Indicator Fact Sheet

3. Access to Sanitation

Indicators:

3.1 Share of total, urban and rural population with access to an improved sanitation system (ISS)

3.2 Proportion of population using safely managed sanitation services (SMSS)

Indicator Specification

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Indicator Specification

H2020 Indicators	
Thematic area **WATER**	**Date:** 11.05.2018 **Author(s): EEA/ETC, UNEP-MAP**
Policy theme **3. Access to sanitation**	
Indicators: **3.1 Share of total, urban and rural population with access to an improved sanitation system (ISS)** **3.2 Proportion of population using safely managed sanitation services (SMSS)**	

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Rationale

Why is access to sanitation important for the state of the Mediterranean

Management of safe water sources and proper sanitation are crucial for sustainable development. Access to water and sanitation are considered core socio-economic and health indicators and key determinants of child survival, maternal, and children's health, family wellbeing, and economic productivity.

Lack of sanitation poses health risks from contaminated drinking water to life-threatening forms of diarrhea to infants, particularly for poorer segments of the population who are most exposed to inadequate human waste disposal.

Enhancing access to improved sanitation services remains politically challenging due to rural/urban inequalities and the emergence of "pockets" of urban poverty. The urban population is likely to increase by 50% by 2025 in the Southern and Eastern Mediterranean rims. Therefore ensuring access to sanitation services in unregulated peripheral quarters and in medium and small-sized towns is a major social challenge in these developing regions. Furthermore, climate change places the additional challenge to regions with already scarce water supplies, such as the Eastern Mediterranean and North African countries, to manage better their water recources and services.

In the Mediterranean, access to sanitation and wastewater treatment is still lagging behind as compared to access to drinking water. There are still 17.6 million people in the Mediterranean region without sanitation. Nevertheless, the ENP South region is generally above world average regarding access to improved sanitation. Between 2003 and 2011, there has been an increase in the access to improved sanitation from 87.5% to 92% in the region (EEA, 2014). Although the Millenium Development Goal (MDG) of halving the proportion of the population without sustainable access to safe drinking water and basic sanitation by 2015 has been achieven, the disparities between rural and urban areas still remain significant and may reach as much as 30% in certain Southern Mediterranean countries.

Justification for indicator selection

3.1 Share of total, urban and rural population with access to an improved (ISS) sanitation system

The Joint Monitoring Programme (JMP) for Water Supply and Sanitation of the United Nations Children's Fund and the World Health Organization (WHO) developed this indicator to help monitor progress towards one of the Millennium Development Goals. It corresponds to the MDG Indicator 7.9: *Proportion of population using an improved sanitation facility*, under Goal 7: Ensure environmental sustainability.

Since this indicator was also adopted as one of the H2020 Water Indicator during ENI-SEIS Phase I, it is deemed important to maintain it for time-series continuity. Fuerthermore, this indicator has been referenced by several countries in their updated National Action Plans, where it relates to specific operational targets put forward by Mediterranean countries (e.g. *Provide XX% population with connection to sewage networks by [2019 to 2025]*) under IMAP's Ecological Objective 5, being one of the proposed common indicators for the Mediterranean Action Plan.

Despite discrepancies in the national definitions of urban population and acceptable sanitation, this indicator is important to show the progress being made in the Mediterranean region according to the type of wastewater collection (individual or collective) and the treatment methods, thus linking directly to the other priority indicators e.g. on volume of wastewater collected and type of treatment.

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3.2 Proportion of population using safely managed sanitation services (SMSS).

This indicator is based on the new definition of the Sustainable Development Goal (SDG) Indicator 6.2.1: *Proportion of population using safely managed sanitation services (SMSS), including a hand-washing facility with water and soap.*
It builds on the MDG indicator 7.9 (population using improved sanitation facility) and addresses public health beyond the household level, including containment and treatment of the faecal waste, which is not includuded in the MDG definition described in 3.1a. Safe management of faecal waste needs to be considered in addition to access to improved services, since release of faecal waste pose a risk to public health. The WHO found that in moving to improved sanitation there was a 16% reduction in diarrhoea. However, depending on the type of water supply diarrhoeal disease can be reduced by 28-45% when household water is treated and safely stored.

References

- EEA, 2014. Horizon 2020 Mediterranean Report – Towards shared environmental information systems EEA-UNEP/MAP Joint Report. Luxembourg: Publications Office of the European Union.
- SDG, 2016. Goal 6 Ensure availability and sustainable management of water and sanitation for al. https://unstats.un.org/sdgs/files/metadata-compilation/Metadata-Goal-6.pdf
- Synopsis of updated NAPs: Hotspots, sensitive areas, targets, measures, indicators and investment portfolios, UNEP/MAP, 2016.
- UNEP/MAP-Plan Bleu, 2009. State of the Environment and Development in the Mediterranean, UNEP/MAP-Plan Bleu, Athens.
- United Nations, 2015. The Millennium Development Goals Report 2015. New York.
- UN Water, 2017. Integrated Monitoring Guide for Sustainable Development Goal 6 on Water and Sanitation Targets and global indicators.
- WHO, 2009. Vision 2030: The resilience of water supply and sanitation in the face of climate change. France.WHO, 2014. Preventing diarrhoea through better water, sanitation and hygiene. - Exposures and impacts in low- and middle-income countries
- WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, 2017. Guidance note to facilitate country consultation on JMP estimates for drinking water, sanitation and hygiene
- WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, 2017. Progress on Drinking Water, Sanitation and Hygiene - 2017 update and SDG baselines

Indicator definition

***3.1** Share of total, urban and rural population with access to an improved (ISS) sanitation system*

"Share of population with access to improved sanitation" refers to the percentage of the population with access to facilities which hygienically separate human excreta from human, animal and insect contact. This indicator represents the share of population (total, urban, rural) having access to

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improved sanitation systems installed in homes or in the immediate vicinity, for the evacuation of human faeces (e.g. public sanitation network, septic tank).

The definition of "improved sanitation system" provided by JMP for Water Supply and Sanitation by the WHO and UNICEF is: connection to a public sewer, connection to a septic system, pour-flush latrine, access to a pit latrine, ventilated improved pit latrine.

According to WHO and UNICEF, facilities such as sewers or septic tanks, pour-flush latrines and simple pit or ventilated improved pit latrines are assumed to be adequate, provided that they are not public. To be effective, facilities must be correctly constructed and properly maintained. Sanitation solutions that are considered as "non-improved" include public or shared latrine, open pit latrine, bucket latrines.

This indicator distinguishes between total, urban and rural population. As the characteristics of urban and rural areas vary from country to country, no single definition can be applied regionally. National definitions most often refer to the size of localities. Rural populations often represent the part of the population considered as non-urban. Some countries distinguish between communal and non-communal populations instead of urban and rural. In others, no distinction between urban and rural populations is made or may have an additional category comprising refugee populations. See more details under section "Uncertainties" below.

Units
Percentage of population (%).

Geographical scope
Mediterranean.

Indicator definition

3.2 *Proportion of population using safely managed sanitation services (SMSS).*

In the context of H2020 and ENP-SEIS II, the indicator's component on hygiene ("*hand-washing facility with water and soap*") will not be accounted.

JMP defines "safely managed sanitation services" as an improved sanitation facility

a) that is not shared with other households
b) and where excreta is safely disposed of in situ or treated off site,

'Improved' facility is defined the same as for MDG Indicator i.e. flush or pour flush toilets to sewer systems, septic tanks or pit latrines, ventilated improved pit latrines, pit latrines with a slab, and composting toilets.

"Safely disposed in situ": when pit latrines and septic tanks are not emptied, the excreta may still remain isolated from human contact and can be considered safely managed.

In addition to "safely managed sanitation", JMP defines other less developed sanitation types:
"Basic sanitation services" include improved sanitation facilities that are not shared with other households but do not meet the described criteria for treatment. If facilities are shared with other households, the service is classified as "limited sanitation services".
"Unimproved sanitation services" include those such as pit latrines without a slab or platform, hanging latrines and bucket latrines. Finally, at the bottom of the ladder classification system is "open defecation", which refers to human faeces disposed of in fields, forest, bushes, open bodies of water, beaches or other open spaces or disposed with solid waste.

Units
Percentage of population (%) with "safely managed", "basic", "limited", "unimproved" or "open defecation" services.

Geographical scope
Mediterranean.

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Policy context and targets

General context description

In the Mediterranean area, this indicator is linked to the Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-based Sources and Activities (LBS Protocol) and the Mediterranean Strategy for Sustainable Development (2016-2025) (MSSD).

The Horizon 2020 Initiative, which aims to reduce the pollution of the Mediterranean Sea by 2020, recognizes the discharged of inadequately treated wastewater as one of the three priority areas causing major pollution in the Mediterranean Sea.

The MSSD objectives are closely linked to the SDGs. Population access to adequate sanitation and appropriate urban wastewater treatment directly relate to the MSSD Objective 2: *Promoting resource management, food production and food security through sustainable forms of rural development*; and Objective 3: *Planning and managing sustainable Mediterranean cities.*

Targets

Relevant targets in global initiatives:

- The MDG target was: *By 2015, halve the number of inhabitants without access to sanitation*.

- The SDG Target 6.2 associated to Indicators 3.1b is: *By 2030, to achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.*

Relevant regional targets:

- MSSD target for wastewater treated by country is 90% by 2025.

- SAP-MED: by the year 2005, to dispose sewage from cities and urban agglomerations exceeding 100.000 inhabitants and areas of concern in conformity with the provisions of the LBS Protocol; by the year 2025, to dispose all municipal wastewater (sewage) in conformity with the provisions of the LBS Protocol.

Targets in the updated NAPs (ENI-South):

- Algeria, Egypt and Lebanon have defined common operational targets linked to % of population with connection to sewage networks by [2019 to 2025].

Related policy documents

- UN, 2012. Millennium Development Goals Report 2012.
- UN Water, 2017. Integrated Monitoring Guide for Sustainable Development Goal 6 on Water and Sanitation. Targets and Global Indicators.
- UNEP/MAP, 2016. Mediterranean Strategy for Sustainable Development 2016-2025. Valbonne.
- UNEP/MAP, 1999. Strategic Action Programme to Address Pollution from Land-based Activities.
- UNEP/MAP, 2016. Synopsis of updated NAPs: Hotspots, sensitive areas, targets, measures, indicators and investment portfolios.

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- UNEP/MAP, 2012. Existing targets and EQO regarding pollution in the framework of UNEP/MAP MEDPOL Programme.

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Methodology

3.1 Share of total, urban and rural population with access to an improved (ISS) sanitation system

Methodology for indicator calculation

The indicator is computed as follows:

(A / P) x 100

A: Population having access to improved sanitation installations

P: Total population

The indicator is calculated for urban, rural and total (urban + rural) populations. The ratio is expressed as percentage.

The datasets below are required for the calculation of the indicator.

Geographical coverage

National-level

- Total population
- Urban population
- Rural population
- Total population having access to improved sanitation installations
- Urban population having access to improved sanitation installations
- Rural population having access to improved sanitation installations

Coastal hydrological basin level

- Total population
- Urban population
- Rural population

Generally, data is available at the country level. However, by knowing the total, urban and rural population in the hydrological basins/catchment area, access to improved sanitation systems can be scaled to the catchment area that discharge in the Mediterranean.

Data sources

National sources

Since the late 1990s, data have routinely been collected at (sub)national levels using censuses and surveys by national governments, often with support from international development agencies.

Two data sources are common:

a) administrative or infrastructure data that report on new and existing facilities, e.g. holding companies as data owners/data producers;

b) data from household surveys including Multiple Indicator Cluster Surveys (MICS), Demographic and Health Surveys, and Living Standards Measurements Study (LSMS) surveys, and censuses, such as Census of Civil Building and Agriculture (CCBA). The latter are generally

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carried out by the Department of Statistics. Rural and urban population statistics are usually also obtained from population censuses.

International sources

Data on the % of the population using each system type are available in the MDG database per country.

Geographical units

This indicator is calculated at two geographical levels:
- Country level, including subdivision in urban and rural;
- Catchment/ hydrological basin at the coastal area or, if data not available, major coastal cities, in order to quantify the extent of land-based pressures that could potentially have a downstream effect on the state/impact of the sea.

Temporal units

Annual

Temporal coverage

2003-2016

Methodology for gap filling

Data gaps could be filled by combining data from different sources, such as surveys and censuses and by considering international sources, such as the MDG database. Note, however, that integrating data collected through different sources and methodologies can lead to discrepancies and inconsistencies (see Methodology Uncentainties below).

Methodological references

- MED POL, 2015
- United Nations Development Group, 2003. Handbook for Indicators for Monitoring the Millennium Development Goals.
- Plan Blue, 2006. Methodological sheets of the 34 priority indicators for the "Mediterranean Strategy for Sustainable development" - Follow up.
- MDG database
- http://mdgs.un.org/unsd/mdg/Default.aspx

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Methodology

3.2 Proportion of population using safely managed sanitation services (SMSS).

Methodology for indicator calculation

This indicator is calculated for each classification of the indicator, ranging from *safely managed services* to *no service*.

A number of variables are required to calculate this indicator:

- P: total population
- TBP: total number of people with access to a basic sanitation system (improved facilities) which include:
  - Total number of people with access piped sewers
  - Total number of people with access septic tanks
  - Total number of people with access other improved onsite facilities
- SMS: total number people with access to of safely managed systems which include:
  - Total number of people with access to piped sewers that are contained + transported & delivered to treatment plants + treated at treatment plants
  - Total number of people with access to septic tanks that are contained + emptied for transport + transported & delivered to treatment plants + treated at treatment plants
  - Total number of people with access to other improved onsite facilities that are contained + emptied for transport + transported & delivered to treatment plants + treated at treatment plants. Or safely disposed insitu.
- SHP: total number of people with improved facilities shared with other households
- UNP: total number of people with access to unimproved facilities which do not separate excreta from human contact.
- ODP: total number of people with open defecation.
- NBP: total number of people with non-basic sanitation

The different classifications are then calculated as follows:

Safely managed services
SMS/P * 100

Basic services
(TBP-SMS)/P * 100

Limited service
SHP/P * 100

Unimproved
UNP/P * 100

No service
ODP/P * 100

Geographical coverage

The calculations above can be done for total population (P) of total national, rural and urban areas. In addition they can be performed on the total population (P) for the catchment/hydrological basin

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that discharge in the Mediterranean and/or coastal cities.

Data sources
National delivery through household surveys, institutional/utility records, licensed emptying service providers.

Data on the % of the population using each system type are available in the SDG database per country.

Geographical units

This indicator is calculated at two geographical levels:

- Country level, including total population and sub-division in urban and rural population;

- Catchment/ hydrological basin at the coastal area or, if data not available, major coastal cities, in order to quantify the extent of land-based pressures that could potentially have a downstream effect on the state/impact of the sea.

Temporal units
Annual

Temporal coverage
2003-2016

Methodology for gap filling
The SDG database contains estimates for this indicator on country level. Note, however, that integrating data collected through different sources and methodologies can lead to discrepancies and inconsistencies (see Methodology Uncentainties below).

Methodological references

- UN-Water Integrated Monitoring Initiative for SDG 6, 2017. Integrated Monitoring Guide for Sustainable Development Goal 6 on Water and Sanitation Targets and global indicatorsUN-Water, 2016. Step-by-step monitoring methodology for indicator 6.2.1. - draft. GEMI – Integrated Monitoring of Water and Sanitation Related SDG Targets
- SDG database

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Uncertainties

Methodology uncertainty

- Definition of "improved sanitation system".

In the description of this indicator, reference is made to the definition of "improved sanitation system" provided by WHO and UNICEF (see section on "Indicator Definition" above). However, various types of facilities are available in the different countries which may not always be in line with the standard definition. For this reason, it is recommended to document in detail the types of facilities that are represented by the (sub) national data.

- Improved sanitation systems shared with other households

When an improved sanitation system is shared with other households the sanitation service is classified as limited service. When a household has additional (lower) qualified sanitation practices (e.g. open defacation) for example when the facilities cannot always be shared, the share of the population might fall under multiple categories. Rules for counting household according to either their higher or lower qualified practices need to be equal for all nationalities when monitoring.

- Population statistics (urban, rural, refugees)

Population statistics are a source of uncertainty due to the following reasons: a) the distinction between urban and rural population is not amenable to a single definition applicable to all countries, b) some countries consider refugees a separate population group (e.g. Palestine) and c) other countries do not make a distinction between rural and urban at all (e.g. Lebanon and Israel). For this reason, it is recommended to document in detail the (sub) national definitions of population upon delivery of data to be used in calculating the indicator.

- Conversion from household to population data

According to the definition of these indicators, reference is made to the share of *population*. However, in some countries this indicator is available in terms of share of *households*. In this case, it is required to convert the number of households to population so as to be coherent with the definition given above. It is recommended to describe in detail the steps and assumptions taken to apply this conversion.

- Combination of different data sources and methodologies

Two main data sources are common: administrative records and household surveys. Rural and urban population statistics come directly from population censuses. The combination of different methodologies may result in discrepancies between different data sets. For this reason, it is necessary to document the method of data collection upon delivery of data.

Data sets uncertainty

- Although the datasets required to compute this indicator consist of population data (see section on "Methodology"), in the first reporting exercise countries delivered directly % data. The reason is that due to the uncertainties in population statistics (see section on "Methodology Uncertainty"), the calculation of % based on the population datasets leads to erroneous trends.
- Data are not routinely collected by "the sector" but by others outside the sector as part of more general surveys. This increases the risks of inconsistencies.
- The timing of collection and analysis of household survey data is irregular, with long intervals between surveys giving rise to data gaps.

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- When data are from administrative sources, they generally refer to existing sanitation facilities, regardless to whether they are used or not. Evidence suggests that data from surveys are more reliable than administrative records and provide information on facilities actually in use by the population.
- Other sources of data sets uncertainty may result in countries with more than one producer of national data, possibly. For instance, in some countries, data is produced by the Ministry of Water as well as the Statistical department using different methodologies. Coordination between the different entities responsible for the production and compilation of data is needed.
- Access to safely managed sanitation services includes extensive information on the containment, transport and treatment of the wastewater. Data collection and estimations are in part based on household surveys. It is not likely that all households are aware of the method of containment, transport and treatment of their wastewater. Thus this would require the datasets (surveys, monitoring, estimation) to be combined, potentially leading to errors and discrepancies between countries.
- There may be some degree of uncertainty associated to the estimation of and assumptions made regarding: sealed septic tanks which may not be properly separated from land and water resources; septic tanks that are actually not emptied regularly; percentage of water that is not transported to the WWTPs.

Rationale uncertainty

- While access is the most reasonable indicator for assessing sanitation facilities, it still involves severe methodological and practical problems as described above. Other uncertainties related to the indicator rationale may include:
    - Facility quality is not systematically addressed in surveys and censuses. In practice, it is often hard to ascertain during a survey or a census which type of sanitation solution is considered improved or not.
    - The fact that facilities are available does not mean that they are used.
    - Although it is insightful to assess the entire chain of services and type of containment used by different population, a detailed mapping of the full range of sanitation services could prove to be challenging.

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