



Guidance note to facilitate country consultation on safely treated domestic wastewater estimates

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1. BACKGROUND

SDG Indicator 6.3 aims to, by 2030, “improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally”.

WHO is in the process of updating the global database on domestic wastewater generation and treatment. The purpose of this country consultation is not to compare global and national estimates of wastewater treatment but rather to review the completeness or correctness of the datasets in the SDG 6.3.1 country file. The country consultation focuses on three main questions:

1. ***Is the country file missing any relevant national sources of data on domestic water use or components of the wastewater management chain (such as septic tank emptying or wastewater treatment performance)?***
2. ***Are the data sources listed as used considered reliable and suitable for use as official national statistics?***
3. ***Is the interpretation and classification of the data extracted from national sources accurate and appropriate?***

This guidance note is designed to support the country consultation on updated estimates of domestic wastewater generation and treatment produced by the WHO, which will be held from 2 December 2024 to 31 January 2025. Following the country consultation WHO will finalize the database and publish updated national, regional and global estimates in May 2025. These estimates will also be included in the UN Secretary General’s annual SDG Progress Report, due to be published in June 2025.

Results of the consultation should be shared with the WHO country and regional offices, and copied to sdg631@who.int. The deadline for the consultation is 31 January 2025.

2. SAFELY TREATED WASTEWATER

SDG Indicator 6.3.1 aims to measure and track over time the percentage of wastewater flows from households, services and industrial premises that are safely treated in compliance with relevant national or local standards. The World Health Organization (WHO) and UN-Habitat serve as the custodian agencies for Indicator 6.3.1, the “proportion of domestic and industrial wastewater flows safely treated”, and are responsible for periodic data compilation and reporting. UN-Habitat is the custodian for data on total wastewater and for industrial wastewater, while WHO is the custodian for domestic wastewater, which includes sewage and faecal sludge from households and service industries. At present, WHO collects data only on wastewater flows from households¹ and has used these to produce draft estimates of safely treated domestic wastewater, which represent a subset of the total volume of safely treated wastewater. Currently, these estimates are available only at the national level (i.e. no urban/rural disaggregation).

The wastewater management chain (Figure 1) is used to characterise household wastewater flows from generation to collection, treatment and discharge. Only household wastewater from sewers and septic tanks is eligible to be classified as safely treated. Wastewater flows from households with all other types of sanitation facilities are classified as not safely treated in their entirety. The proportion of the population connected to various types of sanitation facilities is derived from estimates produced by the Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) under SDG Indicator 6.2.1. Sewer or septic tank wastewater flows can be classified as *collected* when the wastes are captured in a sewer or in an on-site storage tank or pit, and

¹ Wastewater flows from services are rarely monitored independently

delivered to treatment when they reach a treatment facility – such as an urban wastewater treatment plant or an on-site septic tank leachfield² (referred to as ‘independent treatment’).

Wastewater flows that are collected in sewers and delivered to urban wastewater treatment plants may undergo primary, secondary, or tertiary treatment (typically in sequence) and may be discharged in or out of compliance with relevant national or local standards depending on the performance of wastewater treatment processes. For SDG 6.3.1, discharges which are compliant with relevant standards are classified as “safely treated”, but in the absence of compliance data, wastewater which receives secondary or higher treatment is also considered to be “safely treated”.

For septic tank wastewater flows that are collected at properly functioning and contained septic tank systems, faecal sludge may be “safely treated” by remaining safely contained underground with solids retained in the tank and liquids infiltrating through a leachfield (in-situ), or by being emptied and either buried on-site, or removed offsite by a service provider to a centralized facility that provides adequate treatment (either co-treatment with sewage, or in a dedicated faecal sludge treatment plant).

WHO seeks to compile data for each of the steps of the wastewater management chain (Figure 1). For many countries, nationally-representative data are not available to describe each step of the wastewater management chain and for each type of sanitation facility. As a result, WHO strategically employs a standard set of default assumptions to fill these data gaps. However, these assumptions are limited: in countries where a greater proportion of the population have sewer connections than have septic tanks, country estimates are not produced without official data on wastewater treatment plant performance (by technology or compliance with standards). Similarly, in countries where a greater proportion of the population have septic tanks than have sewer connections, estimates are not produced without actual data on the safe management of on-site sanitation.

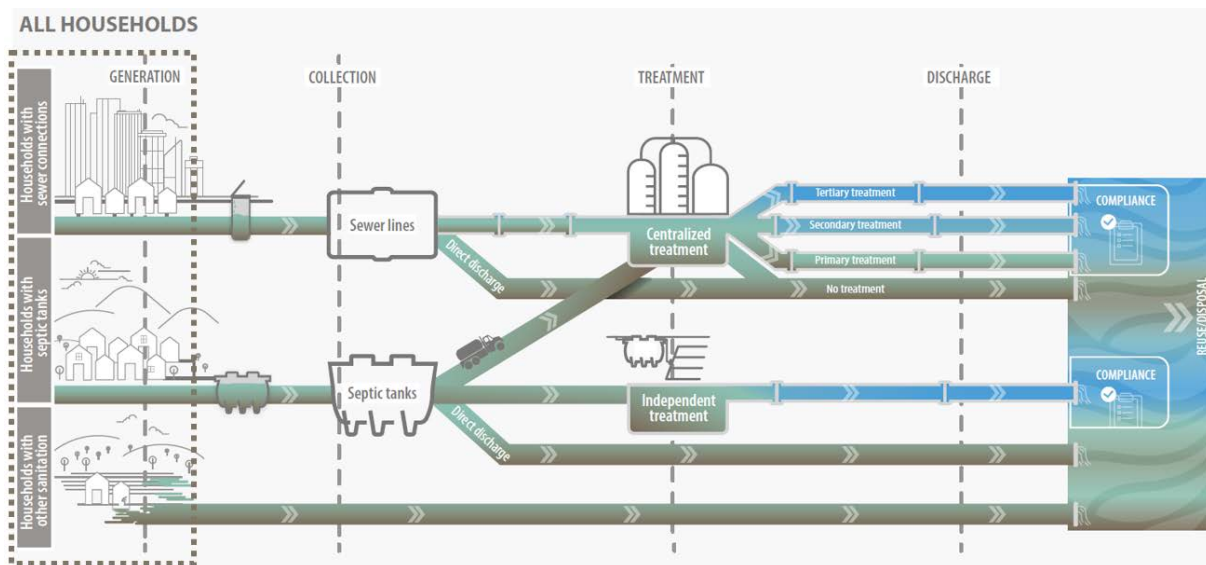


Figure 1. Wastewater management chain

WHO draws on the JMP database for national sources of data on wastewater generation and treatment. This includes three data collection initiatives particularly relevant to Indicator 6.3.1 monitoring:

² Or other similar on-site treatment system

- UNSD and United Nations Environment Programme (UNEP) Environment Statistics³ and corresponding questionnaire.⁴ UNSD serves as a co-custodian for Indicator 6.3.1 monitoring due to its mandate for wastewater data collection via this questionnaire;
- Organisation for Economic Co-Operation and Development (OECD) Environment Statistics;⁵
- Eurostat Environmental Statistics.⁶

While OECD and Eurostat operate separate databases, they collect data via a unified questionnaire (OECD/Eurostat Joint Questionnaire on Inland Waters).⁷ National Statistical Offices (NSOs) are typically responsible for completing their relevant environmental questionnaire as fully as possible.⁸ UNSD sends out its questionnaire to NSOs for a new round of data collection every two years while OECD and Eurostat do so annually.

3. COUNTRY CONSULTATION

WHO is preparing a global update of the household component of SDG Indicator 6.3.1, with global, regional, and country estimates to be published in May 2025. A rigorous data harvesting exercise has already been conducted across all continents and countries, resulting in a set of draft country estimates. Each draft country estimate has been compiled and presented in an Excel spreadsheet (“country file”) which documents the data, their sources, any assumptions employed to derive the estimate, and whether the estimate is based on sufficient national data to be used for the global SDG database. These draft estimates and country files are being made available to relevant country-level representatives through January 31, 2025 for consultation – a process facilitated by WHO’s Regional Offices. During the country consultation process, relevant ministries and agencies are requested to review and consider the data and their sources while providing feedback to the WHO team so that country estimates can be revised (as needed) and finalized. This guidance note has been developed to support the country consultation process alongside the draft country files.

According to the instructions from the Inter-agency and Expert Group on SDG indicators (IAEG-SDGs), international agencies responsible for producing country estimates on SDG indicators are expected to consult with countries on the interpretation and use of country data in global estimates. The country consultation is a process whereby WHO seeks feedback from national authorities on the country files and draft estimates for safely treated domestic wastewater. It is therefore important that relevant country authorities understand the essential elements of the country file and estimation methods in order to effectively provide feedback through this consultation. The purpose of the consultation is not to compare global and national estimates, methods and definitions but rather to review the completeness or correctness of the data in the country file and to verify its correct interpretation.

WHO Country Offices are not expected to undertake complex analysis, or to review the estimation methodology, but simply to support national authorities to identify any missing data sets and to provide feedback on the interpretation and classification of existing data. Country Offices are best placed to know which sectoral

³ <https://unstats.un.org/unsd/envstats/>

⁴ <https://unstats.un.org/unsd/envstats/questionnaire>

⁵ https://www.oecd-ilibrary.org/environment/data/oecd-environment-statistics_env-data-en

⁶ <https://ec.europa.eu/eurostat/web/environment/information-data/water>

⁷ Data Collection Manual for the OECD/Eurostat Joint Questionnaire on Inland Waters and Eurostat Regional Water Questionnaire.

https://ec.europa.eu/eurostat/documents/1798247/6664269/Data+Collection+Manual+for+the+OECD_Eurostat+Joint+Questionnaire+on+Inland+Waters+%28version+3.0%2C+2014%29.pdf/f5f60d49-e88c-4e3c-bc23-c1ec26a01b2a

⁸ Joint Questionnaire on Inland Waters for European and OECD member countries and the UNSD/UNEP Environment Statistics questionnaire for all other countries.

ministries should be consulted (sanitation, environment, regulators, and/or utilities) but in all cases it is important to engage with the National Statistics Office which is the national counterpart of IAEG-SDGs and tasked by the UN General Assembly to oversee the global monitoring. In addition, some countries have identified focal points for SDG 6, or for SDG target 6.3, which should be engaged in the consultation process.

4. STRUCTURE OF THE COUNTRY FILES

The SDG 6.3.1 country files (Excel spreadsheets) have a series of worksheets as described below:

- Introduction: A summary listing the country and draft estimate for safely treated household wastewater (if available). The country files are multilingual, and the language can be selected among English, Arabic, French, Spanish and Russian on this worksheet.
- Guidance: a short description of the country file and methodology for producing the estimate
- Data inputs (reported): A collection of all the relevant wastewater data found to have been reported in national statistics during recent data harvesting exercises. Note that some of the variables reported might not be used. For example, where data are reported for multiple years, only the most recent or most reliable data points are used for Indicator 6.3.1 calculations.
- Data inputs (all): A summary of all the reported data, sub-totals, calculations, and assumptions utilized for the computation of the country estimate
- A-Generated: Data related to the calculation of total household wastewater generation, including population coverage for on- and off-site water supply and corresponding estimates of domestic water use
- B-Generated by facility type: Data on wastewater generated for each type of sanitation facility and corresponding disaggregation of the total volume of household wastewater generated (Part A);
- C-Wastewater management chain: Summary of data points covering the wastewater management chain (Figure 1) including proportions collected in sewers and on-site storage, delivered to treatment facilities and subsequently safely treated.
- D-Delivered to treatment: Computations of the volumes of household wastewater delivered to treatment facilities by sewer and septic tank wastewater streams, and as per the data in Parts B and C.
- E-Safely treated: Computations of the volumes and proportions safely treated by sewer and septic tank wastewater streams, and presentation of the country estimate (if data are sufficient) or explanation for why it cannot be computed (if data are insufficient).

Each data point in the country file is represented in a box with five components, as shown in Figure 2.

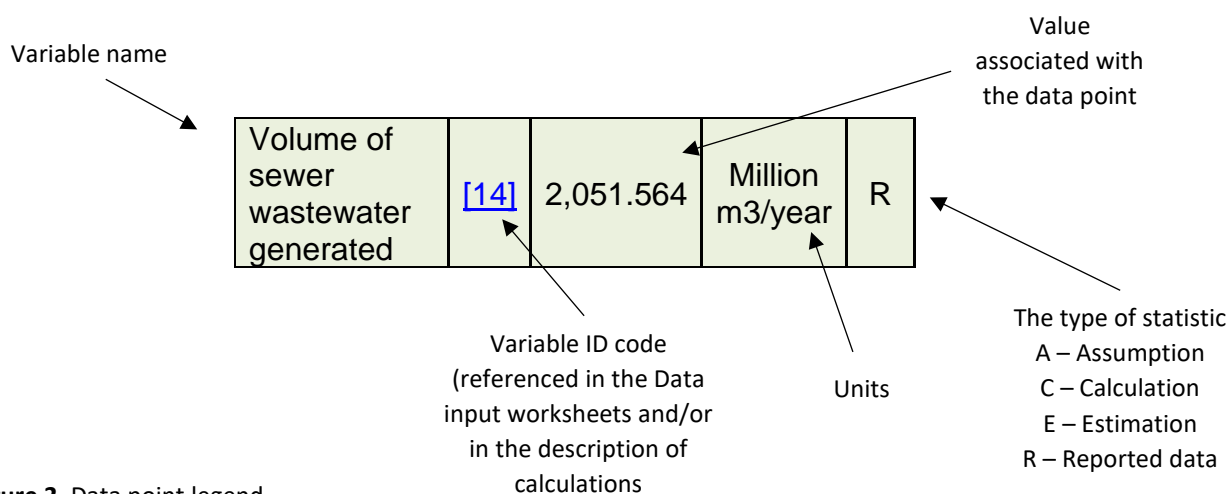


Figure 2. Data point legend

5. ACTIONS TO TAKE DURING THE CONSULTATION

The country consultation should focus on the 'Data inputs (reported)' and 'Data inputs (all)' worksheets which list those sources of data that were reviewed and used to prepare the 6.3.1 country estimate. The consultation should focus on three main questions:

1. ***Is the country file missing any relevant national sources of data on domestic water use or components of the wastewater management chain (such as septic tank emptying or wastewater treatment performance)?***

If the country file is missing any relevant sources of data, the WHO team will be grateful to receive these data and include them to update the estimates. For example, if data on wastewater treatment are missing from the country file but available from national partners, these could potentially be used to calculate and report on the indicator, or they may transform an invalid country estimate (due to lack of data) into a valid one.

2. ***Are the data sources listed as used considered reliable and suitable for use as official national statistics?***

If any of the data sources listed in the 'Data inputs (all)' worksheet are not considered to be reliable and suitable for use in calculating the SDG indicators, please inform the WHO team. Data points can be excluded for global estimates if they are unsuitable, unreliable or simply incorrect.

3. ***Is the interpretation and classification of the data extracted from national sources accurate and appropriate?***

Finally, if the data extracted from the listed sources (shown in detail on the 'Data inputs (reported)' worksheet) have not been accurately extracted or interpreted, please inform the WHO team. In some cases, data extracted might have been misinterpreted or misclassified by the WHO team, and therefore will require correction. Note that the Country Files contain formulas and links. We kindly ask you to **not work directly in the MS Excel worksheets** but rather provide data for consideration including its source in a separate document to the WHO team so they can insert the data into the database accordingly.

Results of the consultation should be shared with the WHO country and regional offices, and copied to sdg631@who.int. The deadline for the consultation is 31 January 2025.

6. REFERENCES AND DOCUMENTATION

2024 indicator report: <https://www.unwater.org/publications/progress-wastewater-treatment-2024-update>

Methodological note for domestic wastewater monitoring under SDG Indicator 6.3.1: <https://www.unwater.org/publications/domestic-wastewater-treatment-methodology-2024>

2023 country files for SDG 6.3.1 (domestic component): <https://www.who.int/teams/environment-climate-change-and-health/water-sanitation-and-health/monitoring-and-evidence/wash-monitoring/2023-country-files-for-sdg-6.3.1>

Metadata for SDG 6.3.1: <https://unstats.un.org/sdgs/metadata/files/Metadata-06-03-01.pdf>