

# Core questions on water, sanitation and hygiene for household surveys

WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene

## Background

The WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply, Sanitation and Hygiene has produced regular estimates of national, regional and global progress on drinking water, sanitation and hygiene (WASH) since 1990. It has established an extensive global database and has been instrumental in developing global norms to benchmark progress. The JMP was responsible for monitoring the 2015 Millennium Development Goal (MDG) target 7c and is now responsible for tracking progress towards the 2030 Sustainable Development Goal (SDG) targets for WASH.

During the MDG period the JMP used a simple system for classifying drinking water and sanitation facilities into 'improved' and 'unimproved' types and partnered with international survey programmes, including the MICS, DHS and LSMS initiatives, to develop and standardize core questions and indicators for use in national household surveys and censuses. Since publication of the JMP core questions in 2006, most international survey programmes have aligned their questionnaires and the core questions have been used extensively in national surveys and censuses around the world, leading to increased harmonisation of WASH data.

The indicators selected for monitoring the SDG WASH targets build on the established improved/unimproved facility type classification and introduce additional criteria, derived from the human rights to safe drinking water and sanitation, relating to the level of service provided. Since 2012, the JMP has been collaborating with UNICEF MICS and other international survey programmes to develop and test new questions on service levels, including an innovative water quality testing module.

More recently the JMP has worked with education and health experts to develop core questions for monitoring WASH in schools and healthcare facilities through facility-based surveys and administrative reporting. Initial discussions have also been held on monitoring WASH in other settings, such as workplaces and refugee camps, and developing harmonised questions for monitoring household WASH expenditures through income and expenditure surveys.

This document focuses on survey questions for assessing drinking water, sanitation and hygiene at the household level.

## Core WASH indicators

The WHO/UNICEF JMP uses the 'service ladders' below to monitor national, regional and global progress towards the Sustainable Development Goal targets on drinking water, sanitation and hygiene (WASH). The table below shows how the core questions for household surveys correspond to each of the 'rungs' on the JMP service ladders.

### Service type

#### Drinking water services

1. Improved/unimproved (W1)
2. Basic and limited services (W2, W3, W4)
3. Safely managed services
  - 3a – accessibility (W3)
  - 3b – availability (W5)
  - 3c – quality (W6)

#### Sanitation services

1. Improved/unimproved (S1)
2. Basic and limited services (S2, S3)
3. Safely managed services
  - 3a – emptying on-site facilities (S4)
  - 3b – disposal of excreta (S5)

#### Hygiene

1. Basic and limited handwashing facility (H1, H2, H3)
2. Private place to wash and change (MH1)
3. Use of menstrual hygiene materials (MH2)
4. Exclusion due to menstruation (MH3)

### New JMP service ladders

SERVICE LEVEL	DEFINITION
SAFELY MANAGED	Drinking water from an improved water source that is located on premises, available when needed and free from faecal and priority chemical contamination
BASIC	Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing
LIMITED	Drinking water from an improved source for which collection time exceeds 30 minutes for a round trip, including queuing
UNIMPROVED	Drinking water from an unprotected dug well or unprotected spring
SURFACE WATER	Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal

*Note: Improved sources include: piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water.*

SERVICE LEVEL	DEFINITION
SAFELY MANAGED	Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or transported and treated offsite
BASIC	Use of improved facilities that 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 faeces in fields, forests, bushes, open bodies of water, beaches or other open spaces, or with solid waste

*Note: improved facilities include flush/pour flush to piped sewer systems, septic tanks or pit latrines; ventilated improved pit latrines, composting toilets or pit latrines with slabs.*

SERVICE LEVEL	DEFINITION
BASIC	Availability of a handwashing facility on premises with soap and water
LIMITED	Availability of a handwashing facility on premises without soap and water
NO FACILITY	No handwashing facility on premises

*Note: Handwashing facilities may be fixed or mobile and include a sink with tap water, buckets with taps, tippy-taps, and jugs or basins designated for handwashing. Soap includes bar soap, liquid soap, powder detergent, and soapy water but does not include ash, soil, sand or other handwashing agents.*

**Core questions for drinking water<sup>1</sup>**

<b>W1. Main water source</b>		
What is the <u>main</u> source of drinking water for members of your household?	Piped water	
	Piped into dwelling.....	11 >>W5
	Piped into compound, yard or plot.....	12 >>W5
	Piped to neighbour .....	13 >>W3
	Public tap / standpipe .....	14 >>W3
	Tube Well, Borehole .....	21 >>W3
	Dug well	
	Protected well .....	31 >>W3
	Unprotected well.....	32 >>W3
	Water from spring	
	Protected spring .....	41 >>W3
	Unprotected spring .....	42 >>W3
	Rainwater collection .....	51 >>W3
	Tanker-truck .....	61 >>W4
	Cart with small tank / drum.....	62 >>W4
Water kiosk.....	72 >>W4	
Surface water (river, stream, dam, lake, pond, canal, irrigation channel) .....	81 >>W3	
Packaged water		
Bottled water.....	91 >>W2	
Sachet water.....	92 >>W2	
Other ( <i>specify</i> ) .....	96 >>W3	

Note: W1 refers to the main source only. See expanded list for questions on use of multiple sources.

<b>W2. Secondary water source for users of packaged water</b>		
What is the <u>main</u> source of drinking water used by members of your household for other purposes, such as cooking and hand washing?	Piped water	
	Piped into dwelling.....	11 >>W5
	Piped into compound, yard or plot.....	12 >>W5
	Piped to neighbour .....	13 >>W3
	Public tap / standpipe .....	14 >>W3
	Tube Well, Borehole .....	21 >>W3
	Dug well	
	Protected well .....	31 >>W3
	Unprotected well.....	32 >>W3
	Water from spring	
	Protected spring.....	41 >>W3
	Unprotected spring .....	42 >>W3
	Rainwater collection .....	51 >>W3
	Tanker-truck .....	61 >>W4
	Cart with small tank / drum.....	62 >>W4
Water kiosk.....	72 >>W4	
Surface water (river, stream, dam, lake, pond, canal, irrigation channel) .....	81 >>W3	
Packaged water		
Bottled water.....	91 >>W4	
Sachet water.....	92 >>W4	
Other ( <i>specify</i> ) .....	96 >>W3	

Notes: W2 only applies to users of packaged water.

<sup>1</sup> Drinking water services refers to the accessibility, availability and quality of the main source used by households for drinking, cooking, personal hygiene and other domestic uses

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W3. Location of water source		
Where is that water source located?	In own dwelling .....1	>>W5
	In own yard / plot .....2	>>W5
	Elsewhere .....3	>>W4

Note: This question can be skipped if the response to W1 or W2 is piped on premises (11, 12).

W4. Time to collect water		
How long does it take to go there, get water, and come back?	Members do not collect..... 000	>>W5
	Number of minutes ..... _ _ _	>>W5
	DK ..... 998	>>W5

Note: W4 may not be required where >95% of the population uses sources located on premises. See expanded list for questions on who collects water and burden of water collection.

W5. Availability of water		
In the last month, has there been any time when your household did not have sufficient quantities of drinking water when needed?	YES, AT LEAST ONCE ..... 1	>>W6
	NO, ALWAYS SUFFICIENT ..... 2	>>W6
	DK ..... 8	>>W6

Note: W5 assesses sufficiency of water available relative to need. See expanded list for questions on continuity, seasonality and reasons water is not available when needed.

W6. Water quality		
Can you please show me the source of the water that members of your household usually drink so that I can take a sample from there?  <i>[record source type if different from W1]</i>	NUMBER OF E.COLI DETECTED IN 100ML SAMPLE  RECORD 3 DIGIT COUNT OF COLONIES  SOURCE WATER TEST ..... _ _ _  IF 101 OR MORE COLONIES ARE COUNTED, RECORD 101  IF NOT POSSIBLE TO READ/ RESULTS LOST, RECORD 998	>>S1

Note: W6 forms part of a water quality testing module<sup>2</sup> applied to sub-sample of households.

<sup>2</sup> For example see MICS6 water quality testing questionnaire <http://mics.unicef.org/tools>

**Expanded questions for drinking water**

***Accessibility***

**XW1. Do members of your household regularly use any other sources for drinking?**

Note: Follows W1. Same response categories but multiple choice. Used to determine the population using more than one drinking water source and whether alternative sources are improved or unimproved.

**XW2. Who usually goes to this source to fetch the water for your household?**

Note: Follows W4. Record line number to link to age/education/gender of household member or use standard categories: adult women (>15 yrs), adult men (>15 yrs), girls (<15) or boy (<15).

**XW3. How many trips did that person make in the last week?**

Note: Follows W4 and XW2. Enables quantification of the burden of water collection and where relevant can also be asked for each individual household member.

**XW4. How much time did that person spend collecting water in the last week?**

Note: Follows W4 and XW2. Alternative to XW3. Enables quantification of the burden of water collection and where relevant can also be asked for each individual household member.

***Availability***

**XW5. Is water always available from your main water source [W1]?**

Note: Follows W1, or W2 if packaged water is the main source of drinking water. Responses may be binary (yes/no/don't know) or sub-categories (yes, always/no, most of the time/no some of the time/no rarely available/don't know)

**XW6. How many hours per day is water supplied on average?**

Note: Assesses continuity of service. Typically only applies to piped supplies. Responses categories may vary depending on national standards.

**XW7. In the past two weeks, was water from this source [W1] unavailable for at least 1 full day?**

Note: Follows W1, or W2 if packaged water is the main source of drinking water. Assesses discontinuity of service. Can be followed up with a question on the number of days.

**XW8. In the past two weeks, has there been any time when drinking water from this source [W1] was not available when expected?**

Note: Follows W1, or W2 if packaged water is the main source of drinking water. Assesses unanticipated discontinuity of service.

**XW9. What is your main source of drinking water in the wet season and the dry season?**

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Notes: Same response categories as W1. Separate responses for wet season and dry season.

## ***Water storage***

### **XW10. Does your household have a storage tank?**

Note: Follow up to questions on availability. Responses may be binary (yes/no/don't know) or sub-categories (no/yes large tank/yes small tank)

### **XW11. Does your household store drinking water in small containers? Can you show me?**

Note: If yes, ask permission to see. Observe whether containers are covered/uncovered. Question may be included in a water quality testing module.

## ***Water quality/safety***

### **XW12. Can you please provide a glass of water that members of your household usually drink?**

Note: Complements W6. Testing water in the household enables comparison of water quality at the source and at the point of consumption. Question may be included in a water quality testing module.

### **XW13. Have you or any other household members done anything to this water to make it safer to drink?**

Note: Follow up to W6. Responses are binary (yes/no/don't know). Question may be included in a water quality testing module.

### **XW14. What do you usually do to the water to make it safer to drink? Anything else?**

Note: Follow up to XW13. Standard responses include: boiled it/added chlorine/strained through a cloth/used a water filter<sup>3</sup>/solar disinfection/let it stand and settle/other (specify). Interviewers are instructed not to list the options. Question may be included in a water quality testing module.

## ***Affordability***

Affordability implies that payment for services should not present a barrier to access or prevent people from meeting other basic needs. Information on household expenditure, collected through income and expenditure surveys<sup>4</sup>, can be used to assess how much of a household's budget is spent on water. In surveys that do not collect information on household expenditures, it is possible to assess whether cost is identified by respondents as the barrier to accessing sufficient quantities of water.

### **XW15. What was the (main) reason that you were unable to access sufficient quantities of water when needed?**

Note: Follow up to W5. Standard responses include: water not available from source/water too expensive/source not accessible/other (specify).

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<sup>3</sup> Includes ultraviolet (UV) and reverse osmosis (RO) filters

<sup>4</sup> <http://datatopics.worldbank.org/consumption/detail#datasource>

***Acceptability***

**XW16. Is the water supplied from your main source [W1] acceptable?**

Note: Follow up to W1. Acceptability of supplies to households is subjective and context specific. Standard responses include: yes/no unacceptable taste/no unacceptable colour/no unacceptable smell/no contains unacceptable materials/no other (specify).

***Management***

**XW17. Is your piped water supplied from a large piped water network, a small community network, or a household scheme?**

Note: Follows W1, or W2 for households that use packaged water but have a piped connection. Applies only to piped water. Response categories include: large piped network managed by a utility/small piped network managed by the community/small piped network managed by the household.

**Core questions for sanitation**

<b>S1. Sanitation facility</b>			
<p>What kind of toilet facility do members of your household usually use?</p> <p><i>If 'Flush' or 'Pour flush', probe: Where does it flush to?</i></p> <p><i>If not possible to determine, ask permission to observe the facility.</i></p>	<b>FLUSH / POUR FLUSH</b>		
	FLUSH TO PIPED SEWER SYSTEM.....	11	>>S2
	FLUSH TO SEPTIC TANK.....	12	>>S2
	FLUSH TO PIT LATRINE.....	13	>>S2
	FLUSH TO OPEN DRAIN .....	14	>>S2
	FLUSH TO DK WHERE .....	18	>>S2
	<b>PIT LATRINE</b>		
	PIT LATRINE WITH SLAB.....	22	>>S2
	PIT LATRINE WITHOUT SLAB / OPEN PIT .....	23	>>S2
	COMPOSTING TOILET.....	31	>>S2
	TWIN PIT WITH SLAB.....	32	>>S2
	TWIN PIT WITHOUT SLAB.....	33	>>S2
	BUCKET .....	41	>>S2
HANGING TOILET / HANGING LATRINE .....	51	>>S2	
NO FACILITY / BUSH / FIELD .....	95	>>H1	
OTHER ( <i>specify</i> ).....	96	>>S2	

Note: New categories added for flush to open drain (not safely managed) and twin pit composting toilets. The term 'with slab' implies a solid platform with a seat or squatting hole which covers the pit and prevents the user from coming into contact with the pit contents. Slabs may be constructed from a wide range of different materials, including cement, ceramic tile, wood, mud and earth.

<b>S2. Shared sanitation</b>			
Do you share this facility with others who are not members of your household?	YES.....	1	>>S3
	NO.....	2	>>S3

Note: Follows S1. Sharing implies a limited sanitation service. See expanded list for further questions on the type of sharing.

<b>S3. Location of sanitation facility</b>			
Where is this toilet facility located?	IN OWN DWELLING.....	1	>>S4
	IN OWN YARD / PLOT .....	2	>>S4
	ELSEWHERE .....	3	>>S4

Note: Follows S1. Using a facility located on premises may be more important for health and well-being than whether the facility is shared with other households.

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### Emptying and disposal of excreta from on-site facilities

**S4 and S5 only apply to households using on-site facilities (codes 12, 13, 22, 23, 31, 32, 33)**

<b>S4. Emptying of on-site sanitation facilities</b>		
Has your (pit latrine or septic tank) ever been emptied?	YES EMPTIED.....1	>>S5
	NEVER EMPTIED.....2	>>H1
	DK ..... 98	>>H1

Note: Follows S1. Only applies to households using on-site sanitation facilities (latrines, septic tanks, composting toilets and twin pits). Used to calculate the proportion of households emptying on-site facilities. See expanded list for questions on frequency of emptying.

<b>S5. Disposal of excreta from onsite sanitation facilities</b>		
The last time it was emptied, where were the contents emptied to?	REMOVED USING A TRUCK / TANKER.....1	>>H1
	REMOVED USING A NONMOTORIZED VEHICLE.....2	>>H1
	BURIED IN A COVERED PIT.....3	>>H1
	AN UNCOVERED PIT, OPEN GROUND, WATER BODY OR ELSEWHERE .....4	>>H1
	OTHER ( <i>specify</i> ) ..... 5	>>H1
	DK..... 8	>>H1

Note: Follows S4. Used to calculate proportion of households emptying and disposing of excreta in situ and the proportion removing excreta off-site for treatment. See expanded list for questions on method of emptying.

## **Expanded questions for sanitation**

### ***Accessibility***

#### **XS1 How many households use this toilet facility?**

Note: Follows S2. Limited sharing is preferable to unlimited sharing but national standards vary. Record number of households sharing the facility, possibly with a separate response or question for public toilets.

#### **XS2 Do all household members use the [sanitation facility S1]?**

Note: Follows S1. Response categories focus on regular practices (yes/no) and should ideally list all household members and record responses for each (yes always/yes sometimes/no rarely or never).

#### **XS3. Is everyone in the household able to access and use the toilet at all times of the day and night?**

Note: Follows S1. Focuses on accessibility and should ideally list all household members and record responses for each in order to link with age, sex, disability and other characteristics

#### **XS4. What was the (main) reason that household members were unable to access and use the toilet at all times of the day and night?**

Note: Follow up to XS3. Possible responses include: unable to use the toilet/unable to access the toilet/toilet not always available/toilet not safe to use/other (specify)

#### **XS5. The last time [name of youngest child] passed stools, what was done to dispose of the stools?**

Note: Typically included in a children's or women's questionnaire. Focuses on safe disposal of child stools. Possible responses include: child used toilet/put or rinsed into toilet/put or rinsed into drain or ditch/thrown into garbage (solid waste)/buried/left in the open/used as manure/other (specify). Follow up question on solid waste management may be required if disposal with garbage is common.

### ***Acceptability***

#### **XS8. Does the design of your toilet prevent other people seeing and hearing what you are doing when you use it?**

Note: Addresses privacy and dignity. Responses of individual household members may be recorded separately.

#### **XS9. Do you or other household members face any risks when using your toilet?**

Note: Addresses safety and security. Possible responses include: no/yes risk to health/yes risk of injury/yes risk of harassment/yes other risk (specify). Responses of individual household members may be recorded separately.

***Containment***

**XS10. Does your sanitation facility [answer to S1] leak or overflow waste water at any time of the year?**

Note: Addresses leakages (no never/yes sometimes/yes frequently). Probe for problems during the rainy season or flood events.

***Emptying***

**XS11. When was your pit latrine/septic tank [answer to S1] last emptied?**

Note: Follow up to S4. Only applies to households emptying on-site sanitation facilities. Record responses in XX years or XX months.

**XS12. The last time your pit latrine/septic tank [answer to S1] was emptied, who emptied it?**

Note: Follow up to S5. Only applies to households reporting emptying and removal by a service provider. Record the name of the service provider in order to cross reference with administrative and regulatory data on collection and treatment of faecal sludge.

***Solid waste disposal***

**XS13. How does your household usually dispose of garbage?**

Note: Follow up to XS5. Response categories may include: collected by formal service, collected by informal service, disposal in designated area, disposal within household yard/plot, disposal elsewhere, burn, bury, other, DK.

**Core questions for hygiene**

**Hand hygiene**

<b>H1. Handwashing facility observation</b>		
Can you please show me where members of your household most often wash their hands?	FIXED FACILITY OBSERVED (SINK / TAP) IN DWELLING..... 1	>>H1B
	IN YARD /PLOT ..... 2	>>H1B
	MOBILE OBJECT OBSERVED (BUCKET / JUG / KETTLE) ..... 3	>>H1B
	NO HANDWASHING PLACE IN DWELLING / YARD / PLOT..... 4	>>H1B
	NO PERMISSION TO SEE ..... 5	>>H1B
	OTHER REASON ( <i>specify</i> ) _____ 6	>>H1B
H2. Water observation Observe availability of water at the place for handwashing.  <i>Verify by checking the tap/pump, or basin, bucket, water container or similar objects for presence of water.</i>	WATER IS AVAILABLE..... 1	>>H1C
	WATER IS NOT AVAILABLE ..... 2	>>H1C
H3. Soap observation Observe availability of soap or detergent at the place for handwashing	SOAP OR DETERGENT AVAILABLE ..... 1	>>MH1
	SOAP OR DETERGENT NOT AVAILABLE..... 2	>>MH1

Note: Direct observation of handwashing behaviours is challenging. The recommended proxy is to observe presence of handwashing facilities and availability of soap and water<sup>5</sup>.

**Menstrual hygiene**

Questions on menstruation are typically asked in the women's questionnaire (15-49) in the context of unmet health needs. They should only be asked of women who have had a period in the preceding year and should be asked in private, by female enumerators.

<b>MH1. Private place to wash and change</b>		
During your last menstrual period were you able to wash and change in privacy while at home?	YES ..... 1	>>MH2
	NO ..... 2	>>MH2

Note: MH1 only applies to women who have had a period in the preceding year. Focuses on her ability to wash herself and change in privacy, regardless of where these activities are carried out.

<sup>5</sup> Handwashing facilities may be fixed or mobile and include a sink with tap water, buckets with taps, tippy-taps, and jugs or basins designated for handwashing. Soap includes bar soap, liquid soap, powder detergent, and soapy water but does not include ash, soil, sand or other handwashing agents.

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MH2. Use of menstrual hygiene materials		
During your last menstrual period, what hygiene materials did you use?  <i>If more than one, record the main type used.</i>	CLOTH/REUSABLE SANITARY PADS.....1	>>MH3
	DISPOSABLE SANITARY PADS.....2	>>MH3
	TAMPONS.....3	>>MH3
	MENSTRUAL CUP.....4	>>MH3
	TOILET PAPER.....5	>>MH3
	UNDERWEAR ALONE.....6	>>MH3
	OTHER ( <i>specify</i> ) ..... 7	>>MH3

Note: MH2 only applies to women who have had a period in the preceding year. See expanded list for questions on reuse.

MH3. Exclusion from activities during menstruation				
During your last menstrual period, did you miss any of the following activities due to your period?  <i>Ask one by one</i>				
[A] Attending school?	[A]	YES 1	NO 2	N.A. 9
[B] Paid work?	[B]	YES 1	NO 2	N.A. 9
[C] Participating in social activities?	[C]	YES 1	NO 2	N.A. 9
[D] Cooking food?	[D]	YES 1	NO 2	N.A. 9
[E] Eating with others?	[E]	YES 1	NO 2	N.A. 9
[F] Bathing in regular place?	[F]	YES 1	NO 2	N.A. 9

Note: Select all that apply. Select N.A. (not applicable) if the woman would not normally do this activity, for example she does not normally attend school, work, or cook food. Specific activities could be adapted according to local culture.

**Expanded questions for hygiene**

***Hand hygiene***

**XH1. Where do you and other members of your household most often wash your hands?**

Note: Follow up to H1 where observation of handwashing facility is not possible. Same response categories as H1. Note that self-reporting is less reliable than observation.

**XH1B. Do you have any soap or detergent in your household for washing hands? Can you show it to me?**

Note: Follow up to H1 where observation of soap is not possible. Record water available/not available. Soap or detergent available/not available.

**XH2. Is there a place for handwashing within 5 metres/10 steps of the toilet/place where food is prepared?**

Note: Alternative to H1. Focuses on proximity of handwashing facility to sanitation facility or food preparation area.

***Menstrual hygiene***

**XMH1. Did you reuse these [answer to MH2] materials?**

Note: Follow up to MH2. Applies only to women who report using materials (yes/no/don't know).

**XMH2. Were you able to dispose of used hygiene materials in privacy?**

Note: Follows XMH1. Applies only to women who do not reuse materials. Links to questions on safe disposal of excreta and solid waste.

**XMH3. Were you able to wash and dry used hygienic materials in privacy?**

Note: Follows XMH1. Applies only to women who reuse materials.

**XMH4. During your last menstrual period, did you miss work, education or participating in social activities due to your period?**

Note: XMH4 only applies to women who have had a period in the preceding year. Focuses on exclusion from normal activities outside the home during menstruation. Can be used as an alternative to MH3.

**Additional questions on bathing hh members who are disabled, sick or elderly?**