits (2024 version against 2022 version) follows in the below table. The reason for the edits is to maintain close harmonisation with the Joint Organisation for Economic Cooperation and Development (OECD)/Eurostat Questionnaire on the State of the Environment.

Term and definition used in the UNSD/UNEP 2022 Questionnaire on Environment Statistics	Term and definition now being used in the UNSD/UNEP 2024 Questionnaire on Environment Statistics

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Term	Definition	Term	Definition
W1,1: Precipitation	Total volume of atmospheric wet precipitation (rain, snow, hail, dew, etc.) falling on the territory of the country over one year, in millions of cubic metres.	W1,1: Precipitation	Total volume of atmospheric ~~wet~~ precipitation (rain, snow, hail, dew, etc.) falling on the territory of the country over one year, in millions of cubic metres.
W1,3: Internal Flow	Total volume of river run-off and groundwater generated over the period of a year, in natural conditions, exclusively by precipitation into a country. The internal flow is equal to precipitation less actual evapotranspiration and can be calculated or measured. If the river and groundwater generation are measured separately, transfers between surface and groundwater should be netted out to avoid double counting.	W1,3: Internal Flow	Total volume of ~~river~~ run-off and groundwater generated over the period of a year, in natural conditions, exclusively by precipitation into a country. The internal flow is equal to precipitation less actual evapotranspiration and can be calculated or measured. If the run-off and groundwater generation are measured separately, transfers between surface and groundwater should be netted out to avoid double counting.
W1,4: Inflow of surface and groundwaters from neighbouring countries	Total volume of actual external inflow of rivers and groundwater, coming from neighbouring countries. Boundary waters should be divided 50/50 between the two riparian countries, unless other water sharing agreements exist.	W1,4: Inflow of surface and groundwaters from neighbouring countries	Total volume of actual external inflow of surface and groundwater, coming from neighbouring countries. Boundary waters should be divided 50/50 between the two riparian countries, unless other water sharing agreements exist.
W1,6: Outflow of surface and groundwaters to neighbouring countries	Actual outflow of rivers and groundwater into neighbouring countries.	W1,6: Outflow of surface and groundwaters to neighbouring countries	~~Actual~~ Outflow of surface and groundwater into neighbouring countries.
W1,9: Outflow of surface and groundwaters to the sea	Actual outflow of rivers and groundwater into the sea.	W1,9: Outflow of surface and groundwaters to the sea	~~Actual~~ Outflow of surface and groundwater into the sea.

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W2: Fresh surface water	Water which flows over, or rests on, the surface of a land mass; natural watercourses such as rivers, streams, brooks, lakes, etc., as well as artificial watercourses such as irrigation, industrial and navigation canals, drainage systems and artificial reservoirs. For purposes of this questionnaire, water obtained through bank filtration is included under (fresh) surface water. Sea-water, and transitional waters, such as brackish swamps, lagoons and estuarine areas are not considered fresh surface water. Bank filtration is the use of existing geologic formations adjacent to surface water bodies to filter drinking water. Wells are dug in fine, sandy sediments next to water bodies and water is extracted from these wells. Water in the water bodies filters through the sediments, removing contaminants.	Fresh surface water	Water which flows over, or rests on, the surface of a land mass; natural watercourses such as rivers, streams, brooks, lakes, glaciers, snow, ice, etc., as well as artificial watercourses such as irrigation, industrial and navigation canals, drainage systems and artificial reservoirs. For purposes of this questionnaire, water obtained through bank filtration is included under (fresh) surface water. Sea-water, and transitional waters, such as brackish swamps, lagoons and estuarine areas are not considered fresh surface water. Bank filtration is the use of existing geologic formations adjacent to surface water bodies to filter drinking water. Wells are dug in fine, sandy sediments next to water bodies and water is extracted from these wells. Water in the water bodies filters through the sediments, removing contaminants.
W2: Fresh groundwater	Water which is being held in, and can usually be recovered from, or via, an underground formation. All permanent and temporary deposits of water, both artificially charged and naturally, in the subsoil, of sufficient quality for at least seasonal use. This category includes phreatic water-bearing strata, as well as deep strata under pressure or not, contained in porous or fracture soils. For purposes of this questionnaire, groundwater includes springs, both concentrated and diffused, which may be subaqueous.	Fresh groundwater	Freshwater which is being held in, and can usually be recovered from, or via, an underground formation. All permanent and temporary deposits of water, both artificially charged and naturally, in the subsoil, of sufficient quality for at least seasonal use. This category includes phreatic water-bearing strata, as well as deep strata under pressure or not, contained in porous or fracture soils. For purposes of this questionnaire, groundwater includes springs, both concentrated and diffused, which may be subaqueous.
Gross freshwater abstracted	Water removed from any water source (surface water sources, such as rivers, lakes, reservoirs or rainwater; and groundwater sources) either permanently or temporarily. Includes abstraction by the water supply industry for distribution and direct abstraction by other activities for own use. The volume of water abstracted is broken down by main groups of economic activity of the abstractors (according to ISIC Rev.4) and households. Water used for hydroelectricity generation is an in-situ use and should be excluded.	Gross freshwater abstracted	Freshwater removed from any water source (surface water sources, such as rivers, lakes, reservoirs or rainwater; and groundwater sources) either permanently or temporarily. Includes abstraction by the water supply industry for distribution and direct abstraction by other activities for own use. The volume of water abstracted is broken down by main groups of economic activity of the abstractors (according to ISIC Rev.4) and households. Water used for hydroelectricity generation is an in-situ use and should be excluded.
Freshwater	Freshwater is water that contains only minimal quantities of dissolved salts, especially sodium chloride, thus distinguishing it from sea water or brackish water.	Freshwater	Freshwater is water that contains only minimal quantities of dissolved salts, especially sodium chloride, thus distinguishing it from sea water or brackish water (usually considered to be less than 500 milligrams of salt per litre).

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STEPS TO FOLLOW

- ☑ Fill in the contact institution information at the top of each table.
- ☑ Tables are pre-filled with data received from previous UNSD/UNEP Questionnaires. Check the pre-filled data and, if possible, kindly update in the table. Check the pre-filled footnotes and correct them if necessary.
- ☑ If necessary, include footnotes to give additional information on data. Assign codes in alphabetical order (e.g., A, B, C...) in the first column to the right of the data and in the 'Footnotes' section below each table. Write your explanatory text in the footnote text column next to the associated code. If there are big data fluctuations in the time series, add footnotes to explain the large changes. Provide as much information as possible in the footnotes on the source and data collection method for each value.
- ☑ Based on the definitions provided, fill in the tables as much as possible (see the Definitions Sheet). If a different definition or methodology has been used, explain the differences in a footnote or provide the definition and/or methodology applied in the Supplementary Information Sheet (W6).
- ☑ **If the requested data are not available, leave the cell blank. If the requested variable is not applicable (the phenomenon is not relevant) to the country, or the value is less than half the unit of measurement, the cell should be filled with "0".**
- ☑ Report data in the requested unit. A conversion matrix is provided below the description of tables.
- ☑ Attach any documents or reference which could help UNSD to understand your data.
- ☑ After you have filled in the data for each table, check the flagged cases (in red) for data coherence in the data validation section next to each table.

Contact us: If you have any questions, contact the United Nations Statistics Division

- by mail: UN Statistics Division, Environment Statistics Section, DC2-1642, 2 United Nations Plaza, New York, New York, 10017, USA
- by e-mail: envstats@un.org

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DESCRIPTION OF TABLES

Table W1: Renewable Freshwater Resources
Table W1 covers the main components to assess the renewable freshwater resources and their availability in a country. Renewable freshwater (surface and groundwater) resources are replenished by precipitation (less evapotranspiration) falling over the territory of the country that ends up as runoff to rivers and recharge to aquifers (internal flow), and by surface waters and groundwater flowing in from neighbouring countries (inflow). The table also includes the outflow of surface and groundwaters to neighbouring countries and to the sea (which is not included in the equation to determine the amount of renewable freshwater resources). The outflow to neighbouring countries is divided into that which is secured by treaties and that which is not secured by treaties. The data requested in the table are usually based on hydrological/meteorological monitoring and modelling.
Table W2: Freshwater Abstraction and Use
Freshwater can be abstracted from surface waters (rivers, lakes etc.) and from groundwaters (through wells or springs). Water is abstracted by the public or private bodies whose main function is to provide water to the general public (the water supply industry). It can also be directly abstracted by industries, farmers, households and others. The table asks for data on abstraction of freshwater, broken down according to the main activity of the water abstractor, as defined by the International Standard Industrial Classification of All Economic Activities (ISIC Rev. 4). The table covers the amount of water made available for use by abstraction, desalination, reuse and net imports. Total freshwater use equals total water available for use minus losses during transport. The table also covers the overall amount of water used by the main ISIC groupings.
Table W3: Water Supply Industry (ISIC 36)
Table W3 focuses on the water supply industry, i.e., the public or private bodies whose main function is to provide water to the general public. It asks for the quantities of water supplied by the water supply industry to its customers (water users), broken down by the main ISIC groupings. It also asks for water losses and for the population served by the water supply industry. The term water supply industry is identical to 'public water supply' and it refers to economic units belonging to ISIC 36 (water collection, treatment and supply).
Table W4: Wastewater Generation and Treatment
Wastewater can be generated from various economic activities and households. Wastewater can be discharged directly into water bodies, or may be treated to remove some of the pollutants before being discharged. Table W4 asks for data on the amount of wastewater generated as well as the amount of wastewater treated in the sewerage industry, in other treatment plants, and in independent treatment facilities. The table distinguishes primary, secondary and tertiary treatment according to the level of wastewater treatment (see definitions).
Table W5: Population Connected to Wastewater Treatment
The share of the resident population connected to public wastewater collecting system, to public wastewater treatment and to independent treatment facilities indicate the coverage and level of sanitation.
Table W6: Supplementary Information Sheet
Table W6 is where any relevant additional information can be added. For example, UNSD has provided a generic definition of freshwater in the Definitions sheet for this questionnaire. However, a more specific national definition (e.g., indicating a degree of salinity) would be useful for international comparisons. In addition, countries are encouraged to provide or attach any complementary source of information such as website addresses, publications, results of surveys, etc., related to the water topic, particularly if countries encountered difficulties filling in the questionnaire.

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CONVERSION TABLE

To Convert	To	Multiply by
gallons (UK)	l	4.54609
gallons (US)	l	3.785411784
m^3	l	1000
litre (l)	m^3	0.001
ml	l	0.001

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List of Definitions

Industry Classification

This questionnaire uses the International Standard Industrial Classification of All Economic Activities (ISIC Rev. 4) to attribute water abstraction and use to economic activities. The codes used in this questionnaire are listed below. For the full classification, see https://unstats.un.org/unsd/publications/catalogue?selectID=396.

ISIC Code(s)	Questionnaire abbreviation	ISIC Rev. 4
E 36	**Water supply industry**	**Water collection, treatment and supply** includes water collection, treatment and distribution activities for domestic and industrial needs. Collection of water from various sources, as well as distribution by various means is included.
E 37	**Wastewater treatment (sewerage)**	**Sewerage** includes: - operation of sewer systems or sewer treatment facilities - collecting and transporting of human or industrial wastewater from one or several users, as well as rain water by means of sewerage networks, collectors, tanks and other means of transport (sewage vehicles etc.) - emptying and cleaning of cesspools and septic tanks, sinks and pits from sewage; servicing of chemical toilets - treatment of wastewater (including human and industrial wastewater, water from swimming pools etc.) by means of physical, chemical and biological processes like dilution, screening, filtering, sedimentation etc. - maintenance and cleaning of sewers and drains, including sewer rodding
A 01-03	**Agriculture, forestry and fishing**	**Agriculture, forestry and fishing** cover: crop and animal production, hunting and related service activities; forestry and logging; and fishing and aquaculture. This section includes the exploitation of vegetal and animal natural resources, comprising the activities of growing of crops, raising and breeding of animals, harvesting of timber and other plants, animals or animal products from a farm or their natural habitats.
B 05-09	**Mining and quarrying**	**Mining and quarrying** includes the extraction of minerals occurring naturally as solids (coal and ores), liquids (petroleum) or gases (natural gas). Extraction can be achieved by different methods such as underground or surface mining, well operation, seabed mining etc.
C 10-33	**Manufacturing**	**Manufacturing** includes the physical or chemical transformation of materials, substances, or components into new products. The materials, substances, or components transformed are raw materials that are products of agriculture, forestry, fishing, mining or quarrying as well as products of other manufacturing activities. Substantial alteration, renovation or reconstruction of goods is generally considered to be manufacturing.
D 35	**Electricity, gas, steam and air conditioning supply**	**Electricity, gas, steam and air conditioning supply** includes the activity of providing electric power, natural gas, steam, hot water and the like through a permanent infrastructure (network) of lines, mains and pipes. The dimension of the network is not decisive; also included are the distribution of electricity, gas, steam, hot water and the like in industrial parks or residential buildings.
Group 351	**Electric power generation, transmission and distribution**	**Electric power generation, transmission and distribution** includes the generation of bulk electric power, transmission from generating facilities to distribution centers and distribution to end users.

F 41-43	**Construction**	**Construction** includes general construction and specialized construction activities for buildings and civil engineering works. It includes new work, repair, additions and alterations, the erection of prefabricated buildings or structures on the site and also construction of a temporary nature.

Definitions

Table	Term	Definitions
W1, 1	**Precipitation**	Total volume of atmospheric precipitation (rain, snow, hail, dew, etc.) falling on the territory of the country over one year, in millions of cubic metres.
W1, 2	**Actual evapotranspiration**	Total actual volume of evaporation from the ground, wetlands and natural water bodies and transpiration of plants. According to the definition of this concept in Hydrology, the evapotranspiration generated by all human interventions is excluded, except unirrigated agriculture and forestry. The 'actual evapotranspiration' is calculated using different types of mathematical models, ranging from very simple algorithms (Budyko, Turn Pyke, etc.) to schemes that represent the hydrological cycle in detail.
W1, 3	**Internal flow**	Total volume of run-off and groundwater generated over the period of a year, in natural conditions, exclusively by precipitation into a country. The internal flow is equal to precipitation less actual evapotranspiration and can be calculated or measured. If the run-off and groundwater generation are measured separately, transfers between surface and groundwater should be netted out to avoid double counting.
W1, 4	**Inflow of surface and groundwaters from neighbouring countries**	Total volume of actual external inflow of surface and groundwater, coming from neighbouring countries. Boundary waters should be divided 50/50 between the two riparian countries, unless other water sharing agreements exist.
W1, 5	**Renewable freshwater resources**	= Internal flow + Inflow of surface and groundwaters from neighbouring countries.
W1, 6	**Outflow of surface and groundwaters to neighbouring countries**	Outflow of surface and groundwater into neighbouring countries.
W1, 7	**Secured by treaties**	The volume of surface water and groundwater that moves out of the country of reference that is guaranteed by formal agreements to adjacent countries per year.
W1, 8	**Not secured by treaties**	The volume of surface water and groundwater that moves out of the country of reference that is not guaranteed by formal agreements to adjacent countries per year.
W1, 9	**Outflow of surface and groundwaters to the sea**	Outflow of surface and groundwater into the sea.
W1	**Long-term annual average**	Arithmetic average over at least 30 consecutive years. Please provide average over available period and indicate the length of the time period in the footnotes.
W2	**Fresh surface water**	Water which flows over, or rests on, the surface of a land mass; natural watercourses such as rivers, streams, brooks, lakes, glaciers, snow, ice, etc., as well as artificial watercourses such as irrigation, industrial and navigation canals, drainage systems and artificial reservoirs. For purposes of this questionnaire, water obtained through bank filtration is included under (fresh) surface water. Sea-water, and transitional waters, such as brackish swamps, lagoons and estuarine areas are not considered fresh surface water. **Bank filtration** is the use of existing geologic formations adjacent to surface water bodies to filter drinking water. Wells are dug in fine, sandy sediments next to water bodies and water is extracted from these wells. Water in the water bodies filters through the sediments, removing contaminants.

Definitions

Table	Term	Definitions
W2	**Fresh groundwater**	Freshwater which is being held in, and can usually be recovered from, or via, an underground formation. All permanent and temporary deposits of water, both artificially charged and naturally, in the subsoil, of sufficient quality for at least seasonal use. This category includes phreatic water-bearing strata, as well as deep strata under pressure or not, contained in porous or fracture soils. For purposes of this questionnaire, groundwater includes springs, both concentrated and diffused, which may be subaqueous.
W2, 1	**Fresh surface water abstracted**	Water removed from any surface water sources, such as rivers, lakes, reservoirs or rainwater, either permanently or temporarily.
W2, 2	**Fresh groundwater abstracted**	Water removed from any groundwater sources either permanently or temporarily.
W2, 3	**Gross freshwater abstracted**	Freshwater removed from any water source (surface water sources, such as rivers, lakes, reservoirs or rainwater; and groundwater sources) either permanently or temporarily. Includes abstraction by the water supply industry for distribution and direct abstraction by other activities for own use. The volume of water abstracted is broken down by main groups of economic activity of the abstractors (according to ISIC Rev.4) and households. Water used for hydroelectricity generation is an in-situ use and should be excluded.
W2, 4	**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.
W2, 5	**Net freshwater abstracted**	Net freshwater abstracted = gross freshwater abstracted - water returned without use.
W2, 6	(Freshwater abstracted by) **Water supply industry (ISIC 36)**	The volume of water abstracted from surface water sources (rivers, lakes, reservoirs etc., including the volume of rainwater collected) and groundwater sources, by economic units whose main activities are the collection and treatment of water and its distribution to households and other users (ISIC 36: Water collection, treatment and supply). The volume of water abstracted by the water supply industry for the operation of irrigation canals is excluded here and should be reported under Freshwater abstracted by agriculture, forestry and fishing.
W2, 7	(Freshwater abstracted by) **Households**	The volume of water directly abstracted from surface water sources (rivers, lakes, reservoirs etc., including the volume of rainwater collected) and groundwater sources by households for own use.
W2, 8	(Freshwater abstracted by) **Agriculture, forestry and fishing (ISIC 01-03)**	The volume of water directly abstracted from surface water sources (rivers, lakes, reservoirs etc., including the volume of rainwater collected) and groundwater sources by economic units belonging to ISIC 01-03 for own use. Includes water abstracted by the water supply industry (ISIC 36) for the operation of irrigation canals.
W2, 9 & W2, 25	**Irrigation in agriculture**	Artificial application of water on land to assist in the growing of crops and pastures.
W2, 10	(Freshwater abstracted by) **Mining and quarrying (ISIC 05-09)**	The volume of water directly abstracted from surface water sources (rivers, lakes, reservoirs etc., including the volume of rainwater collected) and groundwater sources by economic units belonging to ISIC 05-09 for own use.
W2, 11	(Freshwater abstracted by) **Manufacturing (ISIC 10-33)**	The volume of water directly abstracted from surface water sources (rivers, lakes, reservoirs etc., including the volume of rainwater collected) and groundwater sources by economic units belonging to ISIC 10-33 for own use.
W2, 12	(Freshwater abstracted by) **Electricity, gas, steam and air conditioning supply (ISIC 35)**	The volume of water directly abstracted from surface water sources (rivers, lakes, reservoirs etc., including the volume of rainwater collected) and groundwater sources by economic units belonging to ISIC 35 for own use. Water for hydroelectricity generation (e.g., water behind dams) is excluded.

Definitions

Table	Term	Definitions
W2, 13	(Freshwater abstracted by) **Electric power generation, transmission and distribution (ISIC 351)**	The volume of water directly abstracted from surface water sources (rivers, lakes, reservoirs etc., including the volume of rainwater collected) and groundwater sources by economic units belonging to ISIC 351 for own use. Water for hydroelectricity generation (e.g., water behind dams) is excluded.
W2, 14	(Freshwater abstracted by) **Construction (ISIC 41-43)**	The volume of water directly abstracted from surface water sources (rivers, lakes, reservoirs etc., including the volume of rainwater collected) and groundwater sources by economic units belonging to ISIC 41-43 for own use.
W2, 15	(Freshwater abstracted by) **Other economic activities**	The volume of water directly abstracted from surface water sources (rivers, lakes, reservoirs etc., including the volume of rainwater collected) and groundwater sources by economic units belonging to all other ISIC categories not specified above for own use.
W2, 16	**Desalinated water**	Total volume of water obtained from desalination of (i.e., removal of salt from) seawater and brackish water.
W2, 17	**Reused water**	Used water directly received from another user with or without treatment for further use. It also includes treated wastewater received for further use from treatment plants. Excludes water discharged into a watercourse and used again downstream. Excludes recycling of water within industrial sites.
W2, 18	**Imports of water**	Total volume of bulk water that is imported from other countries as a commodity through pipelines or on ships or trucks. Excludes bottled water.
W2, 19	**Exports of water**	Total volume of bulk water that is exported to other countries as a commodity through pipelines or on ships or trucks. Excludes bottled water.
W2, 20	**Total freshwater available for use**	= Net freshwater abstracted + Desalinated water + Reused water + Imports of water - Exports of water.
W2, 21	**Losses during transport**	The volume of water lost during transport between a point of abstraction and a point of use, and between points of use and reuse. Includes evaporation and leakages. This should be greater than or equal to losses during transport by ISIC 36 (W3, Line 2).
W2, 22	**Total freshwater use**	Water use is the total volume of water, either self abstracted or received from a water supplier, which is used by final users, such as households or economic activities for their production or consumption processes. The volume of water used is broken down by main groups of economic activity of the final users (according to ISIC Rev. 4) and households.
W2, 23	(Freshwater used by) **Households**	The volume of water used by households either supplied by the water supply industry or directly abstracted by households for own use. Water used in the normal functioning of households (e.g., drinking or washing). It includes watering of household gardens but should not include water used for commercial agriculture.
W2, 24	(Freshwater used by) **Agriculture, forestry and fishing (ISIC 01-03)**	The volume of water used for economic activities belonging to agriculture, forestry and fishing (ISIC 01-03), either directly abstracted from water sources for own use or supplied by the water supply industry.
W2, 26	(Freshwater used by) **Mining and quarrying (ISIC 05-09)**	The volume of water used for economic activities belonging to mining and quarrying (ISIC 05-09), either directly abstracted from water sources for own use or supplied by the water supply industry.
W2, 27	(Freshwater used by) **Manufacturing (ISIC 10-33)**	The volume of water used for economic activities belonging to manufacturing (ISIC 10-33), either directly abstracted from water sources for own use or supplied by the water supply industry.

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Table	Term	Definitions
W2, 28	(Freshwater used by) **Electricity, gas, steam and air conditioning supply (ISIC 35)**	The volume of water used for economic activities belonging to electricity, gas, steam and air conditioning supply (ISIC 35), either directly abstracted from water sources for own use or supplied by the water supply industry. Water for hydroelectricity generation (e.g., water behind dams) is excluded.

Definitions

Table	Term	Definitions
W2, 29	(Freshwater used by) **Electricity industry (ISIC 351)**	The volume of water used for economic activities belonging to the generation, transmission and distribution of electricity (ISIC 351), either directly abstracted from water sources for own use or supplied by the water supply industry. Water for hydroelectricity generation (e.g., water behind dams) is excluded.
W2, 30	(Freshwater used by) **Construction (ISIC 41-43)**	The volume of water used for economic activities belonging to construction (ISIC 41-43), either directly abstracted from water sources for own use or supplied by the water supply industry.
W2, 31	(Freshwater used by) **Other economic activities**	The volume of water used for all other economic activities not specified above, either directly abstracted from water sources for own use or supplied by the water supply industry.
W3, 1	**Gross freshwater supplied by water supply industry (ISIC 36)**	Water supplied by water supply industry to the user. Includes losses during transport. The water supplied by water supply industry for the operation of irrigation canals is excluded.
W3, 2	**Losses during transport by ISIC 36**	The volume of water lost during transport between a point of abstraction and a point of use, and between points of use and reuse, which pertains to ISIC 36 only. Includes evaporation and leakages. This should be less than or equal to losses during transport (W2, Line 21).
W3, 3	**Net freshwater supplied by water supply industry (ISIC 36)**	Gross freshwater supplied by water supply industry minus freshwater losses during transport. The net volume of freshwater supplied by the water supply industry to final users is broken down by households and by main groups of the economic activity of the final users (according to ISIC Rev. 4).
W3, 12	**Total population supplied by water supply industry (ISIC 36)**	Percentage of the total resident population using water supplied by the water supply industry (ISIC 36).
W3, 13	**Urban population supplied by water supply industry (ISIC 36)**	Percentage of the urban resident population using water supplied by the water supply industry (ISIC 36).
W3, 14	**Rural population supplied by water supply industry (ISIC 36)**	Percentage of the rural resident population using water supplied by the water supply industry (ISIC 36).
W4, 1	**Total wastewater generated**	Wastewater is water which is of no further value to the purpose for which it was used because of its quality, quantity or time of occurrence. Total wastewater generated is the total volume of wastewater generated by economic activities (agriculture, forestry and fishing; mining and quarrying; manufacturing; electricity, gas, steam and air conditionning supply; construction; and other economic activities) and households. Cooling water is excluded.
W4, 8	(Wastewater generated by) **Other economic activities**	Excluding wastewater generated by ISIC 37 (Sewerage).
W4, 10	**Urban wastewater treatment**	Urban wastewater treatment is all treatment of wastewater in urban wastewater treatment plants (UWWTP's). UWWTP's are usually operated by public authorities or by private companies working by order of public authorities. Includes wastewater delivered to treatment plants by trucks. UWWTP's are classified under ISIC 37 (Sewerage).
W4, 14	**Other wastewater treatment**	Treatment of wastewater in any non-public treatment plant, i.e., industrial wastewater treatment plants (IWWTP). Excluded from "other wastewater treatment" is the treatment in septic tanks. IWWTPs may also be classified under ISIC 37 (Sewerage) or under the main activity class of the industrial establishment they belong to.

Definitions

Table	Term	Definitions
W4, 11 & W4, 15	**Primary wastewater treatment**	Treatment of wastewater by a physical and/or chemical process involving settlement of suspended solids, or other process in which the Biochemical Oxygen Demand (BOD_5) of the incoming wastewater is reduced by at least 20% before discharge and the total suspended solids of the incoming wastewater are reduced by at least 50%. To avoid double counting, water subjected to more than one type of treatment should be reported under the highest level of treatment only.
W4, 12 & W4, 16	**Secondary wastewater treatment**	Post-primary treatment of wastewater by a process generally involving biological or other treatment with a secondary settlement or other process, resulting in a Biochemical Oxygen Demand (BOD_5) removal of at least 70% and a Chemical Oxygen Demand (COD) removal of at least 75%. To avoid double counting, water subjected to more than one type of treatment should be reported under the highest level of treatment only.
W4, 13 & W4, 17	**Tertiary wastewater treatment**	Treatment (additional to secondary treatment) of nitrogen and/or phosphorous and/or any other pollutant affecting the quality or a specific use of water: microbiological pollution, colour etc. The different possible treatment efficiencies ('organic pollution removal' of at least 95% for BOD_5, 85% for COD, 'nitrogen removal' of at least 70%, 'phosphorous removal' of at least 80% and 'microbiological removal') cannot be added and are exclusive. To avoid double counting, water subjected to more than one type of treatment should be reported under the highest level of treatment only.
W4, 18	**Independent wastewater treatment**	Collection, preliminary treatment, treatment, infiltration or discharge of domestic wastewater from dwellings generally between 1 and 50 population equivalents, not connected to a wastewater collection system. An example is septic tanks. Excluded from here are systems with storage tanks from which the wastewater is transported periodically by trucks to a wastewater treatment plant which are part of urban wastewater treatment.
W4, 20	**Sewage sludge production (dry matter)**	The accumulated settled solids, either moist or mixed, with a liquid component as a result of natural or artificial processes, that have been separated from various types of wastewater during treatment. Data on dry weight should be provided. If data are only available for wet weight, please fill in the data for wet weight and specify in a footnote.
W5, 1	**Population connected to wastewater collecting system**	Percentage of the resident population connected to the wastewater collecting systems (sewerage). Wastewater collecting systems may deliver wastewater to treatment plants or may discharge it without treatment to the environment.
W5, 2	**Population connected to wastewater treatment**	Percentage of the resident population whose wastewater is treated at wastewater treatment plants.
W5, 4	**Population with independent wastewater treatment (e.g., septic tanks)**	Percentage of the resident population whose wastewater is treated in individual, often private facilities such as septic tanks.
W5, 5	**Population not connected to wastewater treatment**	Percentage of the resident population whose wastewater is neither treated in treatment plants nor in independent treatment facilities.
	Freshwater	Freshwater is water that contains only minimal quantities of dissolved salts, especially sodium chloride, thus distinguishing it from sea water or brackish water (usually considered to be less than 500 milligrams of salt per litre).
	Brackish water	Water that is saltier than freshwater and less salty than sea water. Technically, brackish water contains between 500 and 30,000 milligrams of salt per litre, but most brackish water has a concentration of total dissolved salts is in the range of 1,000-10,000 milligrams per litre (mg/l).
	Sea water	Sea water is water from a sea or ocean. On average, sea water in the world's oceans has a salinity of 35,000 milligrams per litre.

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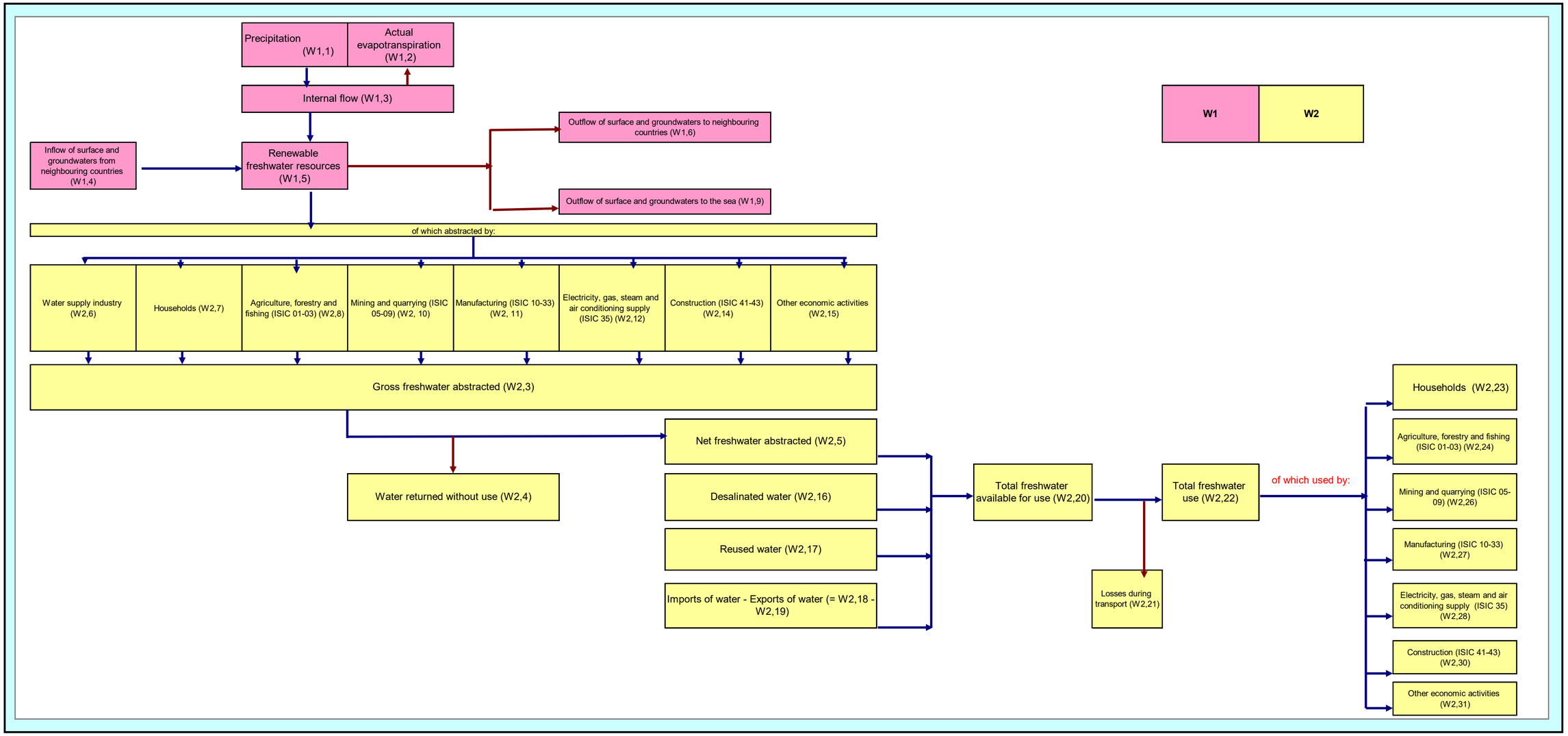
This diagram has been developed by UNSD to demonstrate the relationships between the variables in Tables W1 and W2. Respondents are encouraged to use this diagram for clarifications on the concepts underlying the data requested in this questionnaire.

Diagram: Summary of freshwater resources, freshwater abstraction, distribution and use.



Section: WATER

Country: **Contact institution:**

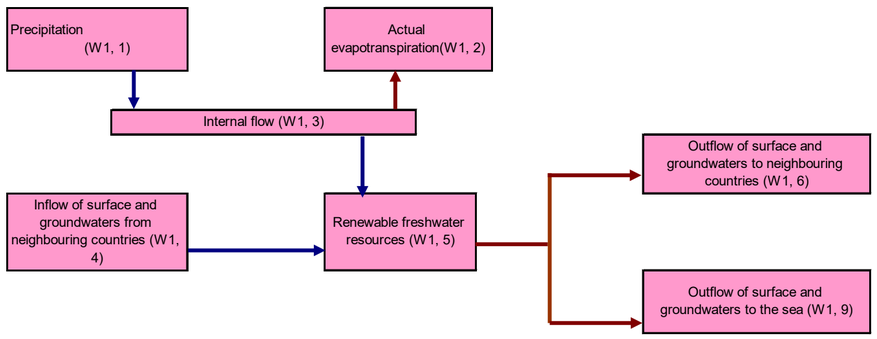
Table W1: Renewable Freshwater Resources

• If the value turns red, please check if it is correct.

Line	Category	Unit	Long term annual average	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1	Precipitation	mio m^3/y																							
2	Actual evapotranspiration	mio m^3/y																							
3	Internal flow (=1-2)	mio m^3/y																							
4	Inflow of surface and groundwaters from neighbouring countries	mio m^3/y																							
5	**Renewable freshwater resources (=3+4)**	mio m^3/y																							
6	Outflow of surface and groundwaters to neighbouring countries	mio m^3/y																							
7	*of which:* Secured by treaties	mio m^3/y																							
8	Not secured by treaties	mio m^3/y																							
9	Outflow of surface and groundwaters to the sea	mio m^3/y																							

Notes :

- Precipitation figures should be based on representative precipitation measurements from across the country and the country's climatic zones.
- Long term annual average is the arithmetic average over at least 30 consecutive years. Please provide average over the available period and indicate the length of the time period in the footnotes.
- **If the requested data are not available, please leave the cell blank. If the requested variable is not applicable (the phenomenon is not relevant) to the country or the value is less than half the unit of measurement, the cell should be filled with "0".**
- Please provide in the Footnotes Section below information on the source and data collection methodology for the values provided, such as estimation methods (if any), and the titles of the original sources (e.g., surveys or administrative records).



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Footnotes

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Country: **Contact institution:**

Table W2: Freshwater Abstraction and Use

• If the value turns red, please check if it is correct.

Line	Category	Unit	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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																						
	of which abstracted by:																							
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	*of which for:* Irrigation in agriculture	mio m^3/y																						
10	Mining and quarrying (ISIC 05-09)	mio m^3/y																						
11	Manufacturing (ISIC 10-33)	mio m^3/y																						
12	Electricity, gas, steam and air conditioning supply (ISIC 35)	mio m^3/y																						
13	*of which for:* Electric power generation, transmission and distribution (ISIC 351)	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																						
21	Losses during transport	mio m^3/y																						
22	**Total freshwater use (=20-21)**	mio m^3/y																						
	of which used by:																							
23	Households	mio m^3/y																						
24	Agriculture, forestry and fishing (ISIC 01-03)	mio m^3/y																						
25	*of which for:* Irrigation in agriculture	mio m^3/y																						
26	Mining and quarrying (ISIC 05-09)	mio m^3/y																						
27	Manufacturing (ISIC 10-33)	mio m^3/y																						
28	Electricity, gas, steam and air conditioning supply (ISIC 35)	mio m^3/y																						
29	*of which for:* Electric power generation, transmission and distribution (ISIC 351)	mio m^3/y																						
30	Construction (ISIC 41-43)	mio m^3/y																						
31	Other economic activities	mio m^3/y																						

Notes :

- This table covers the volume of water abstracted from water bodies (rivers, lakes, groundwater etc.) by different abstractors; the volume of water available from other sources; and the volume of water used by different final users.
- Water for hydroelectricity generation purposes should be **excluded** from electricity industry.
- Water returned without use is water discharged into freshwaters without use, or before use. Occurs primarily during mining and construction activities. Excludes discharges into the sea.
- Losses during transport includes evaporation and leakages, and should be greater than or equal to Table W3, line 2 (which pertains to ISIC 36 only).
- **If the requested data are not available, please leave the cell blank. If the requested variable is not applicable (the phenomenon is not relevant) to the country or the value is less than half the unit of measurement, the cell should be filled with "0".**
- Please provide in the Footnotes Section below information on the source and data collection methodology for the values provided, such as estimation methods (if any), and the titles of the original sources (e.g., surveys or administrative records).

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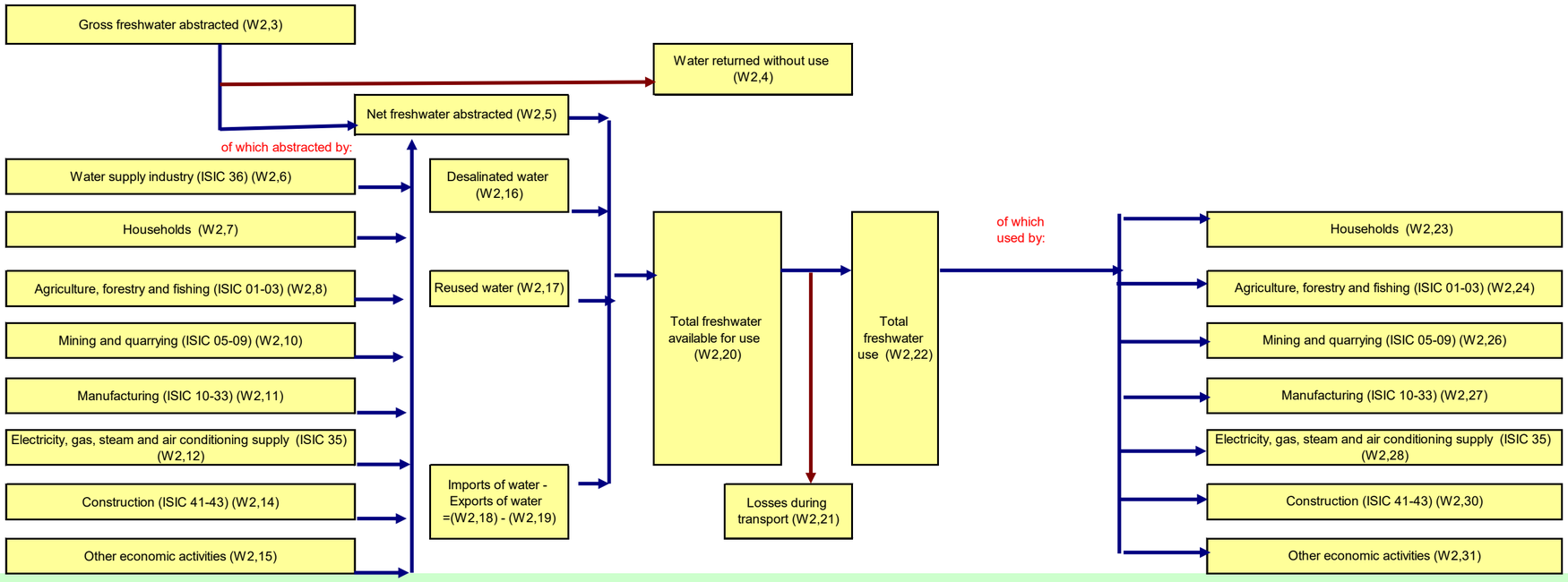

Footnotes

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Country: **Contact institution:**

Table W3: Water Supply Industry (ISIC 36)

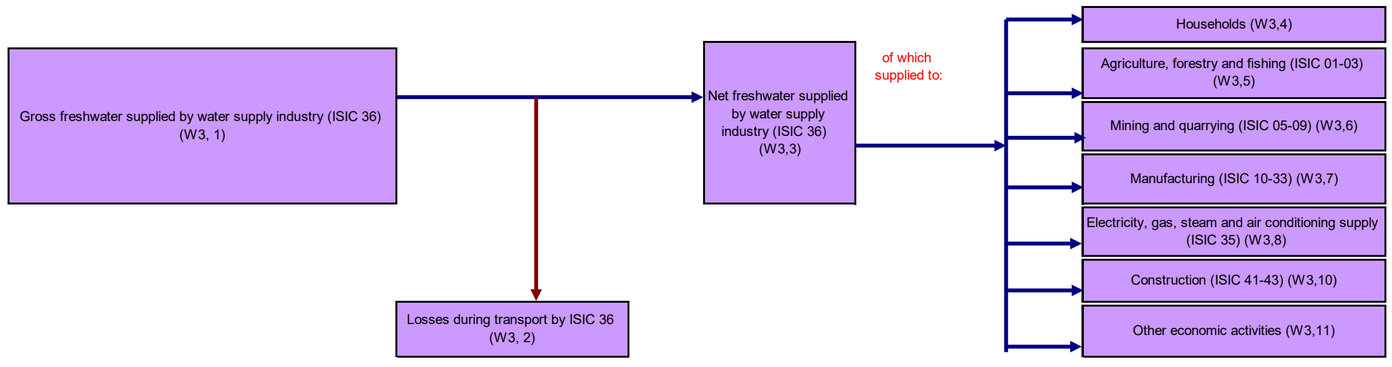
• If the value turns red, please check if it is correct.

Line	Category	Unit	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1	**Gross freshwater supplied by water supply industry (ISIC 36)**	mio m^3/y																						
2	Losses during transport by ISIC 36	mio m^3/y																						
3	**Net freshwater supplied by water supply industry (ISIC 36) (=1-2) (=4+5+6+7+8+10+11)**	mio m^3/y																						
	of which supplied to:																							
4	Households	mio m^3/y																						
5	Agriculture, forestry and fishing (ISIC 01-03)	mio m^3/y																						
6	Mining and quarrying (ISIC 05-09)	mio m^3/y																						
7	Manufacturing (ISIC 10-33)	mio m^3/y																						
8	Electricity, gas, steam and air conditioning supply (ISIC 35)	mio m^3/y																						
9	*of which to:* Electric power generation, transmission and distribution (ISIC 351)	mio m^3/y																						
10	Construction (ISIC 41-43)	mio m^3/y																						
11	Other economic activities	mio m^3/y																						
	Population supplied by water supply industry (ISIC 36)																							
12	**Total population supplied by water supply industry (ISIC 36)**	%																						
13	Urban population supplied by water supply industry (ISIC 36)	%																						
14	Rural population supplied by water supply industry (ISIC 36)	%																						

Notes:

- This table covers water supplied by water supply industries, whether under public or under private control. It corresponds to the term public water supply.
- **If the requested data are not available, please leave the cell blank. If the requested variable is not applicable (the phenomenon is not relevant) to the country or the value is less than half the unit of measurement, the cell should be filled with "0".**

  Losses during transport includes evaporation and leakages, and should be less than or equal to Table W2, line 21 (which pertains to all industries and households).
- Water for hydroelectricity generation purposes should be **excluded** from electricity industry.
- Please provide in the Footnotes Section below information on the source and data collection methodology for the values provided, such as estimation methods (if any), and the titles of the original sources (e.g., surveys or administrative records).



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Country: **Contact institution:**

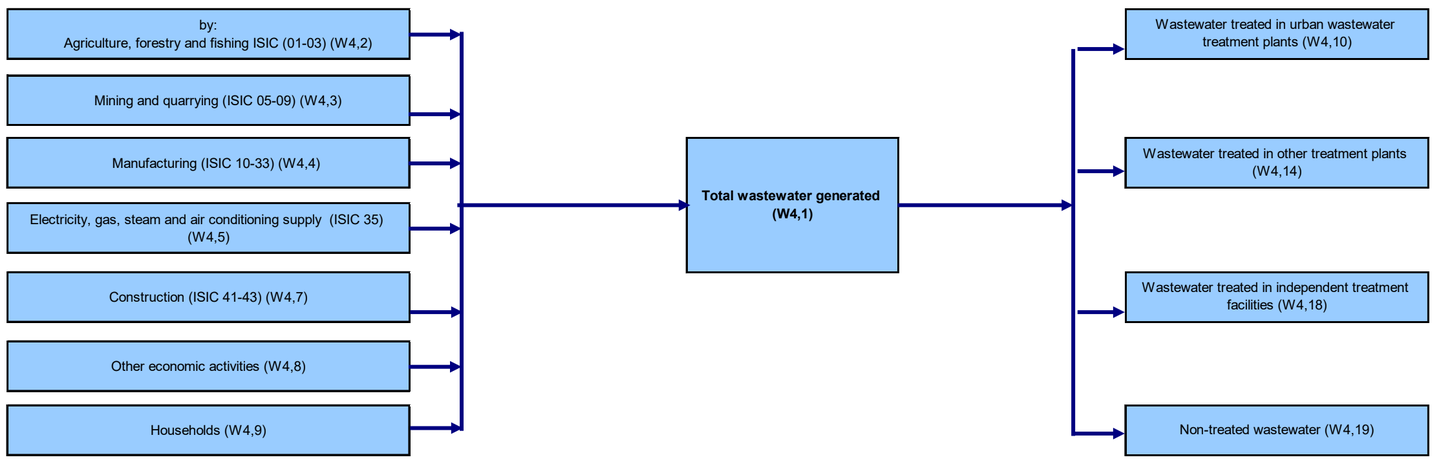
Table W4: Wastewater Generation and Treatment

• If the value turns red, please check if it is correct.

Line	Category	Unit	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1	**Total wastewater generated**	mio m^3/y																						
2	*by:* Agriculture, forestry and fishing ISIC (01-03)	mio m^3/y																						
3	Mining and quarrying (ISIC 05-09)	mio m^3/y																						
4	Manufacturing (ISIC 10-33)	mio m^3/y																						
5	Electricity, gas, steam and air conditioning supply (ISIC 35)	mio m^3/y																						
6	*of which by:* Electric power generation, transmission and distribution (ISIC 351)	mio m^3/y																						
7	Construction (ISIC 41-43)	mio m^3/y																						
8	Other economic activities	mio m^3/y																						
9	Households	mio m^3/y																						
10	Wastewater treated in urban wastewater treatment plants	mio m^3/y																						
11	*of which:* Primary treatment	mio m^3/y																						
12	Secondary treatment	mio m^3/y																						
13	Tertiary treatment	mio m^3/y																						
14	Wastewater treated in other treatment plants	mio m^3/y																						
15	*of which:* Primary treatment	mio m^3/y																						
16	Secondary treatment	mio m^3/y																						
17	Tertiary treatment	mio m^3/y																						
18	Wastewater treated in independent treatment facilities	mio m^3/y																						
19	Non-treated wastewater	mio m^3/y																						
20	Sewage sludge production (dry matter)	1000 t																						

Notes:

- To avoid double counting, water subjected to more than one type of treatment should be reported under the highest level of treatment only.
- **If the requested data are not available, please leave the cell blank. If the requested variable is not applicable (the phenomenon is not relevant) to the country or the value is less than half the unit of measurement, the cell should be filled with "0".**
- Please provide in the Footnotes Section below information on the source and data collection methodology for the values provided, such as estimation methods (if any), and the titles of the original sources (e.g., surveys or administrative records).
- **The diagram below matches closely with table W4. Since there is much interest in this table per reporting for Sustainable Development Goal indicator 6.3.1 (Proportion of domestic and industrial wastewater flow safely treated), the World Health Organization offers a more detailed diagram that also aligns with this table. It is available on page 28 of Monitoring Safely Treated Domestic Wastewater Flows: A Methodological Note for SDG indicator 6.3.1.**



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Country: **Contact institution:**

Table W5: Population Connected to Wastewater Treatment

• If the value turns red, please check if it is correct.

Line	Category	Unit	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1	**Population connected to wastewater collecting system**	%																						
2	**Population connected to wastewater treatment**	%																						
3	*of which:* at least secondary treatment	%																						
4	Population with independent wastewater treatment (e.g., septic tanks)	%																						
5	Population not connected to wastewater treatment (100% - (2) - (4))	%																						

Notes :

- **If the requested data are not available, please leave the cell blank. If the requested variable is not applicable (the phenomenon is not relevant) to the country or the value is less than half the unit of measurement, the cell should be filled with "0".**
- Please provide in the Footnotes Section below information on the source and data collection methodology for the values provided, such as estimation methods (if any), and the titles of the original sources (e.g., surveys or administrative records).

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Table W6: Supplementary Information Sheet

Please insert the national definition for freshwater below:
Please provide supplementary information below, such as: calculation method used for various inflows and outflows; the reference period covered in the long-term annual averages; the methodology used for estimating evapotranspiration, additional categories of national water use statistics, etc.
Please describe the difficulties encountered in filling in the questionnaires.