



# WASH Affordability and Financial Sustainability – How To Make WASH Services More Affordable Through Improved Monitoring?

*A Discussion*

With the WHO/UNICEF Joint Monitoring Programme (JMP) and the UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS)

8<sup>th</sup> June 2021

Chaired by Tom Slaymaker, Senior Adviser, JMP Lead, UNICEF

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## **Opening**

Catarina de Albuquerque, CEO of SWA

Kelly Ann Naylor, Associate Director, WASH Section, UNICEF

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## **Presentations**

Guy Hutton, Senior Adviser, WASH Section, UNICEF

Marina Takane, Technical Officer, WSH Unit, WHO

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## **Panel discussion**

Moderated by Rick Johnston, Technical Officer, JMP Lead, WHO

Engr Benson Ajisegiri, Director of Water Supply, Federal Ministry of Water Resource, Nigeria

Peter Mutale, Chief Inspector, National Water Supply and Sanitation Council, Zambia

Ing. Lucio Domínguez – CONAGUA, Mexico

Oscar Pintos, AFERAS, Argentina

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## **Q&A and closing**

Pedro Arrojo Agudo, Special Rapporteur on the Human Rights to Safe Drinking Water and Sanitation

# Agenda



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# Presentation: The Measurement and Monitoring of WASH Affordability: Key Concepts, Findings and Recommendations

Guy Hutton,  
Senior Adviser, WASH Section, UNICEF



# Global Affordability Monitoring Initiative

Goal: To develop a common vision and accepted methodology for monitoring WASH affordability globally for the SDG period and beyond

- Multi-stakeholder involvement
- Actionable monitoring plan



Supported by 6 country case studies

## Objective 1. Conceptualization

How has affordability been understood and measured in WASH? In other sectors?

## Objective 2. Measurement

What data sources are available to measure and monitor affordability?

## Objective 3. Future data sources

How to improve data availability?

## Objective 4. Policy linkages

How do we use data for policy?



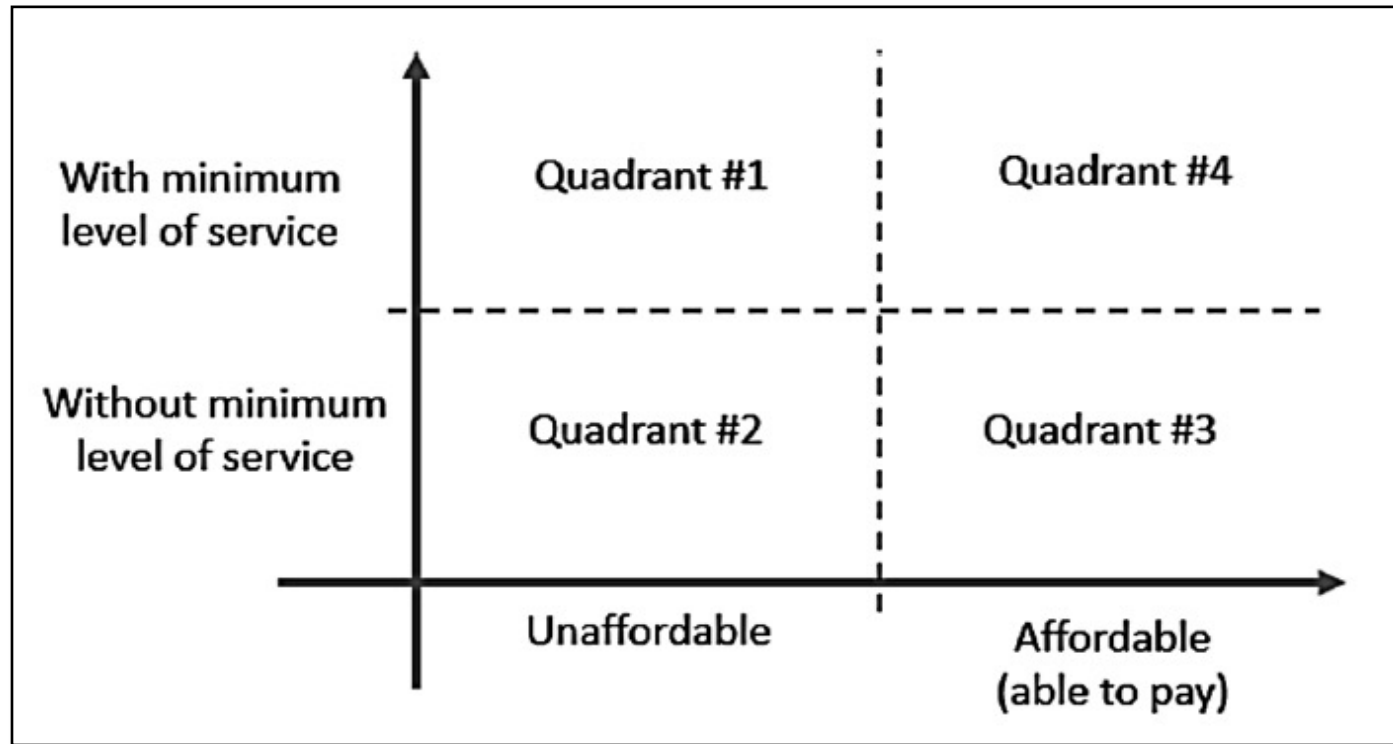
# 3 key dimensions of affordability

1. The price or cost related to WASH services at the household level
2. The spending power of the household
3. The price or cost of meeting other household needs

Matrix	Households have to cover all health, education, housing, pension costs		Households receive low cost or free health, education, housing, pension support	
	WASH prices low	WASH prices high	WASH prices low	WASH prices high
Low income	Vulnerable	Most vulnerable	Not vulnerable	Vulnerable
Median income	Not vulnerable	Vulnerable	Not vulnerable	Not vulnerable

# If we can determine affordability...?

*The quadrant analysis provides a practical way of categorizing households to help formulate a policy response*



Hutton and Andres (2018). Counting the Costs and Benefits of Equitable WASH Service Provision. Chapter 16 in "Achieving Equality in Water and Sanitation Services". Edited by Cummins O and Slaymaker T. Taylor & Francis, Routledge, UK.

# 5 complementary ways to measure affordability

- *How people behave* with respect to WASH expenditure and service levels
- *What people say* about their preferences on WASH expenditure and service levels
- *How WASH expenditures compare to an agreed benchmark* on WASH spending as a percent of overall household income or expenditure
- *What is a household's poverty status*, which indicates deservingness for supportive measures to access affordable WASH services
- *What measures are in place* to ensure the poor and vulnerable have economic access to WASH services

## ASSESSMENT CRITERIA

### 1. Validity

Three affordability dimensions

### 2. Accuracy

Do data capture the definition?

### 3. Relevance and uptake

Does it make sense to stakeholders using it?

### 4. Feasibility

Ease of estimating an indicator through applying a methodology?



# How do these approaches perform?

*How people behave* with respect to WASH expenditure and service levels

*Example: follow how households adjust monthly water demand after a tariff increase or reduction*



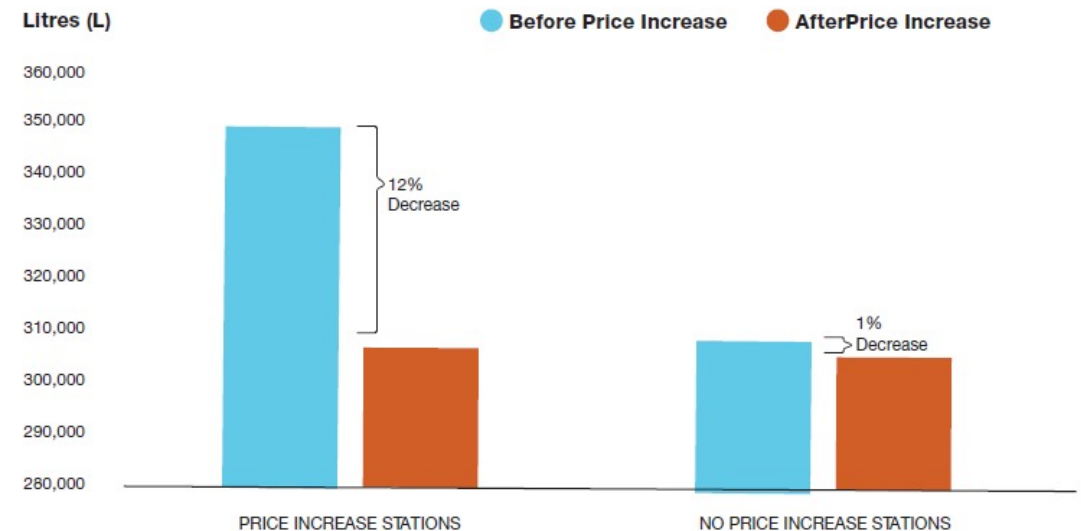
*We see real-life responses to prices, based on household preferences – and reflects their needs for other services*



*Can be from experiments or collected from utility databases*



*How to achieve price discrimination when it is observed that one population group cuts demand*



Source: Safe Water Network, Ghana



# How do these approaches perform?

*What people say about their preferences on WASH expenditure and service levels*

*Example: market survey on willingness to pay for a new (better quality) survey, or question about how they find current tariffs*



*Household responses consider their preferences, spending power and needs*



*Willingness to pay studies difficult to interpret*



*Depends on who responds on behalf of the household*



*Inter-household variation makes price setting difficult*



*Few data sets available, and large studies expensive to conduct*

WILLINGNESS-TO-PAY BIDS FOR PUBLIC STANDPOSTS

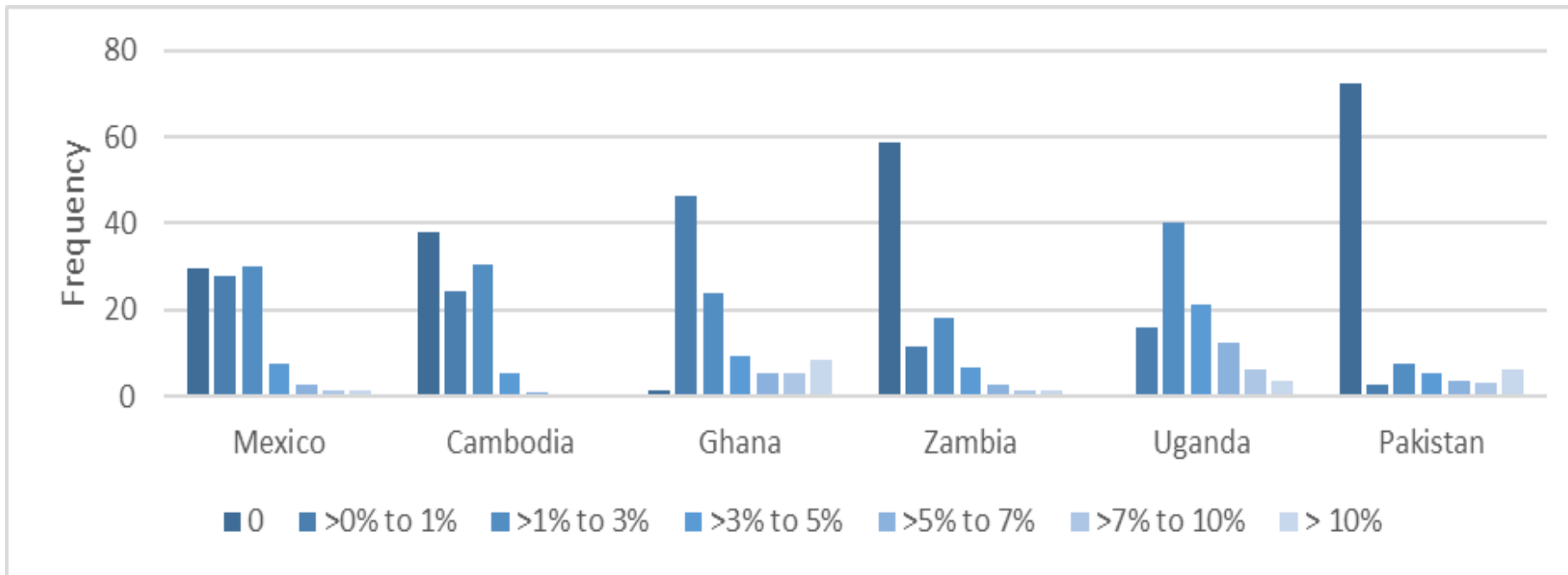
	Coefficient	t-ratio
Dependent variable: Probability that a household's willingness to pay for a public standpost falls within a specified interval		
Independent variables:		
Intercept	.841	1.350
Household wealth index (WLTH)	.126	2.939
Household with foreign income (FINC = 1 if yes)	.064	.232
Occupation index (IOCP = 1 if farmer)	-.209	-.848
Household education level (HHED)	.157	2.113
Distance from existing source (DIST)	.001	5.716
Quality index of existing source (QULT = 1 if satisfactory)	-.072	-2.163
Sex of respondent (male = 1)	-.104	-5.41
Log-likelihood		-206.01
Restricted log-likelihood		-231.95
Chi-square (freedom = 7)		51.878
Adjusted likelihood ratio		.142
Degrees of freedom		137

# How do these approaches perform?

**How WASH expenditures compare to an agreed benchmark on WASH spending as a percent of overall household income or expenditure**

**Example: how many, and which, households pay more than 5% of their income on water and wastewater services?**

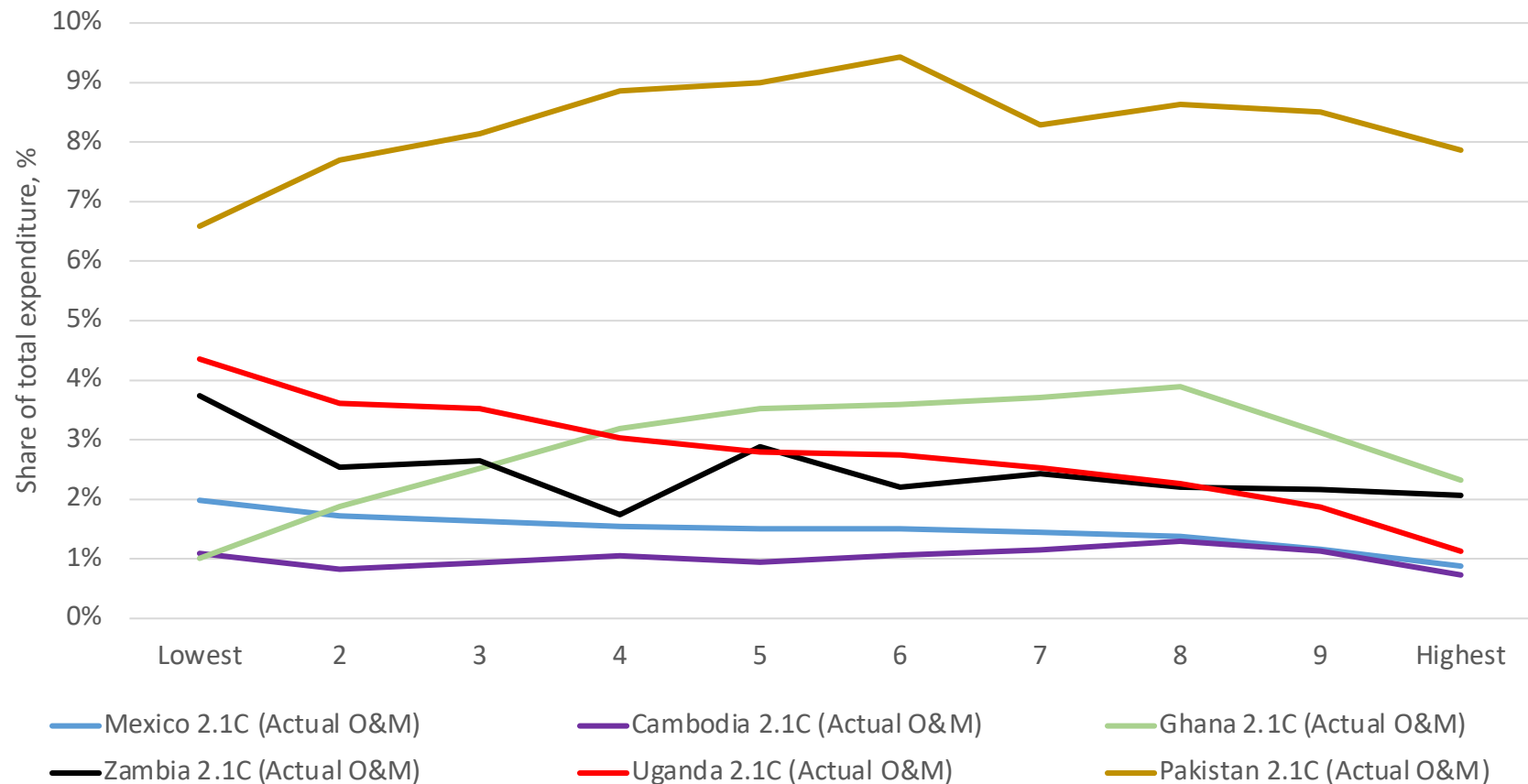
**Different picture emerges across different countries**



# How do these approaches perform?

## How WASH expenditures compare to an agreed benchmark

Measuring share of income spent across income groups is informative

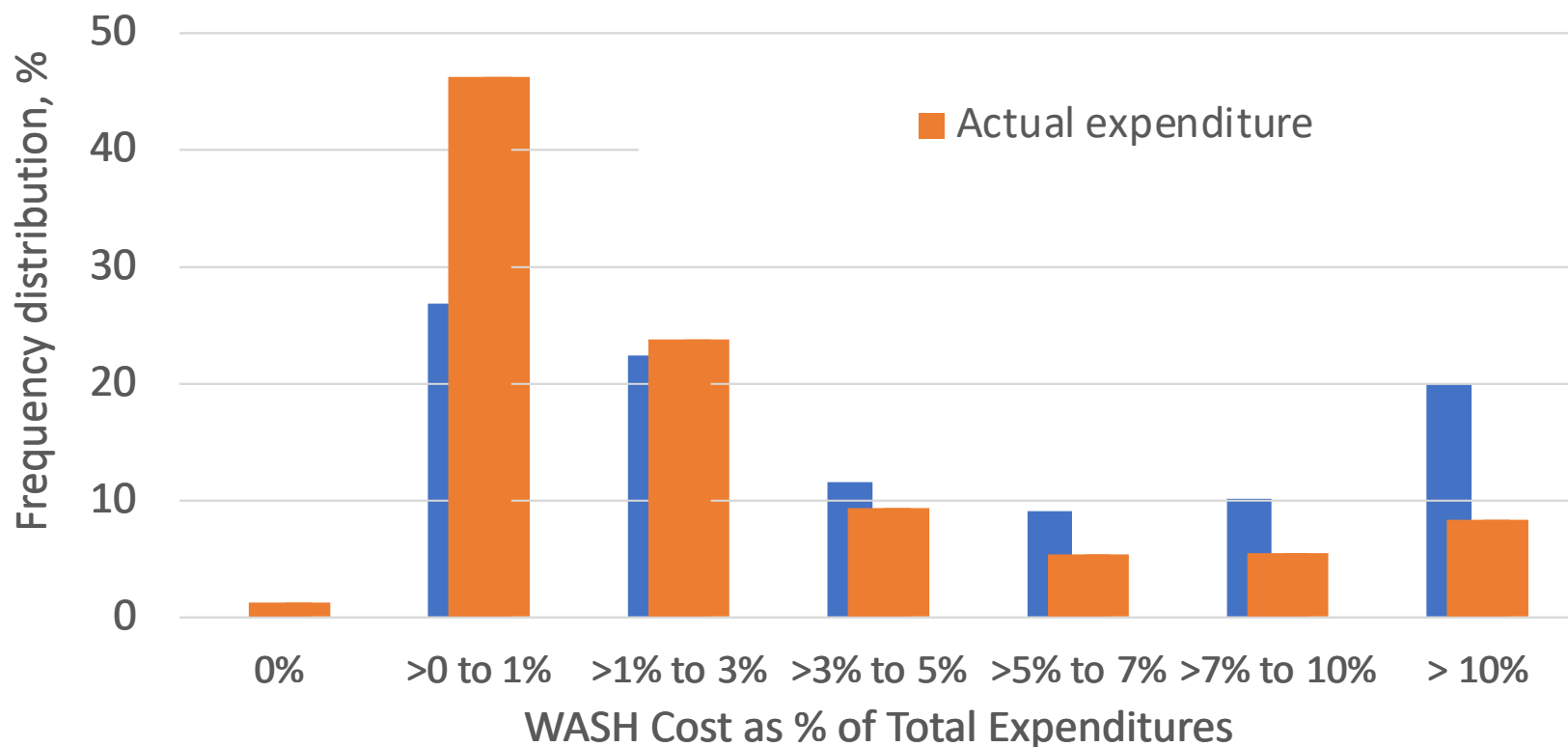


# How do these approaches perform?

## How WASH expenditures compare to an agreed benchmark

Expenditure data based on below standard services for many households

and/or some WASH expenditures not captured

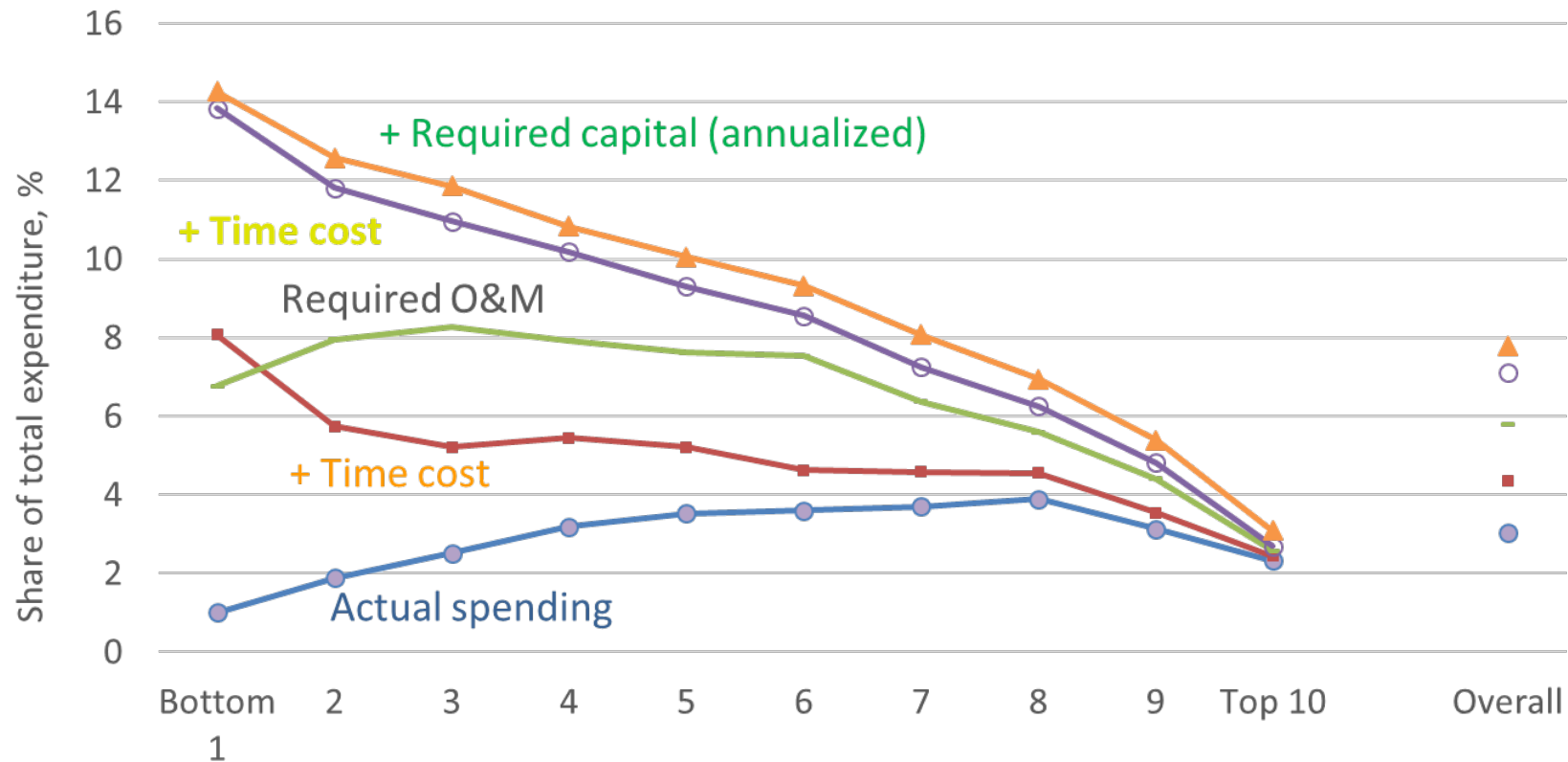


**WASH costs as a share of income increases when the service gap is filled**

# How do these approaches perform?

## How WASH expenditures compare to an agreed benchmark

Adding omitted costs, access time, and filling the service gap



When these costs are added, the affordability picture changes radically for the poorer income deciles

# How do these approaches perform?

## *How WASH expenditures compare to an agreed benchmark*

- ✓ *Income and expenditure surveys (IES) contain core questions on WASH expenditures, allows disaggregation*
  - ✗ *IES conducted every 3-5 years, & data not always public domain*
  - ✗ *IES only capture partial costs, especially from informal services or when sources vary by season*
  - ✗ *IES exclude WatSan access time*
  - ✓ *Cost and service gaps can be filled*
- ✓ *This approach is already widely used, is easy to understand*
  - ✓ *This approach becomes more valid when households rely more on single, formal services and if the service meets national standards*

# How do these approaches perform?

## *How WASH expenditures compare to an agreed benchmark*



*How to judge whether affordable or not?*

*Question: How do you set a benchmark for a WASH affordability threshold, when you do not know what households need to pay for other basic services?*

Affordability mentioned in SDG targets

- SDG 3.8: Financial risk protection (health coverage).
- SDG 3.b: Affordable essential medicines & vaccines.
- SDG 4.3: Affordable education.
- SDG 6.1: Affordable drinking water.
- SDG 7.1: Affordable energy services.
- SDG 9.1: Affordable infrastructure.
- SDG 9.3: Affordable credit
- SDG 9.c: Affordable internet access.
- SDG 11.1: Affordable housing.
- SDG 11.2: Affordable transport systems.

# How do these approaches perform?

***What is a household's poverty status***, which indicates deservingness for supportive measures to access affordable WASH services

***Example: all those identified as living below the poverty line are eligible for government or NGO support (either investment or recurrent)***



*Data sources align with each other*



*Draws on established processes for delivering support to the poor*



*May facilitate consolidation of social welfare payments that include WASH*



*How is poverty measured?*

*How often is status updated?*

*Should degree of poverty determine magnitude of subsidy support?*





# How do these approaches perform?

***What measures are in place*** to ensure the poor and vulnerable have economic access to WASH services

***Example: document policies and resource allocations that make WASH services more affordable***

***NOTE: expenditure data need to be interpreted in the light of support measures, and their continuation / expansion into the future***



***GLAAS data collect standardized data in >100 countries every 2 years***



***No single indicator will predict affordability – requires triangulation across indicators***



***Degree and success of policy implementation more important than existence of policy***



# Overview of recommendations

1. Initiate global monitoring of what households are spending on WASH, compared with total expenditures, using globally available data sets
  - 50 countries with national expenditure surveys since 2016
  - Adjust estimates: add time costs and fill service gaps
  - Provide key disaggregations
  - Tabulate by different service level and cut-offs (0-1%, 1-2% etc) for countries to make own interpretations
2. Promote (additional) WASH questions in future surveys
3. Explore developing database on country cost norms for different technologies / levels of service to enable assessment of required costs to be paid by households to meet SDGs – incorporate issues of sustainability and climate resilience
4. Motivate and support more in-depth country studies, using other local data sources
5. Initiate cross-sectoral conversation on expenditure ratios





# Presentation: Potential for Global Monitoring of Policies and Mechanisms Through the UN-Water GLAAS

Marina Takane,  
Technical Officer, WSH Unit, WHO



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# What is GLAAS?

## Data collection timeline

- **Global monitoring of inputs and processes** required to extend and sustain WASH systems and services to all, especially the underserved and vulnerable populations
- Co-custodian of **SDG targets 6.a and 6.b**
- Last report focused on **national policies, plans and targets** under the SDGs
- **6<sup>th</sup> cycle of data collection** will be launching later this year (Q3 2021)
  - Data collection from countries and from external support agencies (ESAs)
  - Last cycle, 115 countries and 29 ESAs participated
- **Next GLAAS report** will be launched towards the end of next year (Q4 2022)



# GLAAS indicators related to affordability

- 1 Legal: Does the constitution or other legislation recognize water and sanitation as human rights?
- 2 Regulatory: To what extent do regulations, standards and regulatory instruments exist for drinking-water and wastewater?
- 3 Policy: Are policy and planning development processes effective?
- 4 Policy: What is the national coverage target in each sub-sector?
- 5 Policy: Is there an affordability target for drinking-water (rural, urban)?
- 6 Programming: To what extent are there measures to extend services to vulnerable populations in national policies and plans? (9 categories given in form)
- 7 Participation: Are there clearly defined procedures in laws or policies for participation by service users (e.g. households) and communities and what is the level of participation?
- 8 Monitoring: Are there clearly defined performance indicators used for equitable coverage?
- 9 Monitoring: What is the progress towards affordability target for drinking-water (rural, urban)?
- 10 Monitoring: Is progress in extending and sustaining service provision specifically to the following populations tracked and reported? (9 categories given in form)
- 11 Financing: If a sector / sub-sector plan exists, has the plan been supported with adequate financing to implement the plan? Are there sufficient human resources to implement the plan?
- 12 Financing: Are operations and basic maintenance (O&M) covered by tariffs or household contributions?
- 13 Financing: Are there specific measures in the financing plan to target resources to reduce inequities in access and levels of service and are they being applied for vulnerable groups? (9 categories given in form)
- 14 Financing: Are there financial schemes to make access to WASH more affordable for vulnerable groups?
- 15 Financing: Is affordability of WASH services defined in policies or plans (e.g. no more than 2% of median household income)?
- 16 Financing: Please provide examples of affordability schemes in use and the scope of coverage, including how specific groups are targeted for these schemes.
- 17 Financing: Going forward, do you estimate that financing from all sources allocated to water/sanitation/hygiene is sufficient to reach national targets?

• **17 GLAAS indicators** linked directly or indirectly to WASH affordability covering the following aspects:

- Legal
- Regulatory
- Policy
- Programming
- Participation
- Monitoring
- Finance

# GLAAS indicators related to affordability

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3 Policy: Are policy and planning development processes effective?

4 Policy: What is the national

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**Policy: Is there an affordability target for drinking-water (rural, urban)?**

7 Participation: Are there clearly defined procedures in laws or policies for participation by service users (e.g. households) and communities and what is the level of participation?

8 Monitoring: Are there clearly defined performance indicators used for equitable coverage?

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than 2% of median household income)?

16 Financing: Please provide examples of affordability schemes in use and the scope of coverage, including how specific groups are targeted for these schemes.

17 Financing: Going forward, do you estimate that financing from all sources allocated to water/sanitation/hygiene is sufficient to reach national targets?

- **44 of 93 responding countries (47%)** indicated that they have targets for achieving affordability of drinking-water
- For example:
  - **Seychelles** aims to keep the cost of drinking-water below the threshold of 5% of disposable household income, aiming to achieve 3% by 2030
  - **Lesotho** has set a target of 5% of disposable household income to be spent in urban areas on drinking-water by 2020
  - **Jamaica** aims for no one to be denied access to potable water because of an inability to pay
  - **Maldives** indicated its intention to provide access to drinking-water services free of charge in rural areas for all

# GLAAS indicators related to affordability

6

**Programming:** To what extent are there measures to extend services to vulnerable populations in national policies and plans? (9 categories given in form)

10

**Monitoring:** Is progress in extending and sustaining service provision specifically to the following populations tracked and reported? (9 categories given in form)

13

**Financing:** Are there specific measures in the financing plan to target resources to reduce inequities in access and levels of service and are they being applied for vulnerable groups?

**Table 5.1 Measures to extend services to poor populations by income group**

● 80–100% ● 60–79% ● 40–59% ● 0–39%

	World Bank income group <sup>a</sup>	Number of countries	Governance Policies and plans have specific measures to reach poor populations	Monitoring Progress in extending service provision to poor populations is tracked and reported	Finance Specific measures in the financing plan to target resources to poor populations are consistently applied
Sanitation	<b>All responding countries</b>	<b>111</b>	69%	32%	26%
	Low income	28	79%	25%	25%
	Lower-middle income	38	71%	39%	29%
	Upper-middle income	32	69%	38%	22%
	High income	12	50%	17%	33%
Drinking-water	<b>All responding countries</b>	<b>110</b>	74%	35%	35%
	Low income	28	93%	25%	39%
	Lower-middle income	36	75%	42%	36%
	Upper-middle income	32	66%	41%	31%
	High income	13	54%	31%	31%

<sup>a</sup> More information on World Bank classification by income can be found at: <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>.  
Source: GLAAS 2018/2019 country survey.

# GLAAS indicators related to affordability

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**14 Financing: Are there financial schemes to make access to WASH more affordable for vulnerable groups?**

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8 Monitoring: Are there clearly defined performance indicators used for equitable coverage?

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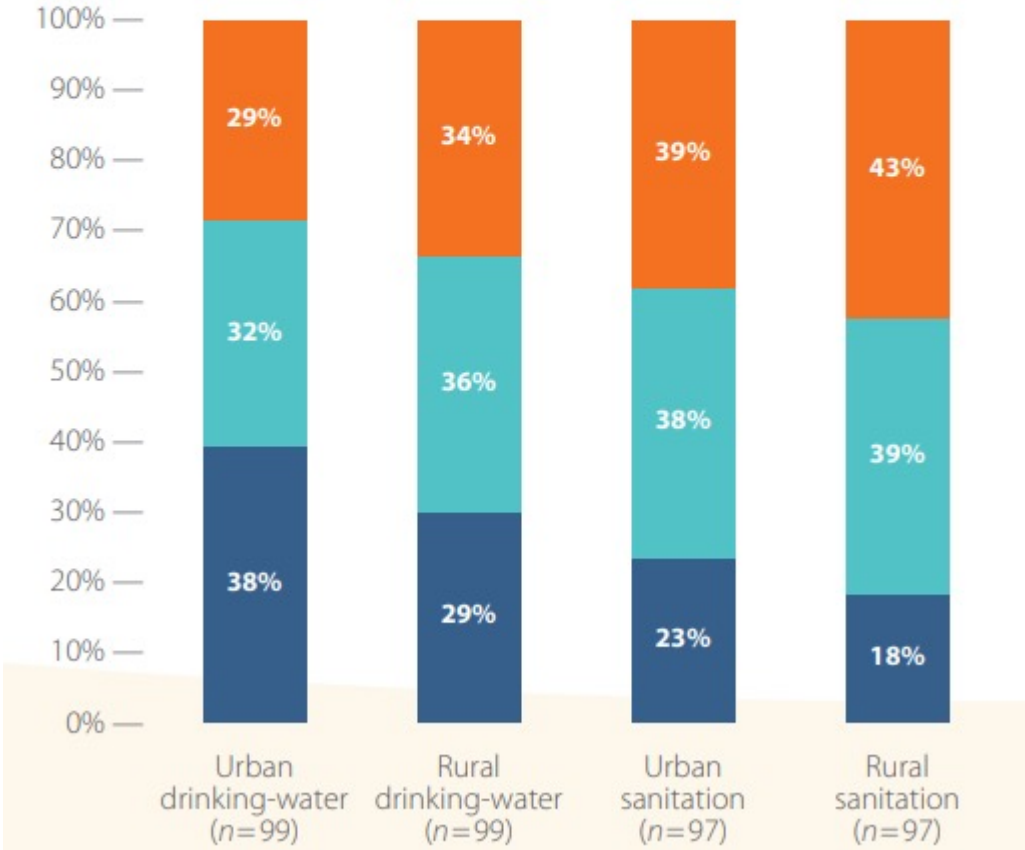
16 Financing: Please provide examples of affordability schemes in use and the scope of coverage, including how specific groups are targeted for these schemes.

17 Financing: Going forward, do you estimate that financing from all sources allocated to water/sanitation/hygiene is sufficient to reach national targets?

than 2% of median household income)?

**Figure 5.5** Existence of financial schemes to make access to WASH more affordable to vulnerable groups

- Schemes exist and widely used
- Schemes exist, not widely used
- No schemes





# GLAAS indicators related to affordability

1 Legal: Does the constitution or other legislation recognize water and sanitation as human rights?

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3 Policy: Are policy and planning development processes effective?

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15

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17 Financing: Going forward, do you estimate that financing from all sources allocated to water/sanitation/hygiene is sufficient to reach national targets?

for these schemes.

**Table 5.3** Example country definitions of affordability for WASH services

Country	Definition of affordability
Indonesia	4% of regional minimum income for drinking-water
Lao People's Democratic Republic	3% of household income for urban drinking-water
Lesotho	5% of minimum salary for drinking-water
Lithuania	4% of average monthly family income drinking-water and sanitation
Ukraine	Housing and utilities no greater than 10% of gross monthly income for low-income households and people living with disabilities; no greater than 15% of average monthly income for the rest of the population

Source: GLAAS 2018/2019 country survey.

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**Financing:** Please provide examples of affordability schemes in use and the scope of coverage, including how specific groups are targeted for these schemes.

10 Monitoring: Is progress in extending and sustaining service provision specifically to the following populations tracked and reported? (9 categories given in form)

- **Fiji:** Free water scheme for households with income below \$30K
- **Ghana:** subsidy of 50-75% to support cost of facility for low-income households
- **Hungary:** Government support to municipalities where cost of water service provision is higher than the national average (e.g., due to long service distance or high-cost water treatment) to keep tariffs on the national average
- **Lesotho:** Block tariffs with the lowest band aimed at the poor and charging less or equal 5% of minimum salary and no standing charge
- **South Africa** has an operational national free basic services policy aimed at poor people, implemented in all municipalities. In 2016, 4.7 million households received free basic water and 3.3 million free basic sanitation.

# GLAAS: Next steps on affordability

- GLAAS will continue to collect and analyze data on affordability inputs and processes
- Data on affordability in **GLAAS data portal** (to be launched Q3 2021)
- Option of producing a **thematic highlight on affordability** in the future
- Linking affordability analyses with **WASH accounts**