



Measuring Success – Handbook

Part I: Quantitative Indicators

#ms05: Sanitation

2.5 #ms05: Sanitation – Households using at least basic sanitation services

Indicator Statements		
Indicator (in short)	Indicator	Number [actual value] of households using at least basic sanitation services
	Unit of indicator	Number [actual value] of households
Project-level indicator statements	Baseline statement	<i>Result:</i> The number of households using at least basic sanitation services was x out of a total of N targeted households. (sampling size = n households)
	Endline statement	<i>Result:</i> During the project period, out of a total of N targeted households, the number of households using at least basic sanitation services changed from x households (baseline) to y households (endline). (sampling size = n households)

Background

Why do we use this indicator? Access to safe sanitation is essential for public health and is widely recognized as a human right. Poor sanitation is closely linked to diarrheal diseases, which exacerbate malnutrition and remain a leading cause of child mortality worldwide, as well as parasitic infections such as soil-transmitted helminths (worms) and a range of other neglected tropical diseases. While access to a hygienic toilet is essential to reduce the transmission of pathogens, safe disposal of excreta is equally important. Sharing of sanitation facilities is also an important consideration given the negative impact on dignity, privacy and personal safety, particularly for women and girls.



The #ms indicator for sanitation is useful for assessing whether the **right to proper sanitation** is being met and how successful related interventions are. Safe sanitation is also important as a precondition to achieving sustainable food and nutrition security.

What does this indicator assess? The number of households using **at least basic sanitation services** comprises households that have access to and make use **of improved sanitation facilities which are not shared with other households**.

According to the WHO/UNICEF Joint Monitoring Program for Water Supply, Sanitation, and Hygiene (JMP), sanitation services can be classified according to the following ‘**sanitation ladder**’:

Safely managed	Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or removed and treated offsite
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Basic	Use of improved facilities which are not shared with other households
Limited	Use of improved facilities shared between two or more households
Unimproved	Use of pit latrines without a slab or platform, hanging latrines or bucket latrines
Open defecation	Disposal of human feces in fields, forests, bushes, open bodies of water, beaches and other open spaces or with solid waste

(For definitions and examples of improved and unimproved sanitation, see also [JMP's Definitions of Terms for Monitoring WASH Services](#), pp. 3/4)

Sanitation services need to be managed in a way as to minimize the risk of fecal contamination of hands, drinking water, and soil/dust. Hygienic conditions, cleanliness and maintenance are key. Furthermore, the existence and utilization of a functioning handwashing facility with soap and water in the vicinity of the sanitation facility (toilet) is a necessary condition for the indicator to be met.

WHH considers a given sanitation service-level to be at least basic if its assessment, conducted through observation and interview questions, reveals a low risk of fecal/oral pathogen transmission.

For which projects should this indicator be used? This indicator is applicable for **projects that aim to increase access and use of at least basic sanitation facilities** including a handwashing facility. This includes projects providing sanitation services for rural, urban, or peri-urban populations.

Typical intervention types for which this indicator is suitable are:

- **Sanitation marketing, hygiene-promotion** interventions, and approaches such as **CLTS, PHAST, CHAST, CHC**
- Toilet/sanitation **construction or rehabilitation**
- **Collection/transport of fecal matter** (e.g., pit-emptying services)
- **Treatment of fecal matter** (e.g., composting, fecal sludge management)
- **Disposal** and/or reuse

Data Collection #ms05: Sanitation

Who should be interviewed? The **research unit** of the population (N) and the sample (n) for this indicator is the **household**. The population size is usually composed of the number of households that are supposed to benefit from project intervention.



Questions should be addressed to the **person (adult) who is responsible for maintaining the sanitation facility used by household members.**

When should the data be collected? This indicator requires a baseline and comparison value(s) to yield interesting information on project outcomes. **At minimum**, it should therefore be collected as part of both a **baseline and an endline** survey.



Please note: Data for the #ms Sanitation indicator can be collected at any time of the year. However, because the rainy and dry season affect the water availability and as such water service levels, you should consider always collecting **baseline and endline data in the same season.**

Preparing data collection

Enumerators should attend a special training session on survey skills and observation in WASH facilities before collecting data. They must have a deep understanding of improved versus unimproved sanitation facilities and how to assess them.

According to the JMP, improved sanitation facilities include:

- Flush/ pour-flush toilets
- (Twin-) pit sanitations with a slab
- Composting toilets
- Container based sanitation

(see also pp. 3 & 4 of JMP’s definitions of terms to monitor WASH services)

Indicator calculation

The #ms Sanitation indicator reveals how many project participant **households** are **using at least basic sanitation services.**

A household is rated as “using at least basic sanitation services” if:

- household members have access to an **improved sanitation facility** (Q5.1); **AND**
- the sanitation is **in use** (Q5.2); **AND**
- the risk of fecal contamination of hands, drinking water, and soil/dust is assessed as low, i.e., if at least **5 of the 7 questions Q5.3-Q5.8 are answered in the affirmative “yes”.**

To **extrapolate**¹ the result from the survey to the (target) population:

1. calculate the proportion of sampled households **using at least basic sanitation services** out of the total number of sampled households; and then
2. multiply the result by the total number of households within the (target) population (see below).

$$\frac{\text{Number of sampled households using at least basic sanitation services}}{\text{Total number of sampled households}} \times \text{Total number of households in the (target) population}$$

Recommended calculation:

1.

Index **access** to improved sanitation facility:

- Copy the original table
- Add one column
- Record a value of “10” in the newly added column for households that have access to an improved sanitation facility

¹ Extrapolation is a process in which measured characteristics of a sample lead to estimates of unknown characteristics of the target population from which the sample was drawn.

2.

Index **use** of an improved sanitation facility:

- Add one column
- Record a value of “10” in the newly added column for households that use an improved sanitation facility

3.

Calculate the **index** for the fecal contamination of hands, drinking water, and soil/dust:

- Copy the table
- In the newly created table replace the answer category “yes” with a “1” and the answer categories “no” or “cannot be judged” with a “0”
- **Please note:** The answer category “yes” for Q5.6 “Availability of a functioning hand-washing facility” is to be replaced with a “2” instead of a “1”

4.

Calculate the **total index**:

- Copy the table
- Add one more column at the end of the table to calculate the total index
- Calculate the total index by summing up the values
- If the summary index amounts to at least 25, the sanitation of the household is considered “at least basic”



Index	Profile
0 – 24	Less than basic
≥25	At least basic

5.

Find out how many **households** in the sample **use “at least basic” sanitation services**:

- Count all households for which the summary index is at least 25

Below is a calculation-matrix template for the #ms Sanitation calculation ([Link to the corresponding Excel matrix on WHH Intranet](#)).

Calculation matrix template (Link to the corresponding Excel matrix on WHH Intranet).

Original Data							
4_sanitation_have	4_sanitation_used	4_sanitation_cleaned	4_sanitation_cover	4_sanitation_light_space	4_hand_washing_facility	4_hand_washing_facility_water	4_soap
yes	Yes (faeces in the pit, sign of walking line to the sanitation, no faeces in the compound)	yes	yes	yes	yes	yes	yes
yes	No (pit empty, road to the sanitation covered with grass, pit hole covered with spider web)	yes	yes	yes	yes	no	no
no							
yes	Yes (faeces in the pit, sign of walking line to the sanitation, no faeces in the compound)	cannot be judged	cannot be judged	cannot be judged	cannot be judged	cannot be judged	cannot be judged

Steps 1-3: Convert answers into numbers. In the first column, index access to improved sanitation facility by recording a value of "10" for answer category "yes"; in the second column, index use to improved sanitation facility by recording a value of "10" for answer category "yes"; in the other columns, replace the answer category "yes" with a "1" and the answer categories "no" or "cannot be judged" with a "0" and sum up the values to obtain the index for fecal contamination.

4_sanitation_have	4_sanitation_used	4_sanitation_cleaned	4_sanitation_cover	4_sanitation_light_space	4_hand_washing_facility	4_hand_washing_facility_water	4_soap	4_index_contamination
10	10	1	1	1	2	1	1	7
10	0	1	1	1	2	0	0	5
0	0	0	0	0	0	0	0	0
10	10	0	0	0	0	0	0	0

Step 4: Score Calculation. Calculate the total index by summing up the index for access to improved sanitation facility, the index for use of improved sanitation facility, and the index for contamination. Count how many households have at least basic sanitation services (total index > 25)

total index is orange

4_sanitation_have	4_sanitation_used	4_sanitation_cleaned	4_sanitation_cover	4_sanitation_light_space	4_hand_washing_facility	4_hand_washing_facility_water	4_soap	4_index_contamination	index_sanitation
10	10	1	1	1	2	1	1	7	27
10	0	1	1	1	2	0	0	5	15
0	0	0	0	0	0	0	0	0	0
10	10	0	0	0	0	0	0	0	20

All households with a score higher than 25 have at least basic sanitation services

Total	1
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3. Questionnaire for #ms05: Sanitation

This section includes not only the questions and answers but also comments for enumerators (which can be used in training) and specifications for the person designing/adapting the project-level template.

Question ID	Question and Answer		Remarks for Different Users of #Measuring Success	
	Questions	Answers	Enumerators (<i>tips for enumerators to be used during the interview</i>)	Designer of Project-Specific Questionnaires (<i>tips for questionnaire design, i.e., before conducting the survey</i>)
0.1	Before starting the interview			
0.1.1	WHH project ID	Project ID		This question is currently formatted as free text. You may change it to a multiple-choice format if necessary (e.g., when one survey covers two or more project IDs).
0.1.2	Date of interview	Date		

0.1.3	Consent to interview: I would like to ask you to provide your objective responses regarding your situation. Your participation is voluntary, and your information will be kept confidential. I have informed you about what type of data will be collected, for which purposes it will be used, with whom the data may be shared, and that you have the right to access your data and to ask for correction or deletion. Do you agree to the collection and processing of your data?	<ul style="list-style-type: none"> - If "yes", proceed with questions - If "no", do not proceed with any further questions 		
0.2	Interviewee information			
0.2.1	Household location	Remark: Answer categories must be project-specific:		Free text question can be replaced by a cascading question if you wish
0.2.2	Geographical coordinates	Geo-coordinates		
0.2.3	Who is head of the household?	<ul style="list-style-type: none"> - Father - Mother - Grandmother - Grandfather - Child/Youth - Other 		

0.2.4	Name & surname of interviewee	<p>Name / surname</p> <p>Or</p> <p>Interviewee is Head of Household</p>	<p>Before starting the interview, make sure that relevant persons are present, mainly:</p> <ul style="list-style-type: none"> - For #ms01 MAHFP and #ms02 FCS: the person (adult) who is responsible for food preparation in the household. - For #ms03 MDD-W: a woman aged 15-49 - For #ms04 Drinking water: the person (adult) who is responsible for handling the household's drinking water - For #ms05 Sanitation: the person (adult) who is responsible for maintaining the sanitation facility used by household members - For #ms06 Income: the head of the household or a person responsible for or aware of the care and organization of the household - For #ms07 Skills: a training graduate - For #ms08 Agriculture and #ms09 Climate Resilience: the person (adult) who is responsible for the usage of the promoted measure and who received input and/or trainings from WHH/partners/the project. - For #ms10 Women in decision-making: an adult woman - For #ms11 Participants' satisfaction: a project participant 	
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0.2.5	What is the sex of the interviewee?	<ul style="list-style-type: none"> - Female - Male - Other - Don't know / No answer 		
0.2.6	Age of the interviewee?	Numeric value		Allow only numeric values up to 99
Choice of Indicators				
0.3.1	On which indicators will you collect data in this household?	<ul style="list-style-type: none"> - #ms01: Food Access (MAHFP) - #ms02: Food Consumption Score - #ms03: Nutrition Diversity (MDD-W) - #m04: Drinking Water - #ms05: Sanitation - #ms06: Income - #ms07: Skills - #ms08: Agriculture - #ms09: Climate Resilience - #ms10: Women in Decision-making - #ms11: Participants' Satisfaction 		

05	Sanitation			
05.1	Do household members have access to an improved sanitation facility?	<p>YES: IMPROVED Flush/pour-flush toilet</p> <ol style="list-style-type: none"> 1. Flush to piped sewer system 2. Flush to septic tank 3. Flush to pit sanitation 4. Pit sanitation with slab 5. Composting toilet 6. Twin pit sanitation with slab 7. Container based sanitation 8. Flush/pour flush to don't know where <p>NO: UNIMPROVED</p> <ol style="list-style-type: none"> 9. Flush/pour flush to open drain 10. Pit sanitation without slab/open pit 11. Bucket 12. Hanging toilet/hanging sanitation 13. No facility/bush/field 	<p>Refer to <u>JMP definitions</u>, Table 2</p> <p>In case the sanitation facility is unimproved (option 10-14/ table 2 of the JMP definitions) this indicator is not fulfilled</p>	<p>An introductory training is necessary to learn about different types of sanitation facilities.</p>
05.2	OBSERVE: Is the sanitation facility used?	<ul style="list-style-type: none"> - Yes (traces or remains of feces contamination in and around the sanitation facility, a worn path to the sanitation facility, no feces in the compound) - No (pit is empty, road to the sanitation covered with grass, pit hole covered with spider web) - Cannot be judged 		
05.3	OBSERVE: Is the facility cleaned properly?	<ul style="list-style-type: none"> - Yes (no feces on floor and superstructure, only few flies in and around the sanitation) - No (any feces and considerable number of flies in and around the sanitation) - Cannot be judged 		

05.4	OBSERVE: Can the sanitation facility be covered (e.g., cover over the pit)?	<ul style="list-style-type: none"> - Yes - No - Cannot be judged 		
05.5	OBSERVE: Does the sanitation have appropriate light and space?	<ul style="list-style-type: none"> - Yes - No - Cannot be judged 	<p>Only tick “yes” if both conditions (i.e., enough light AND space) are fulfilled.</p> <p>The assessment is based on personal perception (convenience indicator).</p>	
05.6	OBSERVE: Is a functioning hand-washing facility nearby?	<ul style="list-style-type: none"> - Yes - No - Cannot be judged 	<p>Only tick “yes” if both conditions (i.e., hand-washing facility available AND functioning) are fulfilled</p> <p>Refer to <u>JMP definitions</u>, Table 3</p>	
05.7	OBSERVE: Does the hand-washing facility contain water at the time of visit?	<ul style="list-style-type: none"> - Yes - No - Cannot be judged 	Refer to <u>JMP definitions</u> , Table 3	
05.8	OBSERVE: Is soap available in the hand-washing facility?	<ul style="list-style-type: none"> - Yes - No - Cannot be judged 	Refer to <u>JMP definitions</u> , Table 3	
05.9	Take a picture of the sanitation facility		Ask for permission before taking the picture	This is an optional question/photo

05.10	Type of Survey (Sanitation)	<ul style="list-style-type: none"> - Baseline Survey - Endline Survey - Midterm or Other Survey 		
05.11	Is your sanitation situation better, the same, or worse than it was in the year 2xxx [year of baseline survey of project]?	<ul style="list-style-type: none"> - Much better - A bit better - The same - A bit worse - Much worse 	Enumerators need to know in which year the project's baseline survey was carried out	<ul style="list-style-type: none"> - This is an optional question for endline surveys: You should take it out if this survey is not an endline survey - This question is supposed to support you for your project planning: You may take it out if the question is found not to be useful for planning purposes
05.12	What are up to three key reasons for changes in your sanitation situation?	Up to three key reasons for changes in drinking water situation	Note each point clearly, describing it in a full sentence.	<ul style="list-style-type: none"> - This is an optional question for endline surveys: You should take it out if this survey is not an endline survey - This question is supposed to support you for your project planning: You may take it out if the question is found not to be useful for planning purposes

05.13	TO BE FILLED IN BY ENUMERATOR: Can any of the improvements be attributed to project activities?	<ul style="list-style-type: none"> - Project activities were a major reason for improvements - Project activities were a minor reason for improvements - No link to project activities 	Enumerators need to be informed about the project's activities	<ul style="list-style-type: none"> - This is an optional question for endline surveys: You should take it out if this survey is not an endline survey - This question is supposed to support you for your project planning: You may take it out if the question is found not to be useful for planning purposes
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