

From Data to Decisions

SIWI World Water Week
Stockholm, 28 August 2017

Rick Johnston

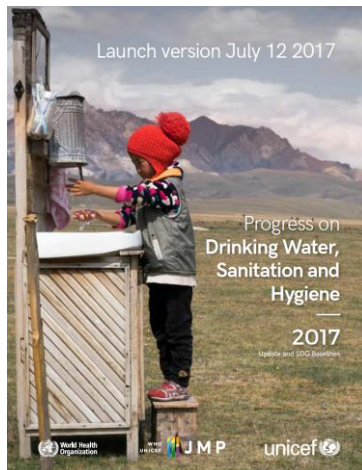
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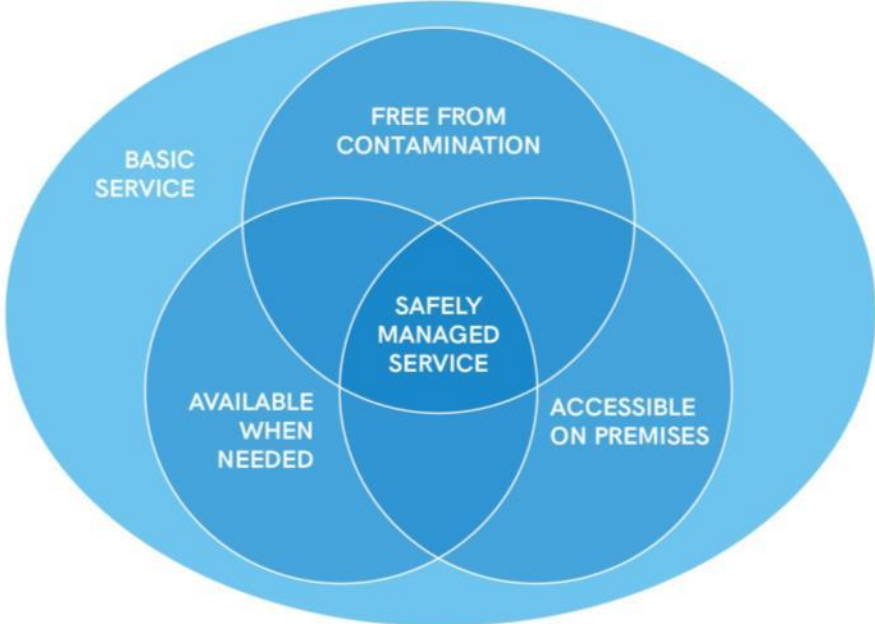
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WHO/UNICEF JMP

washdata.org



New JMP ladder for drinking water

SERVICE LEVEL	DEFINITION
 <p>SAFELY MANAGED</p>	<p>Drinking water from an improved water source that is located on premises, available when needed and free from faecal and priority chemical contamination</p>
 <p>BASIC</p>	
<p>LIMITED</p>	
<p>UNIMPROVED</p>	
<p>SURFACE WATER</p>	

Water quality module: key features

- Testing “glass of water” and “source”
- Quantification of *E. coli* (risk levels)
- Additional parameters in some countries (As, F)
- Test by existing team member
- 3-5 households are selected per cluster; ~5-10k tests per survey
- QA/QC: expert training, blank tests, field supervision
- Overall cost: currently \$60-90k



Water testing in household surveys



Completed

Congo (MICS)
Cote d'Ivoire (MICS)
Ethiopia (ESS)
Ghana (LSS)
Nigeria (MICS)
Bangladesh (MICS)
Ecuador (ENEMDU)
Lebanon (MICS)
Nepal (MICS)
Pakistan (MICS)
Paraguay (MICS)
Mongolia (MICS)

In progress/planned

Sierra Leone (MICS)
DPRK (MICS)
Togo (MICS)
DRC (MICS)
CAR (MICS)
Lao PDR (MICS)
Afghanistan (ALCS)
Philippines (APIS)
Senegal
Cambodia
Lesotho (MICS)
Tunisia (MICS)
Viet Nam (LSMS)
Egypt (DHS)

http://mics.unicef.org/tools

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MICS6 TOOLS

TOOLS BY ROUND

[MICS6](#) | [MICS5](#) | [MICS4](#) | [MICS3](#) | [MICS2](#) | [MICS1](#)

A comprehensive set of tools guide survey teams through every step of the MICS process – from overall planning, design and data collection in the field to data processing, analysis, interpretation, documentation and dissemination.

Survey design

Data collection

Data processing

Analysis

Report writing

Dissemination



Guidelines and templates facilitate planning and design of surveys and help avoid pitfalls in implementation

The design of a MICS survey will depend on an initial assessment of data needed for national and subnational monitoring priorities. The Global MICS Team, together with UNICEF's country offices, support governments to undertake a meticulous data gap assessment, especially with respect to the type of data a MICS survey could produce. During the planning and design stages, a governing structure is established, including the formation of steering and technical committees that oversee implementation. Once the preparation of the country survey plan and survey budget are completed, fundraising activities can be carried out in a more formal manner.

The global MICS programme provides templates to support implementing agencies in identifying needed personnel, supplies and equipment and to draw up a timetable. Other tools are intended to support the customization of standard questionnaires to a national context, estimation of an appropriate sample design and size that will be representative, and listing and mapping of households in the sample.

Compelling results

Water quality testing in household surveys shows large differences in risk level between source types in Ghana

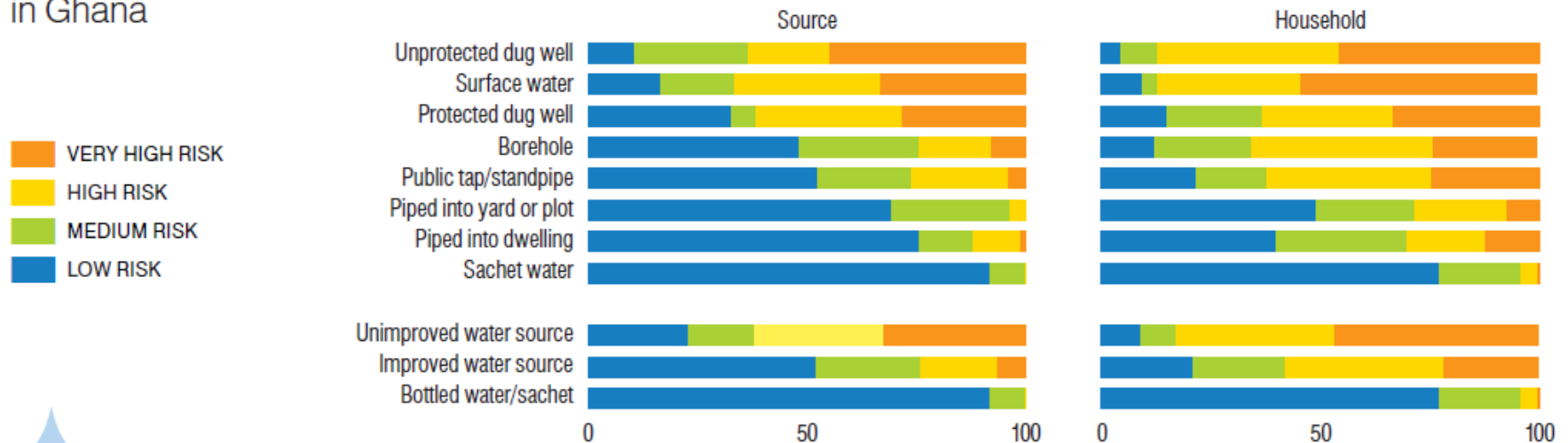


Fig.38 Faecal contamination of drinking water in Ghana

Source: Ghana Living Standards Survey 2013.

Challenges

- Time to result (24 hours), difficult to feedback to households
 - Training requirement: 3-4 days, especially difficult for ToT
 - 10 mins to conduct test, only 3-5 can be done per cluster
 - Cost (US\$1500 for the equipment, US\$2.5 per test)
 - Need for incubation (electricity or wearing belts)
 - Disposal of large volume of consumables and disinfection of used plates
 - Local procurement of multiple items (household bleach, buckets, incubation belts, water for blank test, hand sanitiser)
- **UNICEF Innovation Challenge on Rapid *E. coli* Detection**

Regulatory data

- Majority of 96 countries with SMDW estimates
 - Mainly OECD countries
 - (Protocol on Water and Health)
- Kenya Water Services Regulatory Board (WASREB)
 - Urban piped supplies

Kenya WASREB data

IMPACT	Year	Water quality data reported	Value
1-2		Residual chlorine data compliance	
3	08-09	At least 90% Water Quality target benchmark	75.3
4	09-10	At least 90% (compliance, not frequency)	75.0
5	10-11	At least 90% (67% number of tests, 33% compliance)	40.8
6	11-12	At least 90% (67% number of tests, 33% compliance)	53.7
7	12-13	At least 90%(67% number of tests, 33% compliance)	75.8
8	13-14	At least 90%(67% number of tests, 33% compliance) 40% chlorine, 60% faecal indicator bacteria	91
9	14-15	At least 90%(67% number of tests, 33% compliance) 40% chlorine, 60% faecal indicator bacteria	(92)

Urban piped supplies only

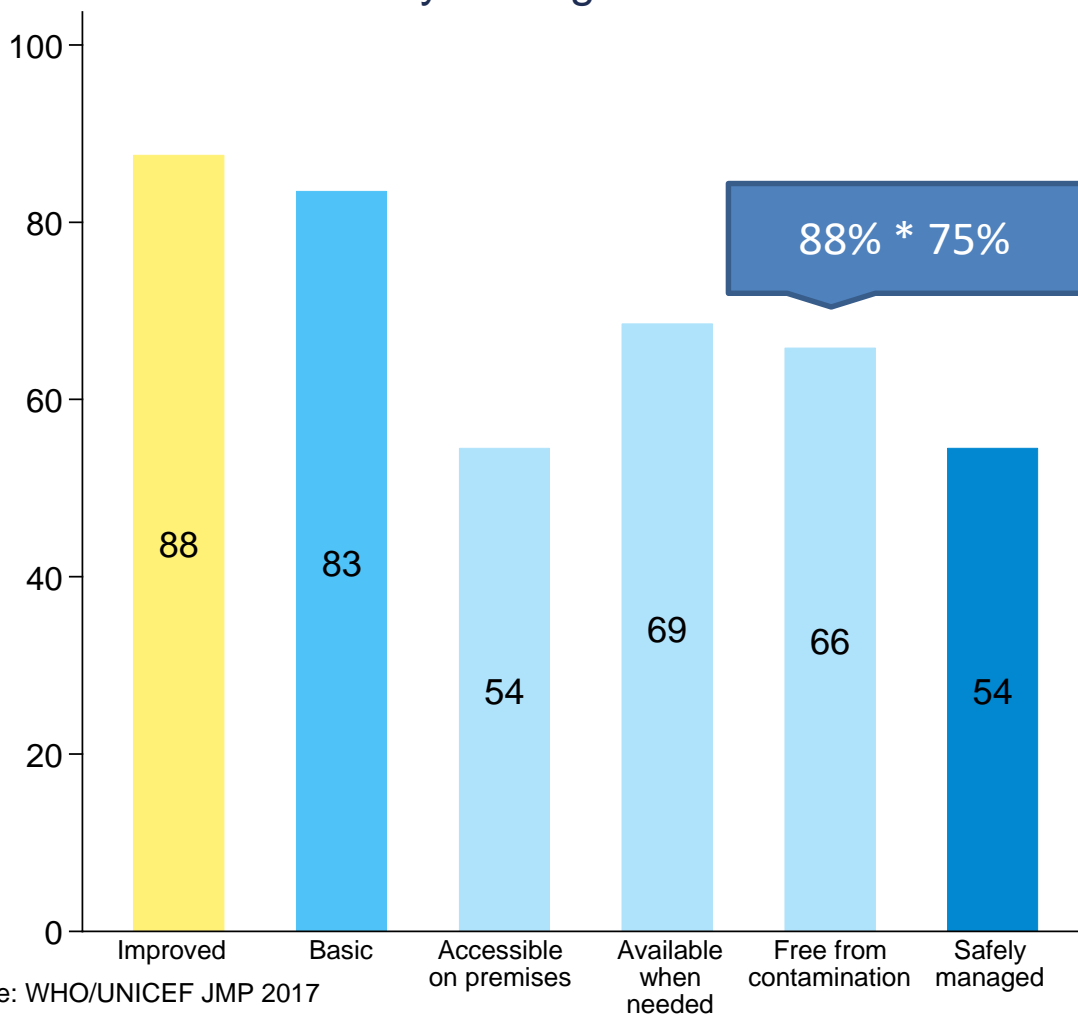


The improved performance in this indicator is attributed to the increased number of samples taken by utilities mainly for bacteriological assessment. Submission of reports as per the requirements of GWQEM continues to be factored in the performance assessment of the utilities. A breakdown of utility performance in the two components of the DWQ sub-indicators is provided in Annex 4.

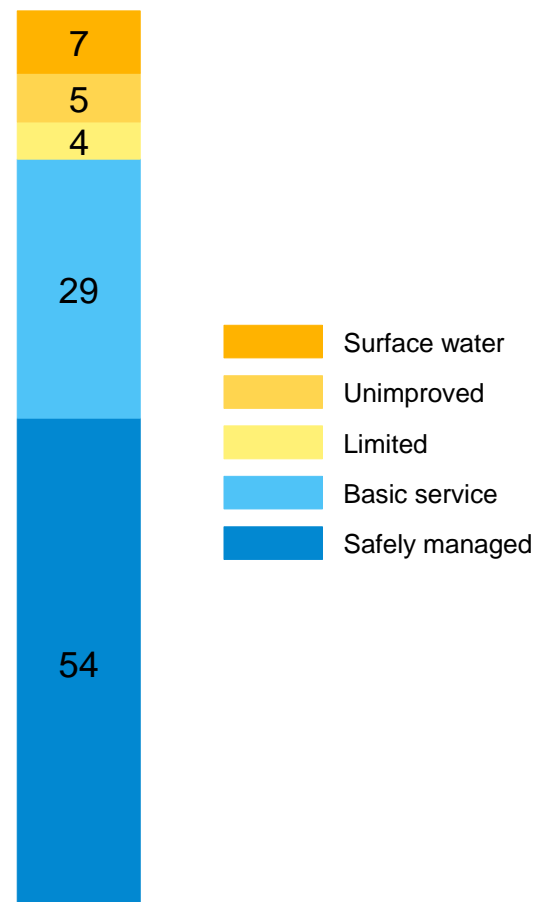
In the past, Wasreb has relied solely on end point sampling as a means of assessment of performance in this indicator. Utilities will now be required to use comprehensive risk assessment and risk management approaches in their reporting. Utilities will now be assessed on the extent of implementation of the requirements of Water Safety Planning (WSP) based on the 10 steps of WSP. This shift is also in line with Goal 6 under the Sustainable Development Goals (SDG) of “ensuring the availability and sustainable management of water and sanitation for all”.

Safely managed drinking water (2015) Urban Kenya

Safely managed elements:



Water ladder



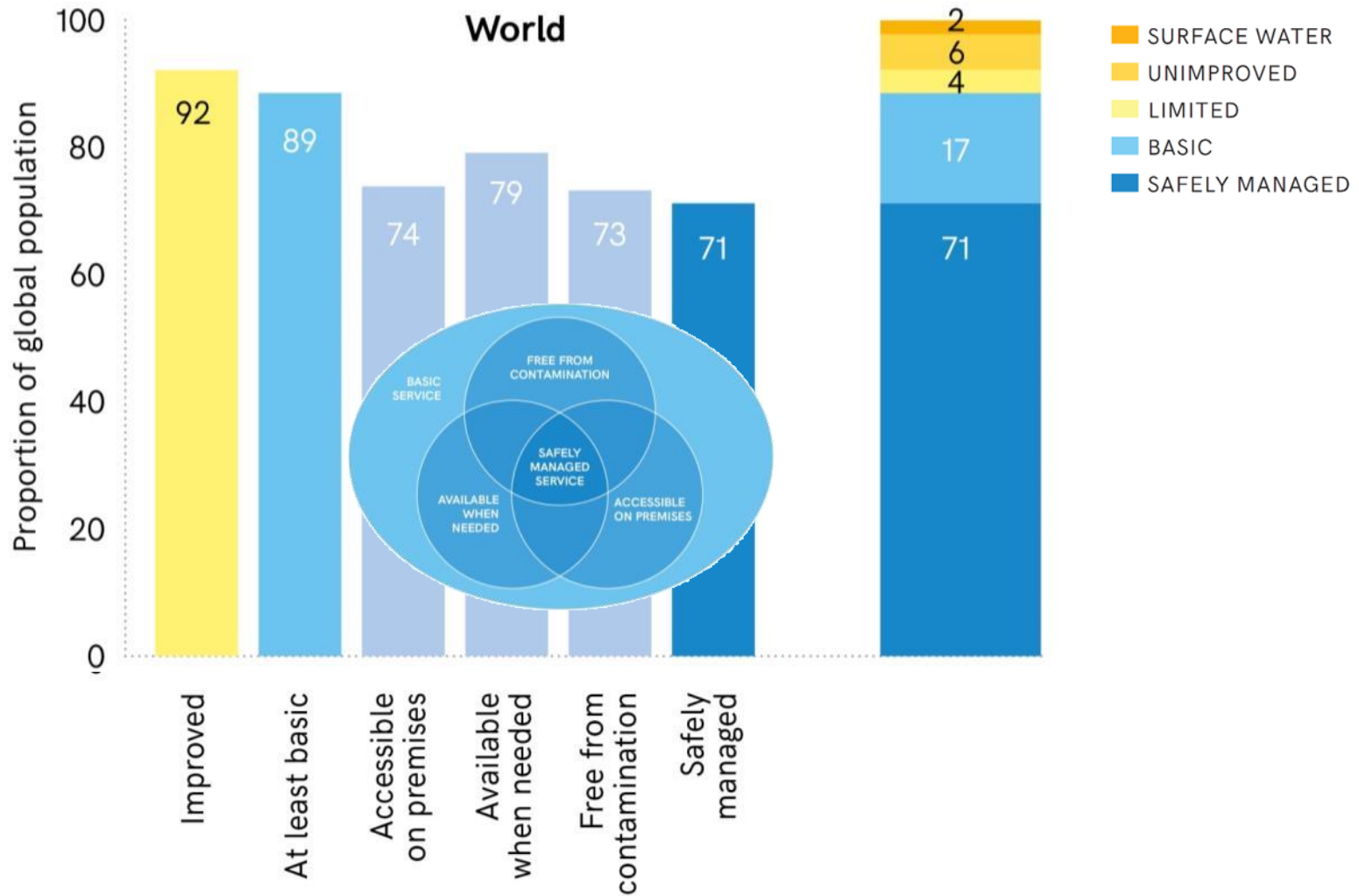
Source: WHO/UNICEF JMP 2017

Challenges (regulatory)

- Limited to formal supplies or urban settings
- *E. coli* or combined parameters
- Compliance with regulatory limits, or with numeric targets
- Data not always reported in easy ways to use
- Reliability of data

→ **Triangulation**

7 out of 10 people used safely managed drinking water services in 2015



Thank you!
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