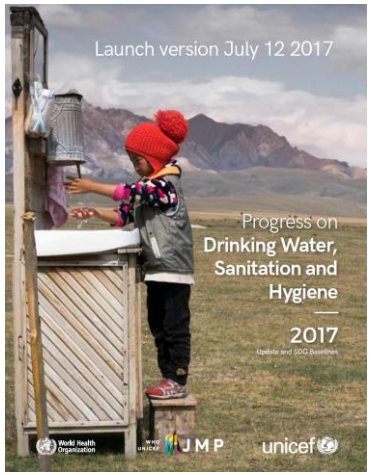
From Data to Decisions

SIWI World Water Week

Stockholm, 28 August 2017



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WHO/UNICEF JMP

washdata.org

World Health Organization

WHO UNICEF JMP

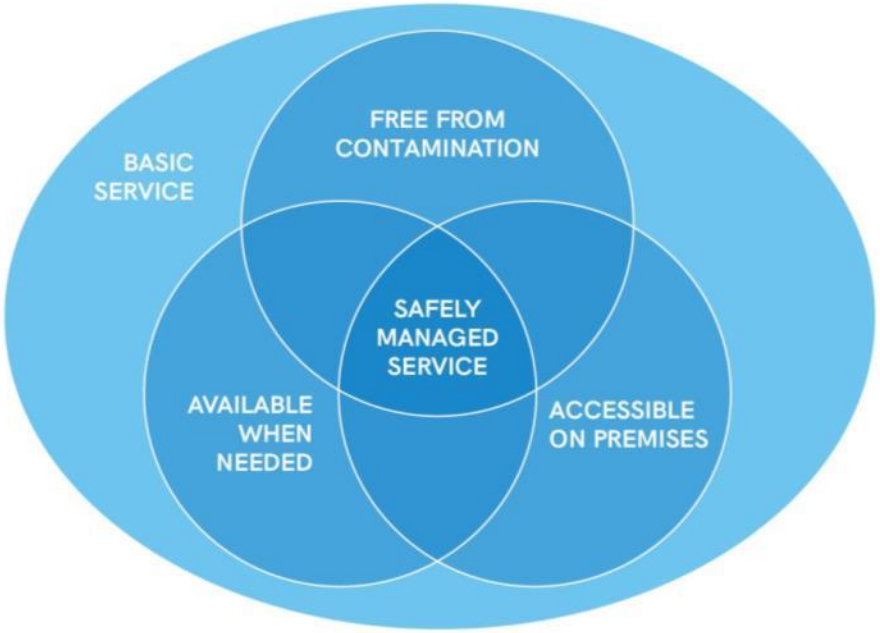
unicef

New JMP ladder for drinking water

SDG 6.1.1

SDG 1.4.1

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	
LIMITED	
UNIMPROVED	
SURFACE WATER	



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

Integration is cost-effective

Pool of water quality experts

Full package of training materials

Involvement of national regulator/labs

More planned for 2017/2018

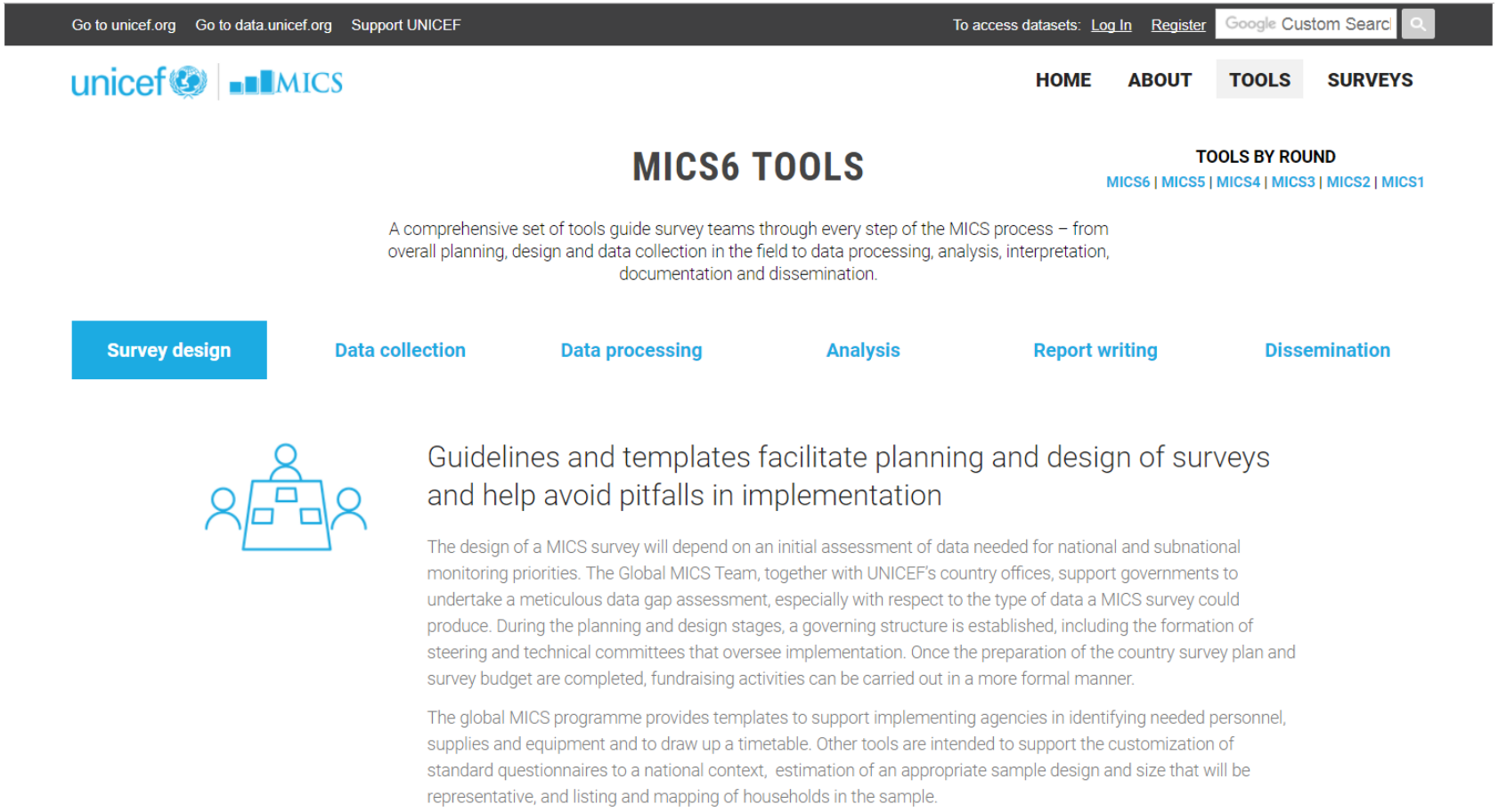
Completed

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



Compelling results

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

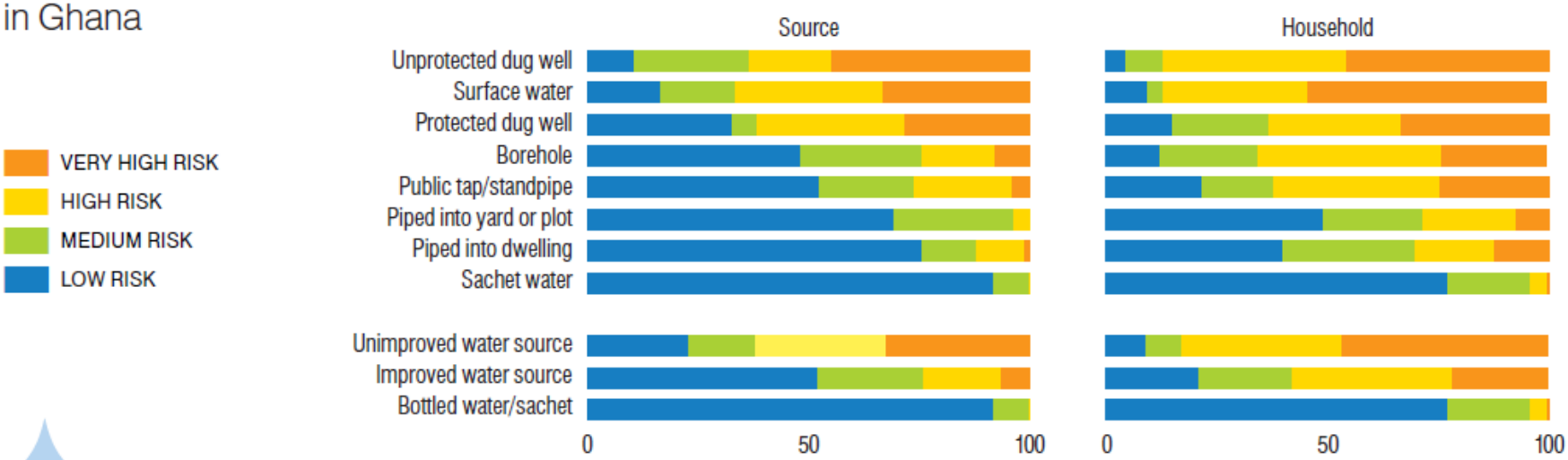


Fig. 38 Faecal contamination of drinking water in Ghana

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)

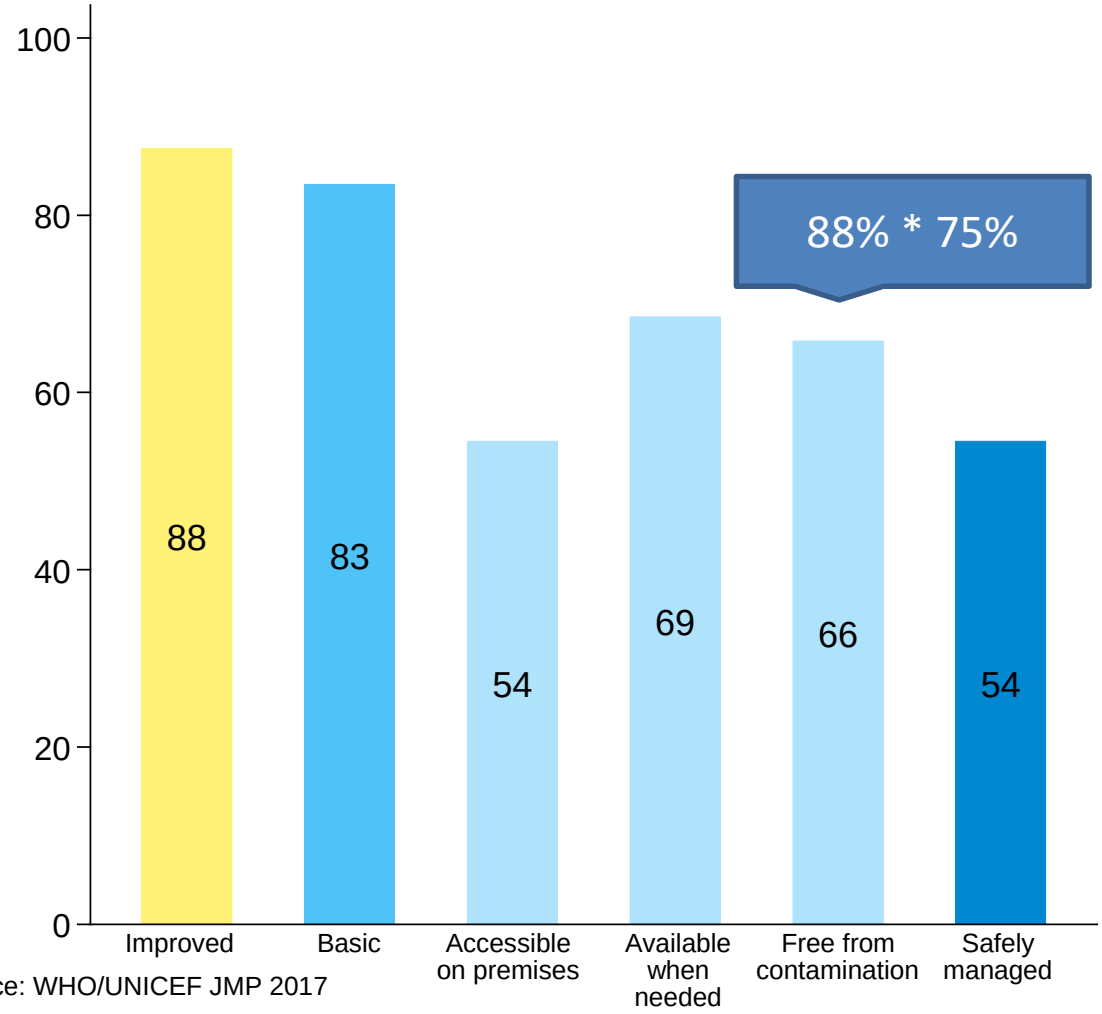
Urban piped supplies only

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".

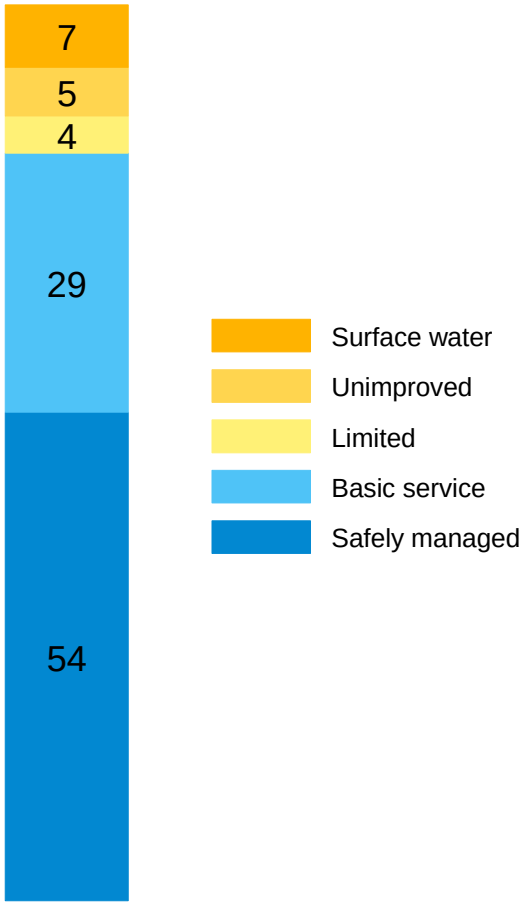
Safely managed drinking water (2015)
Urban Kenya

Safely managed elements:



Source: WHO/UNICEF JMP 2017

Water ladder

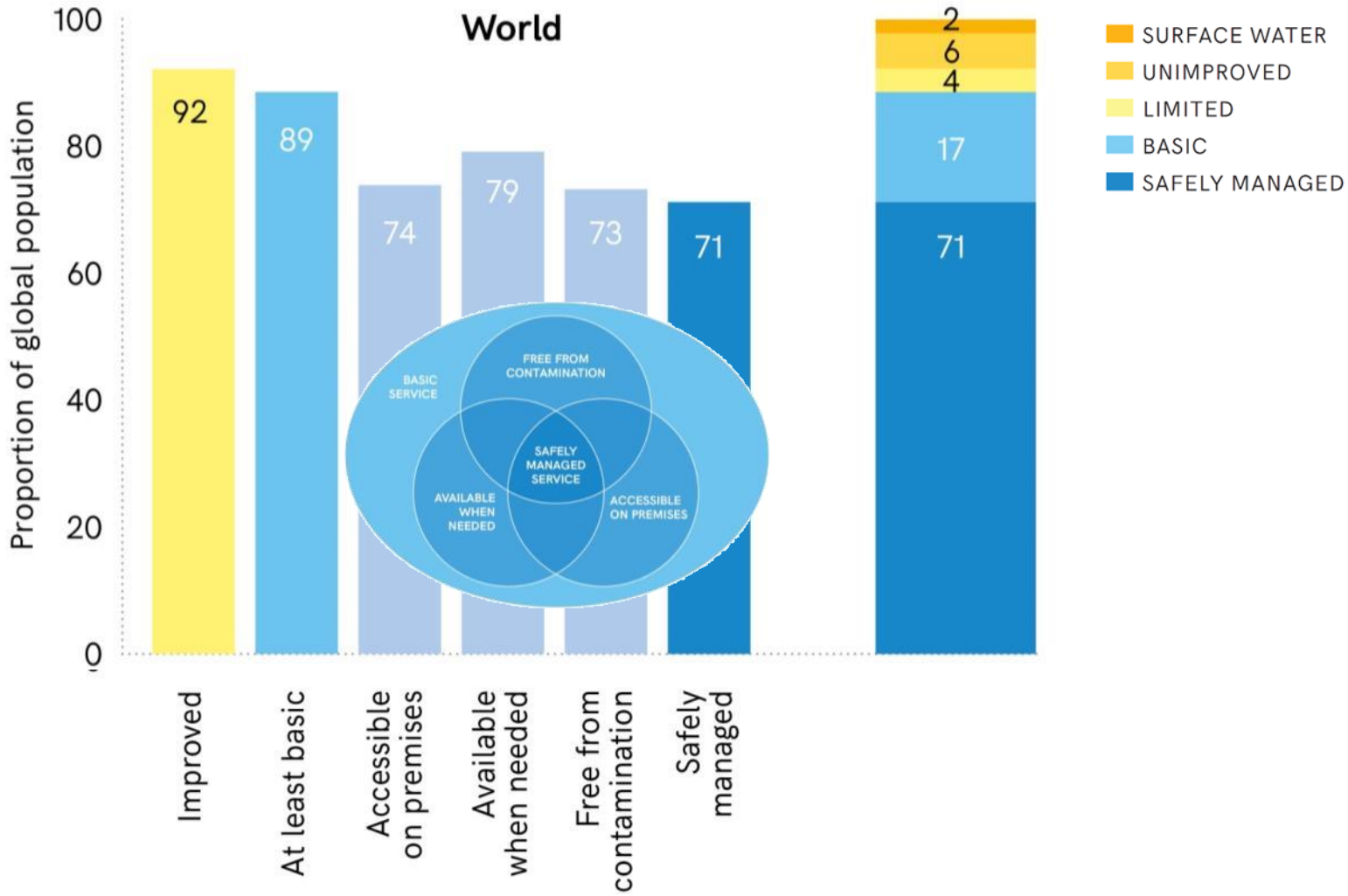


Challenges (regulatory)

- 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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World Health Organization

WHO UNICEF JMP

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