Metadata on SDGs Indicator 6.3.1

Indicator category: Tier II

Goal 6: *Ensure availability and sustainable management of water and sanitation for all*

Target 6.3: *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.*

Indicator 6.3.1: *Proportion of domestic and industrial wastewater flows safely treated*

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World Health Organization

UN HABITAT
FOR A BETTER URBAN FUTURE

1. Definitions and method of computation

1.1 Definition:

Proportion of wastewater generated both by households (sewage and faecal sludge), as well as economic activities (based on the International Standard Industrial Classification of All Economic Activities -ISIC categories) safely treated compared to total wastewater generated both through households and economic activities. While the definition conceptually includes wastewater generated from all economic activities, monitoring will focus on wastewater generated from hazardous industries (as defined by relevant ISIC categories).

1.2 Method of computation:

The indicator on wastewater safely treated is calculated by combining the percentage of household (sewage and faecal sludge) wastewater and the percentage of wastewater from hazardous industries treated.

Household surveys and censuses provide information on the use of different types of basic sanitation facilities. These estimates are combined with safety factors for on-site disposal and for transportation to designated places for safe disposal or treatment, as described in indicator 6.2.1. The information generated for indicator 6.2.1 will be combined with safety factors describing the proportion of wastewater from hazardous industries which is safely treated before disposal or reuse to produce data for indicator 6.3.1. Calculation of safety factors for household wastewater (sewage and faecal sludge) treatment will be coordinated with estimation of similar safety factors for safe management of sanitation required for indicator 6.2.1.

The accompanying Statistical Note describes in more detail how 'safety factors' for wastewater treatment, disposal and reuse will be generated through a national assessment process and combined with data on use of different types of sanitation facilities, as recorded in the current Joint Monitoring Programme for Water Supply and Sanitation (JMP) database.

Statistical methods for measurement of the wastewater treatment (called "wastewater to sewerage" by the System of Environmental-Economic Accounts for Water (SEEA-Water)) align with the SEEA definitions and treatment categories (primary, secondary, tertiary). Statistical methods for the treatment of industrial wastewater align with the SEEA definitions and treatment categories using ISIC classifications and treated volumes from permits data.

2. Rationale and interpretation

SDG 6, target 3 calls for reduction of water pollution, minimizing the release of hazardous chemicals and increasing treatment and reuse. Household wastewater includes faecal waste from onsite facilities (such as emptying and cleaning of cesspools and septic tanks, sinks and pits) as well as offsite wastewater treatment plants according to the ISIC definition 3700 for "Sewerage".

Inclusion of onsite facilities is critical from a public health, environment and equity perspective since approximately two-thirds of people globally use onsite facilities. Industrial wastewater (which includes point source agricultural discharges) responds to minimizing release of hazardous chemicals. Diffusion of agricultural pollution is a major source of water pollution but cannot be monitored at source and therefore its impact on ambient water quality will be monitored under 6.3.2.

Water Pollution in Bangladesh © emaze.com.

Women fetching water in Misraq Gashamo, Somali Region of Ethiopia

The purpose of monitoring progress against the SDG 6 Target 3 (Indicator 6.3.1) is to provide necessary and timely information to decision makers and stakeholders to make informed decision to accelerate progress towards reducing water pollution, minimizing release of hazardous chemicals and increasing treatment and reuse. In general, monitoring promotes higher accountability, better performance assessment and strong coordination between the local central governments, and the regional and local governments. Countries and cities can make appropriate evidence-based decisions on the best policies and actions to adopt, whilst systematically documenting their performance at the outcome and impact levels.

3. Disaggregation

Disaggregation will be done based on source of waste water, i.e. household (on and offsite) and industrial wastewater. The household part of this indicator is also addressed by safely managed sanitation services (indicator 6.2.1).

Household wastewater can be further disaggregated to estimate the proportion of treated wastewater that is safely reused, responding to the target component "substantially increase recycling and reuse". However, data availability will be challenging in many countries. Further details can be found in the methods note: http://www.wssinfo.org/fileadmin/user_upload/resources/Methodological-note-on-monitoring-SDGtargets-for-WASH-and-wastewater_WHO-UNICEF_8October2015_Final.pdf

4. Sources and data collection processes

The aim is to cover households and the entire economy, and to build on the monitoring framework of JMP, AQUASAT , IBNET , UNSD/UNEP Water Questionnaire for non-OECD/Eurostat countries, OECD/Eurostat Questionnaire for OECD countries, etc., as well as population density, depth to groundwater, and land use/ land cover data from earth observations. Statistical methods for measurement of wastewater treatment will align with the SEEA statistical standard and associated definitions, classifications and treatment categories.

The calculation of the indicator value is derived from the amount of waste treated both on and offsite divided by the total amount of waste generated. The indicator for household wastewater could be expressed in "proportion of population" as in Indicator 6.2.1.

Data will come from a variety of sources combining utility and regulator data for offsite waste management, and household surveys for onsite treatment; supplemented by modelled estimates where no reliable national data exists.

The total volume of industrial wastewater can be reliably estimated from an inventory of industries, maintained by the vast majority of member states through International Standard Industrial Classification from all economic activities, revision 4, ISIC Rev4). This can be populated from databases and records held by Ministries of Industry, Tax offices, local authority registries etc. For each industry, records will be available on the amount of water they abstract from municipal supplies or from boreholes and other sources. Given the knowledge of the type of industry, from and a mass balance of products in and out, the proportion of wastewater flow generated as waste water can be estimated.

Children drinking water in Borno, Nigeria © un.org.

5. Comments and limitations

A framework for measuring faecal waste flows and safety factors have been developed and piloted in 12 countries (World Bank Water and Sanitation Program, 2014), and is being scaled up post 2015. This framework has served as the basis for monitoring plans for indicators 6.2.1 and 6.3.1. Data on safe disposal and treatment remains scarce, and will not be available for all countries immediately. However, sufficient data exists to make global and regional estimates of safely treated wastewater by 2018.

6. Responsible entities

WHO and UNHABITAT

7. Current data availability/indicator tier

Although currently classified as a Tier II indicator, this indicator should be classified as a Tier I indicator as it has an established methodology, follows international standards, and has extensive data coverage for most countries.

Most countries of the world, including the MDG regions, covering 90% of the global population (2010 onwards), as well as 50% of the countries of the world, covering at least 50% of the global population, including all MDG regions, for 2000-2009 period.

Preliminary estimates are available for 140 countries for 6.2.1, which is the same as the household part of this indicator. Since the publication of the report above, WHO and UNHABITAT have been collecting data directly from country sources, and now have data on treatment of wastewater from majority of countries of the world, many of which also provide time series data.

Following further testing, a revised SDG baseline estimate will be available soon, along with estimates for other parts of this wastewater indicator, i.e. industrial and commercial parts broken down by economic activities following SEEA definitions and standards.

Data sources:

i) UNSD-UNEP questionnaire: http://unstats.un.org/unsd/environment/questionnaire.htm;

ii) OECD: https://data.oecd.org/water/waste-water-treatment.htm.

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

iv) IBNET: https://www.ibnet.org/.

v) GWI: https://www.globalwaterintel.com/."

8. Data collection and data release calendar

Data collection started and ran throughout 2017.

Data release: The baseline SDG report was released in July 2017 with the date collected feeding into the report.

Children drink and collect water at a community pump, India © USAID / Amit Pasricha.

8.1 Treatment of missing values,

At country level: The calculation of the indicator value as derived from the framework is the amount of waste treated (off-site and on-site) divided by the total amount of waste produced. Data on treatment of domestic wastewater will come from the multi- purpose indicator 6.2.1. Data on volumes of industrial wastewater can be estimated from inventories of industries, which will be available in the majority of Member States disaggregated by ISIC classifications. The breakdown of treated wastewater can be calculated based on compliance records, related to national standards. Unless verified otherwise, through audited compliance records, the waste generated will be considered untreated.

At regional and global levels : No data will be published for countries which do not have such information.

8.2 Sources of discrepancies

WHO is required by World Health Assembly resolution to consult on all WHO statistics, and seek feedback from countries on data about their territories. Before publishing, all JMP estimates undergo rigorous country consultations facilitated by WHO and UNICEF country offices. Often these consultations give rise to in-country visits, and meetings about data reconciliations.

8.3 Regional and global estimates and data collection for global monitoring

Regional aggregates:

See methods note mentioned 8.2 above.

8.4 References

- Progress on sanitation and drinking water 2015 update and MDG assessment. New York: UNICEF/WHO, 2015. http://www.wssinfo.org/fileadmin/user_upload/resources/JMPUpdate-report2015_English.pdf

- Methodological note on monitoring WASH and wastewater for the SDGs: http://www.wssinfo.org/fileadmin/user_upload/resources/Methodological-note-on- monitoring-SDG-targets-for-WASH-and-wastewater_WHOUNICEF_8October2015_Final.pdf.

- The Missing Link in Sanitation Service Delivery: A Review of Fecal Sludge Management in 12 Cities. World Bank Water and Sanitation Program, 2014. http://documents.worldbank.org/curated/en/2014/04/19549016/targeting-urbanpoorimproving-services-small-towns-missing-link-sanitation-service-delivery-reviewfecalsludge-management-12-cities

- SEEA-Water System of Environmental- Economic Accounting for Water, United Nations Department of Economic and Social Affairs, 2012

- International Standard Industrial Classification of All Economic Activities, Rev.4 http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=27

- Report of the First Stakeholders Consultation on Post-2015 monitoring: Indicators and Monitoring Mechanisms: http://www.unwater.org/fileadmin/user_upload/unwater_new/docs/Topics/SDG/GEMI_Report_First_Stakeholders_Consultation_Post-2015_Monitoring_FINAL2015-04-27.pdf

Connection to other SDG indicators

This indicator is connected to a) Indicator 6.1.1: Proportion of population using safely managed drinking water services, b) Indicator 6.2.1: Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water and c) Indicator 6.3.2: Proportion of bodies of water with good ambient water quality.

Woman fills her jerrycan with water from a collection tank in the ground, Melbana Village, Mio District © Flickr/cubo-agua.

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