Align to Accelerate Background Paper

Towards a core set of indicators and common monitoring and review framework

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1. Introduction

The Align to Accelerate (A2A) initiative is a joint initiative led by WHO and UNICEF, in close collaboration with the World Bank, that aims to define and agree on a set of core indicators to monitor the strength and performance of the WASH system and common monitoring and review framework through a process of sector-wide multi-stakeholder consultation. A brief overview of the A2A initiative and a summary of the progress to date is provided below in Box 1 and more information is available in the concept note.

Launched in June 2024, the A2A initiative is being implemented through a four-phased approach: (1) preparatory phase including consultations, *A2A Background and Discussion Papers*, (2) consultations and development of core indicators, (3) pilot testing to finalize core indicators and develop common monitoring and review framework; and (4) upscaling led by countries with aligned support from development partners.

This *Background Paper* is part of the initial preparatory Phase 1. Its purpose is to provide information, examples and analysis that will inform the design of the technical approach for the selection of the core set of indicators. Each section includes *key considerations and recommendations* that summarize the main 'take-away' points which are relevant for A2A going forward. These key considerations will inform the *A2A Discussion Paper* which is a companion document that proposes indicator domains and criteria for the selection of the set of core indicators as an input to Phase 2.

The background paper addresses the following questions:

- *What are the current approaches to WASH frameworks and monitoring practices?* (Section 2)
- *What is the status of evidence and learning about WASH systems?* (Section 3)
- *How can the set of core indicators be 'forward-looking' to anticipate future needs in an evolving context?* (Section 4)
- *How have other processes approached the selection of a set of core indicators?* (Section 5)

The paper attempts to tackle these questions from two angles. First to address the aspect of alignment, there is an effort to identify "common denominators" across the frameworks. These are areas where programming and monitoring are already taking place, albeit often in different forms; however, there are established practices, experience and evidence for A2A to draw from and build on. Second, the paper makes a very humble initial attempt to identify emerging areas, gaps, and new or unique practices that may lack evidence at present time but could be of interest for further exploration during Phase 2 and beyond. This latter area will require further attention from the wider community of A2A stakeholders and partners going forward to ensure a truly forward-looking approach.

The paper's scope covers a vast amount of content and source material. As such, supporting data tables and analyses are included in annexes and references have been provided to additional sources for more in-depth information on specific topics. The paper is not intended as an exhaustive review of available literature, evidence and other resources. It builds on the A2A "Call for Evidence" launched in June 2024, the A2A webinar that took place on 17 June 2024, in-person stakeholder consultations during the 2024 UNC Water and Health Conference, and meetings with key partners to provide a foundation and foster a common understanding for the forthcoming consultations and development of the core set of indicators and monitoring and review framework in Phase 2.

2. Current approaches to WASH frameworks and monitoring practices

A starting point for the development of an agreed set of core indicators and a common monitoring and review framework is understanding the WASH frameworks and monitoring practices currently in use by governments and stakeholders. This section presents the findings from an assessment of global, regional and country WASH frameworks (2.1) and preliminary results from the GLAAS 2024 country survey question B2 on national monitoring indicators (2.2).

Brief overview of terminology and concepts used in the assessments

Sections 2.1 and 2.2 present new content and analysis prepared specifically as an input for this *Background Paper* and the companion *A2A Discussion Paper*. For consistency, the results chain structure and terminology published in the GLAAS 2024/2025 country survey guidance document has been used for both assessments (see Figure 1). The results chain used for the assessments has five parts: inputs, process/activities, outputs, outcomes, and impacts.

Figure 1. Results chain for the WASH system from 2024/2025 GLAAS Country Survey Guidance Document

Results chain	Definition	Example Indicators
Input	Financial, human, and other resources mobilized to support activities undertaken to achieve results	• WASH expenditure per capita • Existence of a country compact[1] for WASH
Processes	Action taken or work performed by which inputs are converted into specific outputs	• % of required water quality testing conducted • % of community participation meetings with service providers conducted
Outputs	Events, products, capital goods or services that result from an intervention (e.g. process/activity)	• Losses in m3/network km per day of non-revenue water • % of wastewater treated
Outcome	Uptake, adoption or use of outputs by beneficiaries	• % of households with access to basic sanitation
Impact	Higher level long-term goals	• Number of diarrheal deaths per hundred thousand people • Proportion of bodies of water with good ambient water quality

Several frameworks included *'external factors'* that influence the WASH sector, but that are not within the mandates of the WASH sector. These include inter alia: structural factors such as demography, geography, economy, and institutional factors such as decentralization, social norms, anti-corruption means and provisions, and public finance management. Given the focus of A2A on indicators suitable for national monitoring systems, these 'external factors' are considered outside of the scope of the assessment.

[1] A country compact is a negotiated agreement between a government and development partners.

2.1 Assessment of global, regional and country WASH frameworks

As part of A2A Phase 1, WHO GLAAS team conducted a mapping and assessment of 82 WASH frameworks. The sample was comprised of 72 frameworks used by global and regional entities as part of their WASH-related programmes and projects and 10 frameworks used by countries as part of WASH policies, plans and/or national monitoring systems.[2] The full list of frameworks included in the review is included in Annex B.

The assessment aimed to address the following questions:

- *What main type of WASH sector frameworks are currently in use by (a) WASH sector actors (globally and regionally) and (b) national governments? How are the frameworks used?*
- *How are the frameworks structured? What are the common domains across the WASH results chain?*
- *Do the frameworks include indicators? What measurement methods are used?*
- *To what extent are the frameworks linked with national monitoring and review processes?*

Assessment Methodology

The assessment was conducted in three steps. The first step was the identification of WASH systems and other relevant WASH-related frameworks to be included in the assessment. A 'Call for Evidence' was launched during the A2A joint webinar that took place on 17 June 2024, including a specific request for organizations to share relevant WASH frameworks. Additional frameworks were identified during the desk review for A2A, by key informants, and as part of the recent strategic assessment of the Means of Implementation for SDG 6 undertaken by WHO GLAAS team. As a result of feedback received during the UNC Water and Health Conference in October 2024, additional frameworks were added to the assessment notably new submissions received from main WASH actors and partnerships, recently published and advance draft frameworks still under development, financing-related frameworks used by international financing institutions, water integrity and regulation-oriented frameworks as well as more frameworks used for urban WASH and benchmarking of large WASH utilities.

The second step was the assessment of each framework. This included collecting basic information about the lead entities, sector/sub-sector covered, purpose of the framework, and whether it includes a companion "tool" to support its use. The content of each framework was mapped across the five segments of the WASH results chain as shown above in Figure 1. As not all WASH frameworks were designed using a theory of change or follow the logic of a results chain this required interpretation to associate the content from the framework with the appropriate results chain segment to provide a common basis for comparison across all frameworks. Additional information was also collected on the monitoring-related aspects of the framework including number and type of indicators, measurement methods, data source and collection methods, and whether the framework is associated with a review process.

The third step was to overlay the frameworks to identify common topics that represent possible indicator domains and sub-domains[3] for the set of core indicators. Given the different terminology used across the frameworks and that there is not a "master WASH framework" or existing agreed common monitoring framework that could be used as a basis for the comparison, it was necessary to use an iterative approach to identify and group the common topic areas for each link in the results chain. Grouping the topics into "indicator domain groupings" required a balance between consolidation (reduce the total number of domains/sub-domains), while also maintaining granularity of the topics to keep what is interesting/different and to avoid oversimplification. A particular effort was made to establish topic areas that reflect content contained even in only one or a few

[2] This smaller sample of WASH policy frameworks from ten countries were assessed using a similar methodology for comparative purposes. A more substantive assessment of country WASH monitoring approaches is presented in 2.2 based on results from the 2024 GLAAS country survey.

[3] Terminology and definitions are presented in Section 5.

frameworks to capture the 'whole picture' at this preliminary stage. Once the "indicator domain groupings" were defined for each segment of the results chain, the topics within each framework were assessed and the number of frameworks that include the topic were summed. Finally, the "indicator domain groupings" for each segment of the results chain were ranked from most to least common.

Assumptions and limitations of the approach

This assessment was conducted as a learning exercise to serve as an input to the accompanying *A2A Discussion Paper* and contribute to inform further analysis and discussion in Phase 2. It not intended as a standalone academically rigorous study. As such, several assumptions and limitations are presented upfront to contextualize the results and findings:

- The assessment included all frameworks that were shared or recommended by key informants to be included in the assessment, none were excluded at this stage. The only criteria applied was that the content be in the format of a 'framework' or similar structure that could be overlayed with the other frameworks. This allowed for an inclusive selection of frameworks covering a wide range of approaches to the WASH system as well as specialised focus areas; however, this also presented some challenges to compare such a diverse set of frameworks using the same methodology.
- All frameworks were assessed on an equal basis. Neither the status of the framework (e.g. internationally agreed vs. specific to one organization) nor its degree of use by number of countries or partners were taken into consideration.
- Not all frameworks are structured using a results chain, which is the common basis for cross-framework comparisons. Thus, interpretation was required to assign the content from each framework into a link of the results chain. While efforts have been made to harmonize how content is assigned to the results chain links for each framework, some inconsistencies are inevitable due to the qualitative and fluid nature of the topic areas and level of detail provided in each framework document.
- The diversity of frameworks covered many combinations of water resources, water supply, sanitation, hygiene, and institutions. All sub-sectors are currently assessed together. However, during the assessment there were observable variations between the content included in the sub-sector-specific frameworks (e.g., market-based sanitation (MBS), faecal sludge management (FSM), WASH in health care facilities, etc.). How best to address sub-sector specificities while maintaining a "slim" subset of core indicators for the WASH system will need to be considered during Phase 2.

Overview of the global and regional frameworks included in the assessment

The assessment covered an inclusive and diverse set of WASH system frameworks. A complete list is included in Annex A. The frameworks were developed for a range of different use cases. Of the 72 global and regional frameworks assessed, the largest share, over one-third (27), were developed as to monitor indicators from the SDG indictor framework,[4] other global and regional intergovernmental agreements, or organizational results frameworks. Around 20% were developed and are used for diagnostic exercises (14), design and implementation of WASH programmes (13), and performance benchmarking, including scorecard approaches (12). The remaining frameworks are used to describe a system (2), plan change management (2), develop policy (1), and survey public attitudes and views (1).

[4] United Nations (2017). SDG Indicators. Global Indicator Framework for the Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development. A/RES/71/313
https://unstats.un.org/sdgs/indicators/indicators-list/

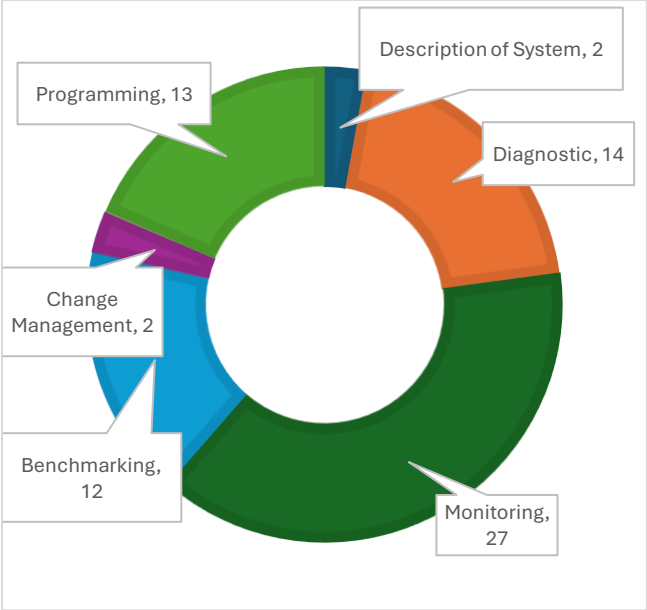

Figure 2a. Purpose of the framework

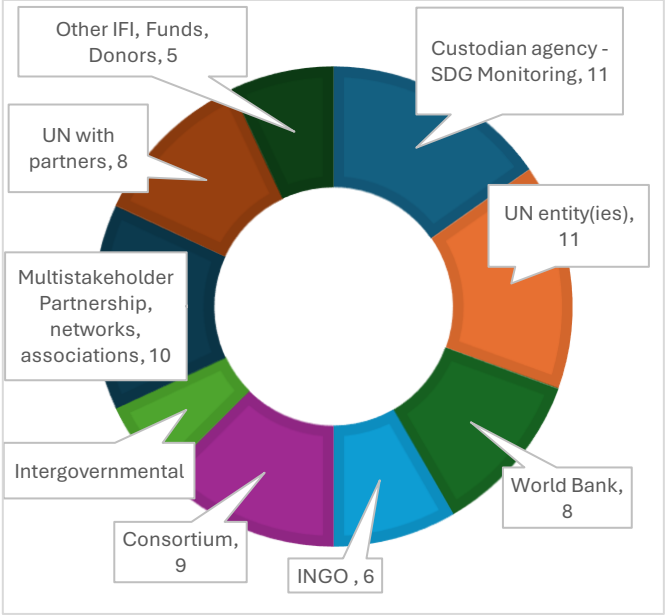

Figure 2b. Type of entity that developed the framework

The frameworks were developed and used by different types of actors, individually and in partnership: custodian agencies for SDG monitoring (11); UN entities (11); multistakeholder partnerships, networks and associations (10); consortium (9); UN entities with partners (8); World Bank (8); INGOs (6); international financial institutions, funds and donors (5), and secretariats of intergovernmental processes (4). Most frameworks are intended for use by national sector actors. One main group of frameworks relates to national monitoring and reporting to global and regional mechanisms. While others are intended for use at country-level including also sub-national/ district-level and/or service provider modules. Other target audiences are utility leaders and managers, service providers, investors, international cooperation (external support agencies), and technical assistance programmes. Nearly one-third (23) of the frameworks are a "tool" or include a companion "tool" that can be used to support implementation.

The global and regional frameworks included in the assessment cover different combinations of WASH-related sub-sectors. The main focus of A2A is WASH, as defined as safe drinking-water, sanitation and hygiene[5], which is covered by one-third of the frameworks (24). Nearly one-fifth of the frameworks (14) cover water and sanitation sub-sectors, which typically include aspects of both water resources management and water supply. Thirteen of the frameworks cover all SDG 6 areas. Sanitation is the sub-sector with the greatest number of dedicated frameworks (7), including specific frameworks for topics such as market-based sanitation and faecal sludge management. The other topics covered by frameworks are listed below in Table 1.

An effort was made to include frameworks that focus on specific thematic areas to expand the breadth and depth of the assessment: human rights, affordability (2); climate resilience (2); gender (2); public attitudes (1); regulation (2); finance, investment (3); sustainability (2); human resources (2); integrity (2); as well as special contexts: humanitarian, fragile settings (2); rural (1); and urban (1).

Most of the frameworks included indicators specific to the framework (60), an inventory of indicators (2) or were in the process of developing indicators (3). The frameworks with indicators were split between those collecting quantitative data (20), qualitative (17), or mixed (24).

[5] Definition of WASH. WHO website, https://www.who.int/health-topics/water-sanitation-and-hygiene-wash#tab=tab_1

Table 1. Sectors and sub-sectors covered by global & regional frameworks

Sectors/ Sub-sectors	Number of Frameworks	Percentage (n=72)
Safe drinking-water, sanitation, hygiene (WASH)	24	33%
Water and sanitation	14	19%
All SDG 6 areas	13	18%
Sanitation	7	10%
Water resources management, including WASH	6	8%
Water Supply	2	3%
Hygiene	2	3%
WASH in Institutions (HCF, Schools)	2	3%
Systems change	1	1%
Water, sanitation, solid waste	1	1%
Sanitation and hygiene	0	0%

For those collecting qualitative data, there was a high variation in the type of rating scales used including binary, linear numeric, Likert scales, interval scales, pictorial/graphical (e.g. stars, traffic lights). Fourteen of the frameworks used a composite index approach. Most of the frameworks with indicators provide results that are intended to be externally comparable across countries; however, many of the diagnostic type frameworks indicated that their results are internally specific to the country. Across the 72 global and regional frameworks, there are over *3200 indicators and survey questions*.

About one-third of frameworks use data collected from the responsible line ministry and/or bureau of statistics. Other main data sources include regulator data, utility data, as well as secondary data and earth observations. One quarter require primary data collection through surveys, workshops, interviews or specific project-related monitoring processes. Only 11 out of 72 frameworks rely upon routine monitoring systems for data collection. Only 20% of frameworks (14) indicated that they were linked to sector review processes; whereas 26% of frameworks (19) referred to a dedicated stakeholder validation and review process. Many frameworks did not provide information about linkages between the framework and sector or other review processes.

In summary, many different WASH-related frameworks that cover a common set of topics from different angles, collect primary data using different indicators and measurement methods, with limited use of routine monitoring systems or sector review processes.

Overview of the country frameworks included in the assessment

For comparative purposes, a sample of ten different types of national water and sanitation/WASH sector documents that relate to national monitoring systems were selected. These frameworks include National Water and Sanitation/WASH sector policies (Burkina Faso, Senegal, Papua New Guinea, Zambia), strategies (Sierra Leone) and plans (Egypt, South Africa, Tanzania), as well as two examples of national monitoring indicator guides (Uganda and Madagascar). While not a representative sample, this limited assessment of national government documents offers some insights into similarities and differences to how countries versus global and regional partners approach WASH monitoring.

A few observations from the assessment of country frameworks:

- Designed to monitor progress towards policy objectives typically framed at outcome level. These include national targets typically aligned with SDG-type indicators on population using services, for example 6.1 and 6.2 using JMP definitions for safely managed services or basic services.

- Expected impacts were often framed in terms of the contribution of the sector policy/strategy/plan to the overarching National Development Plan objectives.
- Outputs were strongly reflected in the country frameworks. These indicators track infrastructure constructed, rehabilitated or service extension, such as number of new boreholes, piped water systems, or new connections, as well as increased capacity for water production, storage and treatment (water/ wastewater).
- Monitoring frameworks for policies, plans, and strategies typically tracked the process/activities and outputs from sector reform such as progress on the development of a reform-related document (e.g, water code) or degree of implementation/operationalization of policy changes by service authorities or service providers.
- In terms of relating government documents to the WASH results chain, it was interpreted that the existing policies, legislation, and institutional frameworks presented in the document reflect the "inputs" to the policy, plan, or strategy.
- Across framework documents there was strong alignment with United Nations 2030 Agenda[6] and its SDG indicator framework[7], in particular SDG 6 and regionally, for example, African Union Agenda 2063[8]; as well as global and regional monitoring programmes including WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP), UN-Water Global Analysis and Assessment of Sanitation and Drinking-water (GLAAS), FAO's global information system on water and agriculture (Aquastat), AMCOW's Africa Water and Sanitation Sector Monitoring and Reporting System (WASSMO), and the Ngor Declaration on Sanitation and Hygiene.

Results of the overlay of the WASH global, regional and country frameworks

This section briefly discusses the main findings from the overlay of WASH frameworks for each link of the results chain, followed by some observations on the evolution of indicators domains across the results chain.

Of the 82 results frameworks, 63 frameworks (77%) have input-level and process-level indicator domains, 49 have output-level indicator domains (60%), 48 have outcome-level indicator domains (59%), and only around one-third, 29 frameworks have impact-level indicator domains (35%). The "top ten" most common indicator domain groupings for each segment of the WASH system results chain are presented in Table 2. The complete list of indicator domains and sub-domains identified across the results chain is provided in Annex B.

Inputs. For the purposes of this assessment, inputs are defined to be, ***"Financial, human, and other resources mobilized to support activities undertaken to achieve results."*** Structural governance aspects such as legal, policy, institutional and regulatory frameworks as well as physical assets like 'infrastructure' and natural assets like 'water resources' are also included in the "input" category.

Of the 82 frameworks, 63 included input-level topic areas. The most common types of input indicator domain groupings can be sorted into two major categories:

(i) *sector architecture and its governing frameworks:* legislation and policy frameworks (36), institutional frameworks and arrangements (32), regulatory frameworks and technical standards (23), and 'governance-general' (13); and,

[6] United Nations General Assembly (2015). *Transforming our world: the 2030 Agenda for Sustainable Development*, Resolution 70/1, adopted on 25 September 2015.
[7] United Nations (2017). SDG Indicators. Global Indicator Framework for the Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development. Available at: https://unstats.un.org/sdgs/indicators/indicators-list/
[8] African Union (2013). Agenda 2063: The Africa We Want. Available at: https://au.int/en/agenda2063/overview

Table 2. "Top Ten" most common Indicator domain groupings for each segment of the WASH system results chain

Rank	Inputs (n=63)	No*	Processes (n=63)	No*	Outputs (n=49)	No*	Outcomes (n=48)	No*	Impacts (n=29)	No*
1	Funding Financing External aid (6.a.1)	40	Planning, organization strategy, monitoring, review, learning	38	Service level, quality (access, available, safe)	26	National WASH coverage estimates (SDG 6.1, 6.2, 1.4)	33	Health (SDG 3.9.2)	13
2	Policy Legislation	36	Financial management Financial flow tracking Budgeting, spending rates	33	Infrastructure outputs (new construction, service expansion, rehabilitation)	16	Equitable and inclusive access to WASH services (disaggregated data)	13	Environment (SDG 15) Ecosystems (SDG 6.3.2, 6.6.1)	13
3	Institutions Institutional arrangements	32	Regulatory functions Accountability mechanisms Surveillance	24	Operational sustainability & efficiency *(nonrevenue water, operating cost recovery, energy efficiency)*	13	Public/ customer satisfaction with quality of service	7	Economic growth Livelihoods (SDG 8)	10
4	Regulatory framework Technical standards	23	Human resources management Capacity development, training Worker safety	23	Service affordability, social inclusion in service delivery	11	Level of water stress Increased supply, Reduction in future water demand (SDG 6.4.2)	6	Human Rights Universal access to basic services	6
5	Data and information	22	Technical management Asset management Operations, maintenance Service delivery	19	Regulatory compliance, monitoring and performance reporting	10	National and local WASH systems are strengthened	6	Nutrition and food security (SDG 2)	5
6	WASH workforce Human capital	22	Water resources management (SDG 6.5.1, 6.5.2)	18	Functionality (physical condition)	10	WASH systems are resilient to shocks and stresses - climate, conflict, emergencies	6	Gender equality (SDG 5) Social inclusion (SDG 10)	4
7	Gender, equity, social inclusion, disability affordability in policies	16	Coordination *(intersectoral, levels of government, multistakeholder)*	15	National proportion of domestic and industrial wastewater flows safely treated (SDG 6.3.1)	8	Water for economic growth, productivity, Water use efficiency improved (SDG 6.4.1)	6	Peace (SDG 16) International cooperation (SDG 17)	4
8	Participation policies and procedures (6.b.1)	14	Partnerships International cooperation Private sector participation	14	Environmental management Circular economy, reuse Pollution control GHG emissions	8	Political and social prioritization of WASH	5	Water security	4
9	Service delivery models; service provider frameworks	14	Participatory processes Stakeholder engagement Awareness and outreach	13	Increased water resources availability, water storage capacity, reduced demand	7	Affordability of services (population view)	4	Education (SDG 4)	3
10	Governance - general	14	Risk-informed management, climate adaptation actions, emergency planning/ training	12	Level of public/ local community participation	7	Increased investment Financial viability Creditworthiness	3	Human well-being (SDG 3)	3

**No.is defined as the sum total number of global, regional and country frameworks that include the 'indicator domain grouping' for the respective results chain segment.*

(ii) *resources:* funding and financing (40), data and information (22), human capital and workforce (22), government leadership and political will (10), water resources (7) as well as infrastructure assets (7). The ten most common Indicator domain groupings for each segment of the WASH system results chain for "inputs" are presented below in Table 2. The full results are presented in Annex B.

Some frameworks also specified topics that should be addressed within sector policies and frameworks such as *equity, social inclusion and affordability* (16); *participation and stakeholder engagement* (14); *service delivery models, service providers, and private sector participation* (14); *assessments of hazards and risks* (10); *anti-corruption* (3); and *environmental management* (1).

Additionally, some frameworks included areas not under the direct remit of government national monitoring systems (the focus of A2A) but that are also considered as 'inputs' to the WASH system. These indicator domain groupings include the *private sector, markets, technology, supply chains* (6), *innovation governance, eco-system, readiness* (4), *social norms and attitudes* (2) and *public goods* (1).

Processes. For the purposes of this assessment, processes are defined to be, ***"Actions taken or work performed by which inputs are converted into specific outputs."*** These indicator domain groupings typically capture the primary functions, processes and management activities of government, regulatory bodies, service authorities, and service providers.

Of the 82 frameworks assessed, 63 included process-level topic areas. The "top ten" most common indicator domain groupings for each segment of the WASH system results chain for "Processes" is presented above in Table 2. Management functions were among the top "indicator domain grouping" results for processes. These include planning, monitoring and review (38), financial management (33), regulatory functions (24), human resources management (23), technical management (19), water resources management (18), coordination (15), partnerships (14), participatory processes and stakeholder engagement (13), risk-informed management, climate adaptation actions, and emergency preparedness/training (12). *Innovation, technology and research and development* (12) were highlighted in the frameworks of the international financing institutions and those aligned with the SDG 6 Global Acceleration Framework, as well as in country frameworks with a focus on use and scaling up of innovations and technology, as well as research. Incorporating *equity considerations* into setting national targets, financing allocations, technical designs, tariff policies, and decision-making processes was highlighted in 11 frameworks. *Audits, corporate governance, management controls, and transparency and integrity in decision making processes* were cited in 10 frameworks. Several of the financing frameworks emphasized the importance of domains and sub-domains related to *infrastructure development* including project pipelines, investment development and procurement (9). Nearly half of the country frameworks included aspects related to *sector reform* ranging from revision of the Water Code (Senegal), new tariff policy (Burkina Faso) or implementation and uptake of reforms at decentralization levels of government (Zambia).

Outputs. For the purposes of this assessment, outputs are defined to be, ***"Events, products, capital goods or services that result from an intervention (e.g. process/activity)"***. These topics predominately reflect the performance of the service delivery (level and quality) as well as the extension of services to new people (users) or expansion of water supply production or water/wastewater treatment capacities.

The most common indicator domain area grouping is *Service level & quality (access, availability, continuity, quality, reliability)* which is included in 26 of the 49 frameworks with output domains. Similarly, eight frameworks include an indicator domain area for coverage of wastewater treatment, in most cases aligned with SDG indicator 6.3.1, *Proportion of domestic and industrial wastewater treated*. Utility benchmarking frameworks and some country frameworks typically include indicator domains related to *Operational sustainability and efficiency*, most notably indicators related to *non-revenue water* (NRW) and *cost recovery ratios* (13). Along similar lines, utility-

oriented frameworks also include metrics related to outputs from *Commercial operations/management performance* related to meter ratios, billing and collection, and customer service complaints resolved (6).

Infrastructure outputs (new construction, expansion of service, capital projects) was the second most frequently cited area (16) and is included by 9 out of 10 country frameworks. *Functionality* of WASH infrastructure is included in 10, or just over one-fifth of the frameworks with output-level indicator domains. On the water resources side, seven frameworks include an indicator domain grouping related to *Increased water resources availability, water storage capacity, reduced water demand*.

Regulatory compliance, monitoring and performance reporting are included as output-level indicator domains in 10 frameworks, primarily related to drinking-water quality, wastewater discharges and environmental regulations. Different aspects related to *Environmental management* are included by different frameworks across the results chain. At output level, eight frameworks include indicator domains related to *environmental management and sustainability* in areas such as circular economy/reuse, pollution control and remediation, and greenhouse gas emissions. Beyond the procedures and policies for participation, seven frameworks include indicator domains at output-level related to the actual '*Level of participation'* in WASH processes. Recent cycles of GLAAS country surveys have included a monitoring question on *Level of participation* that is used to complement SDG global reporting on indicator 6.b.1 which only covers the existence of policies and procedures for participation (input-level).

Outcomes. For the purposes of this assessment, outcomes are defined to be, "***Uptake, adoption or use of outputs by beneficiaries***." Overall, slightly over half global and regional frameworks cover 'outcome-level' of the results chain with only 39 out of 72 (54%) whereas all 10 country frameworks included outcome-level domains, often as policy objectives as part of their national targets.

By far the most common outcome level indicator domain and indicator are the SDG 6.1, 6.2(a) and 6.2(b) indicators that monitor national coverage estimates of drinking-water and sanitation and hygiene (33). Many of these frameworks include estimates for *WASH in institutions* (schools and health care facilities), whereas only two include *menstrual health and hygiene* (not part of current SDG reporting). Most frameworks are aligned with the WHO/UNICEF JMP definitions for water, sanitation and hygiene, with most using the "safely managed" service level, although some frameworks also monitor basic services and open defecation. In second position is a closely related indicator domain grouping that addresses *Equitable access to services* and its indicators are often measured from the same data as the national coverage estimates but disaggregated by rural vs. urban, wealth quintiles, geographic regions, among others. Outcome level indicator domains for *Affordability* and *Equitable sharing of water resources* were also included in this 'equity' grouping. The third ranked indicator domain grouping is *public/ customer satisfaction with services* (7) further reinforcing the 'population view' of the use of and perception of WASH services. Several composite indicators for stakeholder outreach and customer satisfaction were identified in country frameworks (Uganda) and some of the utility-oriented frameworks, as well as questions used by Afrobarometer as part of their population surveys.

Additionally, frameworks also included outcome-level indicator domains and indicators related to improved national situation perspective on water resources, typically linked to SDG target 6.4 *to substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity*. Six frameworks include indicator domains and/or indicators for water use efficiency (6.4.1) and level of water stress (6.4.2).

Outcome-level indicator domain groupings common across frameworks are also those related to *strengthened WASH systems* (6), *resilient WASH systems* (6), *improved financial viability, increased investment and creditworthiness* (3), and *sanitation market maturity* (1). *Increased political and social prioritization of WASH*

was included as an outcome-level domain in five frameworks. Beyond WASH systems, several frameworks cited indicator domains related to broader systems such as *systemic change* (2) *strengthened accountability and effective management of public services* (2), and *effective international cooperation and partnership* (1).

Impacts. For the purposes of this assessment, impacts are defined to be, "***Higher level long-term goals."*** Of all results chain links, "impact-level" domains were included in the fewest number of frameworks – only 29 overall (21 global and regional; 8 country frameworks).

Many of the frameworks with impact-level indicator domains reference objectives of the United Nations 2030 Agenda and its SDGs[9], while some of the frameworks from African countries also refer to the African Union Agenda 2063[10]. These indicator domain groupings include *Health* (13) and *Well-being* (3) covered by SDG 3; *Environment* (13) covered by SDG 15 and include also ambient water quality (SDG 6.3.2) and freshwater ecosystems (SDG 6.6.1); *Economic growth* (10) included in SDG 8; *Nutrition and food security* (5) covered in SDG 2; *gender equality and inclusion* (4) related to SDG 5; *Education* (3) covered by SDG 4; *Resilience including climate change adaptation* (3) related to SDG 13; *Ending extreme poverty* (2) covered by SDG 1; *Urban development* (1) covered by SDG 11; and finally, *Responsible production and consumption* (1) related to SDG 12. Several impact-level indicator groups related to various aspects of SDG 16 and 17: *Peace and international cooperation* (4); *Safety and freedom from violence* (2); and *Accountable, responsive and effective institutions* (1). *Sustainable development* 'in general' is included as an indicator domain area in two frameworks.

This outcome further reinforces that water and sanitation (SDG 6) is a "highly synergistic" SDG that has interlinkages and contributes to the achievement of many other sustainable development goals.[11] Additionally, *Human rights and universal access to basic services* is included in six frameworks, notably including South Africa where the human right to water is in the national Constitution.

Areas for further exploration

Health is not the only other sector to have developed a common framework and monitoring indicators for a "systems approach". As part of the desk review for this *Background Paper*, systems and indicator frameworks were identified for sustainable food systems[12], sustainable energy[13], and education[14] sectors. It was beyond the scope of this *Background Paper* to assess additional frameworks from other sectors; however, it could be valuable for Phase 2 to compare approaches and monitoring indicators for common areas such as financing, human resources/workforce, capacity development, regulation, etc. Additionally, the SDG indicator framework for the means of implementation indicators can also be a useful source for examples of indicators used by other sectors that could potentially be adapted for WASH systems. A rapid scan of the MoI indicators was included in the annex of the recent GLAAS assessment of the Means of Implementation for SDG 6[15].

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[9] United Nations General Assembly, *Transforming our world : the 2030 Agenda for Sustainable Development*, A/RES/70/1, adopted on 25 September 2015.

[10] African Union (2013). *Agenda 2063: The Africa We Want*. Available at: https://au.int/en/agenda2063/overview

[11] Independent Group of Scientists appointed by the Secretary-General, Global Sustainable Development Report 2023: Times of crisis, times of change: Science for accelerating transformations to sustainable development, (United Nations, New York, 2023) and UN-Water (2016). *Water and Sanitation Interlinkages across the 2030 Agenda for Sustainable Development*. Available at:

[12] FAO, Sustainable food systems: concept and framework. Available at: https://www.unwater.org/publications/water-and-sanitation-interlinkages-across-2030-agenda-sustainable-developmenthttps://openknowledge.fao.org/server/api/core/bitstreams/b620989c-407b-4caf-a152-f790f55fec71/content

[13] Energy Sector Management Assistance Program (ESMAP). 2022. Regulatory Indicators for Sustainable Energy (RISE). Washington, DC: World Bank.

[14] OECD (2021), Education at a Glance 2021: OECD Indicators, OECD Publishing, Paris, https://doi.org/10.1787/b35a14e5-en.

[15] Forthcoming (2025), GLAAS white paper.

Main findings and key considerations for A2A

1. **Frameworks include various combinations of sub-sectors within and beyond 'WASH'.** According to the JMP, WASH is defined as safe drinking-water, sanitation and hygiene. While 'WASH' frameworks accounted for the largest portion in the assessment, it was evident that key stakeholders, notably International Financial Institutions (IFIs) and governments, tend to use frameworks that are not aligned with 'WASH': in general, they do not address 'hygiene' and do address water resources management, multiple uses of water (e.g. industrial, agricultural), and in some cases freshwater eco-systems. This can be interpreted as a concrete demonstration of a greater integration between not only water resources management and WASH, but also linkages across the whole water cycle. Additionally, WASH in institutions were clearly mentioned in some frameworks and while not explicit in others. The assessment also noted observable variations between the content included in the sub-sector-specific frameworks (e.g., market-based sanitation (MBS), faecal sludge management (FSM), menstrual health and hygiene (MHH), WASH in health care facilities, etc.).
    - *Looking ahead to Phase 2*, it will be important for the A2A initiative to a) define the sub-sectors that will be included in the selection of the set of core indicators and b) decide how to address sub-sector specificities while maintaining a "slim" subset of core indicators for the WASH system will need to be considered during Phase 2.
2. **Outlier topics merit further consideration as possible gaps in current approaches and/or emerging issues.** As noted previously, the main limitation of this assessment in the context of A2A, is that it maps what is 'common' across frameworks which is central to improving alignment; however, reviewing what exists does not answer the broader question of *what should be monitored* in terms of what is most meaningful to monitor. Thus, in addition to noting the most common indicator domain groupings across frameworks, it is also interesting to note some of the less frequently cited areas also reflected across the framework in only one or two frameworks. Some of the frameworks newly released or still under development bring up new topics (e.g. Utility of the Future, WaterGov benchmark, Financing scorecards, SANEMAT, etc.). The assessment also identified innovative monitoring methods such as Uganda's customer satisfaction index.
    - For phase 2, 'outlier areas' could be given attention during Phase 2 to identify potential 'frontier issues' that could be further explored and developed as a forward-looking element of the core set of indicators. It is recommended to consider dedicating an indicator domain to potential frontier issues that could be further explored in Phase 2 and developed across future phases of A2A.
3. **Common WASH frameworks topics tend to be transversal across multiple parts of the results chain.** By assessing this set of frameworks across results chain, it is readily apparent that related topics are present in varying forms for multiple segments of the results chain. A concrete example is 'finance' which appears at input-level as "*funding, financing, external aid (6.a.1)";* at process-level as "*financial management, financial flow tracking, budgeting, spending rates*"; at output-level as *"financial performance"* and at outcome-level as "*increased investment, financial viability, and creditworthiness*." There is a similar 'transversal' pattern for topics related to human resources, regulation, participation, and service delivery among others.
    - *For the selection of indicator domains*, it is recommended to not to tie indicator domains to one segment in the results chains but rather group related domains (and sub-domains) appearing under different links in the results chain into thematic "***indicator domain families***" that span multiple segments. This approach will allow greater fluidity and during Phase 2 as well as consideration of potential candidate core indicators at different stages of the results chain.
4. **Cross-cutting topics inter-relate with other indicator domain groupings across the results chain.** Another pattern that emerged from the assessment is the presence of several topics under different segments of the results chain that inter-relate with other indicator domain groupings. One such case is "equity, gender

equality, disability and social inclusion" which appears at input-level interlinked with "policy", at process-level "finance allocations", at output-level as "service affordability, application of pro-poor measures and social inclusion in services"; at outcome-level "equitable and inclusive access to WASH services (population view)." A similar pattern is also observed for "risk and resilience". Human rights principles and approaches also underpin and interact with multiple indicator domain groupings across all segments of the results chain.

- *For the selection of indicator domains*, it is recommended to establish "gender, equity, disability, social inclusion, affordability and human rights" and "resilience and risk, including climate change" as two explicit "***cross-cutting areas***" which will be considered within each "indicator domain family" during the selection of potential candidate indicators.

2.2 GLAAS 2024 country survey: National Indicators - *preliminary results*

As part of the GLAAS 2024 country survey, a new set of questions about national WASH indicators were added to gather more in-depth information on current monitoring practices by countries. For reference, the GLAAS 2024 country survey question B2 is included in Annex C. Since the GLAAS 2024/2025 cycle is still in process, this section presents a preliminary analysis of the responses received as of 10 January 2025.

To date[16], 83 countries have responded to question B2a. Of these, 64 countries (77%) have defined national monitoring indicators to monitor progress of implementing the national WASH plan(s)/strategy(ies) (GLAAS B2a). Two-thirds of countries (67%) reported that they have less than 50 WASH monitoring indicators, 11% have between 51 and 75 indicators, and 22% have more than 75 indicators (GLAAS 2024 B2c). Sixty-four per cent of countries reported that they regularly monitor and review their national indicators and an additional 21% regularly monitor the indicators but are not included in review (GLAAS 2024 B2d). Fifty-five countries (86%) responded that subnational data is collected and consolidated at the national level (GLAAS 2024 B2e).

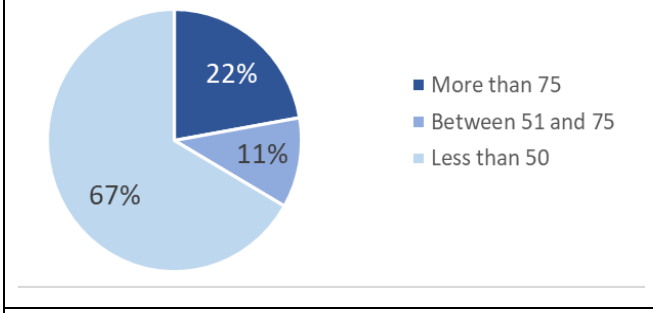


Figure 3a. Range of national WASH monitoring indicators to monitor WASH plans/ strategies *(GLAAS 2024 2c)*

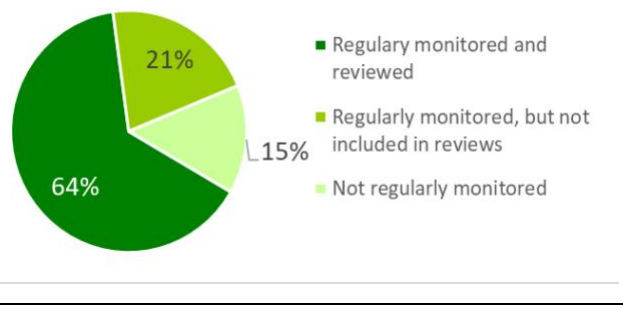


Figure 3b. Countries with processes to regularly monitor indicators and include results in reviews *(GLAAS 2024 2d)*

For the countries that reported having defined national monitoring indicators in question B2a (*n*=64), a follow-up question (B2.b) requested more detailed information about these indicators. GLAAS survey question B2b is structured around same results chain for the WASH system used in the assessment of WASH frameworks presented above in Figure 1 (see Annex C for details).

It requests additional information for 16 indicator domains and asks countries to provide the main indicators from their WASH plans/ strategies.

- Inputs: (i) governance, (ii) finance, (iii) human resources, (iv) infrastructure, (v) regulation;
- Process/activity: (vi) service planning, (vii) surveillance, (viii) community participation;
- Outputs: (ix) service delivery, (x) service quality, (xi) affordability;

[16] As of 10 January 2025

- Outcomes: (xii) service coverage, (xiii) equity; and
- Impact: (xiv) health impacts, (xv) environmental impacts, (xvi) economic impact.

If national monitoring indicators exist for more than one WASH plan/strategy, countries were asked to provide information on indicators across all plans/strategies. Figure 4, below, presents the number of countries that reported having indicators that are "*agreed and tracked against established baseline data*" for each indicator domain.

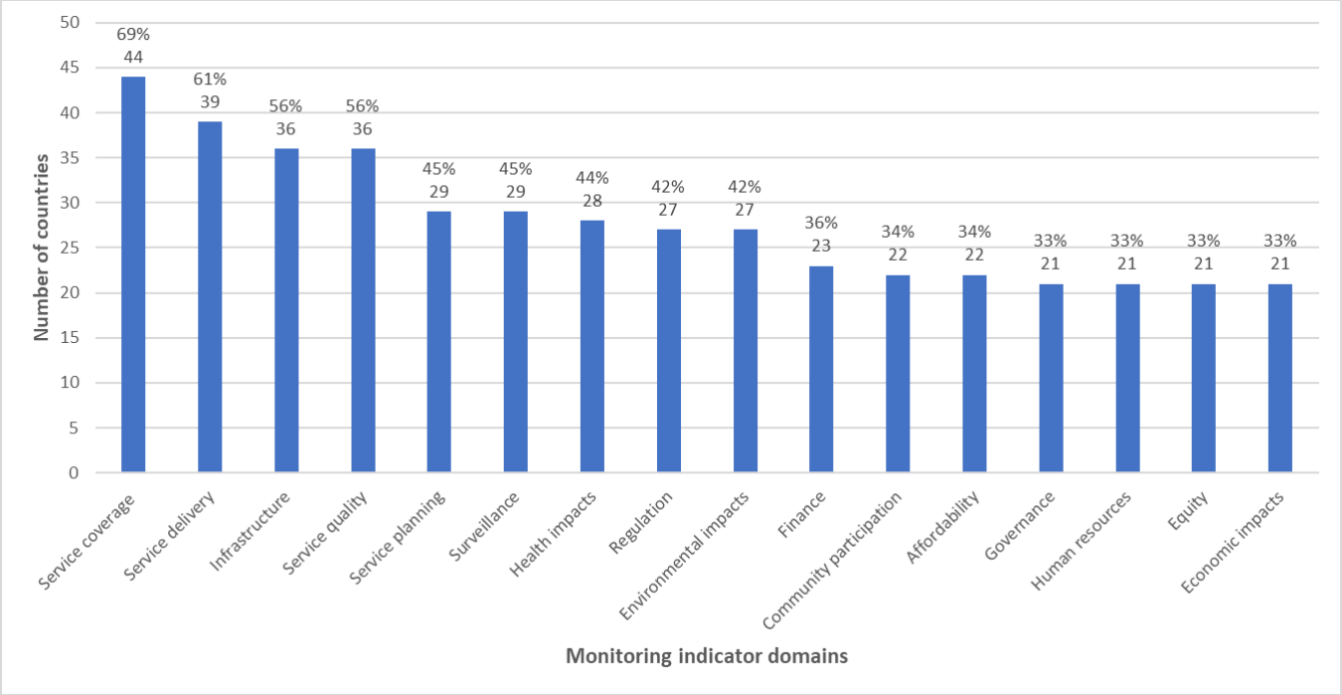


Figure 4. Number of countries that have defined national monitoring indicators to monitor progress of the national WASH plan(s)/ strategy(ies) [n=64], where national monitoring indicators are agreed and tracked against baseline data (GLAAS 2024 B2b)

Across the results chain, the indicator domains with the greatest numbers of countries that report having agreed monitoring indicators that are tracked against baseline data are service coverage (44), service delivery (39), service quality (36), and infrastructure indicators (36). The indicator domains with the fewest country responses (21) are governance, human resources, equity and economic impacts, followed closely from community participation (22), affordability (22), and finance (23).

As this is the first time this question has been included in a GLAAS country survey, there is some variation in understanding of the indicator domain topics, so there is some limitation to further quantitative analysis. For the purposes of A2A, it is more informative to examine the qualitative responses provided by countries. This subsection will discuss the results for the 16 indicator domains, including some highlights about the responses from countries. The complete, unedited and untranslated preliminary data set of country responses for each indicator domain are provided in Annex D.

Input indicators

For input indicators, the preliminary results from the GLAAS 2024 country survey questions for the five 'Input' indicator domains (B2.b.(i) to (v)) are presented below in Table 3.

Table 3. Inputs: Number of countries with national monitoring indicators for five indicator domains (*n*=64)

GLAAS 2024 Survey question	Indicator Domain	Agreed, tracked against baseline data	Agreed and baseline data established	Being developed or agreed and not implemented	No such indicators	No answer
B2.b.i	Governance indicators	21	14	8	17	4
B2.b.ii.1	Finance indicators	23	10	11	16	4
B2.b.iii.1	Human resources indicators	21	7	12	20	4
B2.b.iv.1	Infrastructure indicators	36	7	6	15	0
B2.b.v.1	Regulation indicators	27	8	9	17	3

Governance. Out of 43 countries reporting having 'governance' indicators defined or being developed, under half (49%) report that they track progress against baseline data. Over 30 countries shared their national monitoring indicators for 'governance'. Common types of governance indicators reported by countries include the following:

- **Legal frameworks and policies.** Common country responses include indicators to monitor progress related to the development, approval, revision and/or implementation of new legal and institutional frameworks, sector reforms, policies, strategies, plans, as well as the creation of new national institutions.
- **Sub-national and local authorities.** Several countries shared indicators that track the number of sub-national or local service authorities and/or service providers that are established, legalised, have plans and procedures, and/or are operational.
- **Coordination.** The existence of a functional coordination mechanism, sectoral and inter-sectoral political dialogues, as well as the number of meetings, are being tracked by countries across geographic regions.
- **Corporate governance and audit.** A couple of countries shared indicators that relate to corporate governance compliance and conformity of audit reports.
- **Community Participation policy and procedures.** A few country responses included SDG indicator 6.b.1, "Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management," or similar indicators related to public participation.
- **Other areas.** Countries also shared indicators related to other indicator domains including for 'Finance': accumulated budget deficit, tracking tariff levels, unit operating costs, budget execution rate.

Finance. In total, 44 countries reported having 'finance' indicators that have been agreed or are being developed, with 52% reporting that they track progress against baseline data. Nearly 40 countries shared national monitoring indicators for 'finance'. There are a wide range of indicators, but a few common types of indicators are the following:

- **Availability of budget, financing plan.** Availability of an annual workplan and budget, medium plan (5 yrs), multi-year investment plan. Forecast of financial resources to achieve targets.
- **Budget allocations and expenditure rate.** Percentage of government budget allocated to WASH, rate of increase per year (to target level); Increased domestic financing for WASH – 0.5% of the GDP; Proportion of budget allocated and spent by sub-sector; Financial contribution of sectors engaged in WASH; WASH in Health sector plans and budgets.
- **External aid.** Official development assistance, part of government spending plan – SDG 6.a.1; Implementation of foreign loans & grants.

- **Cost recovery/coverage of expenses.** Coverage of total expenses; coverage of operating costs (Operating income/Annual operating cost).
- **Level of debt.** Indebtedness; Percentage of units facing financial crisis.
- **Audits and financial reporting.** Financial audits - frequency, level of implementation of recommendations, review & follow-up; Publication of financial reports.

Human resources. Forty countries reported having 'human resources' indicators defined or being developed. Of these, a total of 34 countries provided examples of 'human resources' indicators:

- **Assessment of HR needs.** Assessment of HR needs completed.
- **Capacity development, training, and certification.** Staffing and capacity building plan agreed; Level of implementation of capacity development plan; Number of service providers participating in operator certification programme, percentage of operators certified.
- **Staffing level and qualifications.** Quantity of workers/1000 connections; Increase human resources up to 75% in the country; Numbers of qualified staff.
- **HR management and diversity.** Proficiency of staff reported in performance evaluations; Proportion of young workers in WASH institutions; Contract stability; Women's participation rate in leadership positions.

Infrastructure. A total of 49 countries reported having infrastructure indicators agreed or being developed, with nearly three-quarters (73%) reporting that progress is tracked against baseline data. This is the highest among the "input-level" indicator domains. Forty-five countries shared monitoring indicators related to 'infrastructure', some of the common topics include the following:

- **Infrastructure works.** The most common indicators measure progress on the construction or rehabilitation of water and sanitation infrastructure projects, including construction of new boreholes, piped water supply networks and sewerage collection systems, national laboratories and treatment facilities, as well as WASH facilities in schools and health care facilities and progress on separation of sewers and stormwater. One country shared an indicator that tracks the percentage of infrastructure works meeting national standards for infrastructure resistant to climate hazards. Others are tracking total number of infrastructures works completed according to national plans.
- **Asset inventory and condition assessments.** Several countries reported indicators that count the total number of assets, updated inventories of infrastructure, efficiency in asset management, and status of the condition of infrastructure.
- **Plans and reports.** Countries included indicators that reference the development and implementation of national and district plans for water and sanitation infrastructure construction and management, for example, '5-year water and sanitation reliability plans'. Another country is tracking the public disclosure of data.
- **New connections.** Several countries are tracking the number of new connections to piped water supply and sewerage systems, as well as degree of metering.
- **Functionality/failure rate.** A common indicator across many countries is the level of functionality, failure rate, and the associated impacts such as number of service disruptions, length of pipeline affected, number of customers affected.
- **Water loss/leakage.** A few countries reported indicators that monitor water loss and leakage, as well as non-revenue water rates.
- **Maintenance.** Indicators were shared that monitor repairs and metrics, such as increase in 'maintenance coverage ratio.'
- Additionally, countries reported on water and sanitation service coverage levels. An indicator on the 'sustainable management of wetlands' was reported by one country.

Regulation. Forty-four countries reported having infrastructure indicators agreed or being developed, with 27 reporting that progress is tracked against baseline data. Thirty-nine countries shared indicators for 'regulation'. Some of the common topics are below:

- **Regulatory frameworks, regulations and standards.** More than a few countries shared indicators that measure the development, approval and implementation of regulatory frameworks and/or related regulations, standards or guidance for water and sanitation. Some examples include Number of laws, decrees, norms and directives drafted and validated; Regulations and standards "gazetted"; Evidence of regulatory framework; WASH regulations are developed and implemented; Number of districts implementing; Updates and amendments made to water code and laws; Subordinate legislation (rules/ regulations) developed and submitted; Establish legal basis for water safety plans (law drafted, adopted, implemented).
- **Regulatory compliance.** Examples of indicators that address compliance include: Percentage of services compliant with regulatory standards, number of inspections performed, compliance monitoring; Compliance to environmental impact assessment procedures (EIA) requirements; Proportion of compliant business premises.
- **Regulatory enforcement and effectiveness.** Enforcement of laws and regulations; Numerous regulatory violations and sanctions, average time to resolve non-conformities.
- **Regulatory updates, review and reporting.** Establish performance monitoring and annual strategic reviews; Frequency of regulatory updates; Stakeholder participation in regulatory review.
- Additional topics that relate to other indicator domains include status of audited accounts, tariffs, use of data in the development of standards, codes and regulations.

Table 4. Inputs: Examples of national monitoring indicators reported by countries

Indicator Domain	Examples of indicators reported by countries
Governance indicators	• Legal Framework Gazetted • Number of sector plans, policies strategies, developed, approved and implemented • One water supply and sanitation section/unit is established in each provincial Department/district Office of Public Works and Transport countrywide • Political support obtained and maintained (Presidential decree on improving WASH in public institutions) • Nombre de réunions de coordination nationale intersectorielle réalisées
Finance indicators	• Percentage of Government Budget allocated to WASH • Increased domestic financing for WASH form 0.5% of the GDP • Percentage of the WASH budget execution rate • Coverage of operating costs. It is calculated as annual Operating Income / Annual Operating Cost (%) • Percentage of service units facing financial crisis (level 7 not exceeding 6%) • Forecast of financial resources to achieve targets • Fréquence des Audits Financiers; Réactivité aux Recommandations d'Audit
Human resources indicators	• Quantity of workers/1000 connections • Number of service providers participating in operator certification programme, percentage of operators certified • Staff productivity index • Women's participation rate in leadership positions • Efficiency in Human Resources Management (%); Extent of Gender Mainstreaming (%); Health Workforce per 10,000 Population (#)

Infrastructure indicators	• The construction of the regional Drinking Water Supply System (DWSS) as planned in the National Mid-Term Planning (RPJMN) 2020-2024 are achieved • No of water treatment plants are rehabilitated/constructed; No. of Wastewater treatment systems are constructed • Number of projects completed per district per year • Pourcentage d'infrastructures nouvelles suivant les Directives nationales pour la construction des infra resistants aux aleas climatiques" • Increased functionality of WASH infrastructure in communities and institutions • Porcentaje de nuevas conexiones a redes de agua potable en menos de 30 días en todo el país. Conexiones de saneamiento. • Increase in Maintenance Ratio • Efficiency in Asset Management (%)
Regulation indicators	• Regulatory Compliance Indicators: Percentage of services compliant with regulatory standards, number of inspections performed • Regulatory Effectiveness Indicators: Numerous regulatory violations and sanctions, average time to resolve non-conformities • Regulatory Update Indicators: Frequency of regulatory updates, stakeholder participation in regulatory review • WASH regulations are developed and implemented; number of districts implementing • Establish legal basis for water safety plans (law drafted, adopted, implemented) • Reduce water losses by enforcing laws and regulations against unauthorized use of public networks

'Process/activity-level' indicator domains

The GLAAS 2024 country survey included questions for three 'process' indicator domains (B2.b.(vi) to (viii)) which are presented below in Table 5.

Table 5. Process: Number of countries with national monitoring indicators for three indicator domains (*n*=64)

GLAAS 2024 Survey question	Indicator Domain	Agreed, tracked against baseline data	Agreed and baseline data established	Being developed or agreed and not implemented	No such indicators	No answer
B2.b.vi.1	Service planning indicators	29	12	3	17	3
B2.b.vii.1	Surveillance indicators	29	8	5	18	4
B2.b.viii.1	Community participation indicators	22	9	5	22	6

Service planning. A total of 44 countries reported having 'service planning' indicators defined or being developed. Of these a total of 39 countries provided examples of their 'service planning indicators, most of which can be grouped into two main categories:

- **Plans and Planning tools.** Numerous countries provided indicators related to the number of national and sub-national WASH plans that have been developed and/or approved, while others shared references for the current version of their plan. Several countries have indicators that track the inclusion of WASH in the plans of the education and health sectors nationally and at facility-level (schools and HCFs). One country provided its planned cycle: "3-year rolling corporate planning is developed, implemented, then reviewed and revised every year." Another country is monitoring "Percentage Increase in the use of standard WASH planning tools."

- **Planning targets and indicators.** A significant number of responding countries shared the targets and indicators in their plans. They capture a wide range of national planning targets that include infrastructure to be constructed/rehabilitated/maintained, reduction of leakage and non-revenue water, service coverage, number of feasibility studies and procurement processes completed, number of districts with water and sanitation reliability plans, as well as targets for compliance.

Surveillance. Forty-two countries have defined or are in the process of developing 'surveillance' indicators with nearly 70% tracking progress against baseline data. Thirty-seven countries provided 'surveillance' indicators. There is a strong focus on surveillance of the quality of drinking-water and wastewater effluent. Some of the common topics include:

- **Data, monitoring, inspections and reports.** These indicators track the number of monitoring missions, inspections, assessments, audits and evaluations undertaken, as well as the availability and frequency of the publication of reports. Some of the indicators also track the collection of data.
- **Level of compliance.** Numerous indicators track the number of samples, entities or administrative units that are in compliance with different regulations and standards, or other legal requirements.
- **Water quality control.** A few countries included indicators that monitor the quality of water for specific technical parameters, for example for drinking-water: residual chlorine, turbidity, microbial, chemical.
- **Problem response.** A few countries track the response time to reports of contamination or malfunction, and issues resolved.

Community participation. In total 36 countries have defined or are in the process of developing 'community participation' indicators. Thirty-three countries shared 'community participation' indicators, which reflect different interpretations of what is meant by "community participation," and its objectives. Some of the common topics are summarized below:

- **SDG indicator 6.b.1.** Several countries have aligned national monitoring indicator with SDG indicator 6.b.1, "Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management." Several countries provided links or the specific codes where these policies and procedures are found.
- **Public consultation and involvement.** The number of coordination meetings and consultations during the planning and involvement in decision-making processes for new projects is another common type of indicator reported by countries. One country is tracking compliance with requirements for participation in environmental impact assessment procedures (EIAs).
- **Community/user committees and local management.** More than a few countries have indicators that monitor the number of water or user committees that have been formed, trained and that are active in performing roles related to the local management of WASH-related services and hygiene promotion. In addition to WASH, several countries include activities related to water resources management and specifically mention protection of watersheds. A few countries refer to participation or involvement of communities in the implementation of new projects.
- **Public awareness and education.** A few countries included indicators that monitor the frequency of actions related to awareness campaigns, educational workshops and seminars, notifications in cases of emergencies. Some of the outreach methods being tracked are door-to-door, social media and community level.
- **Customer complaints, feedback, and satisfaction.** As part of this indicator domain, several countries shared indicators related to the number of complaints received per 1000 accounts, response rates to complaints, number of complaints resolved, satisfaction in response to customer complaints, as well as service disruptions to customers. One country shared an indicator for an annual public meeting called "Listening to our customers." A couple countries mentioned community accountability and consumer protection.

- Additional topics mentioned by countries include private sector participation, as well as indicators for service coverage.

Table 6. Processes/Activities: Examples of national monitoring indicators reported by countries

Indicator Domain	Examples of indicators reported by countries
Service planning indicators	• Evidence of national development plan; availability of ministerial Implementation plans • Percentage increase in the use of standard WASH planning tools • WASH in schools plans and budgets in school improvement plans • WASH in HCF in health system and facility improvement/management plans • Capital project plans: km of water/sewer network newly built and renovated, Capacity of newly built or expanded treatment plants (m3/day); Number of water kiosks maintained • Planning service coverage targets: Services shall reach all community members, recognizing different needs (equity), reduction in losses in water supply, percent reduction open defecation, hydraulic resources per capita, aqueduct provision, clearing cycle, pit cleaning cycle, proportion of flood sites resolved
Surveillance indicators	• Compliance rate of residual chlorine, turbidity, microbial and chemical quality • Frequency of water and service quality checks, number of samples tested • Response time to reports of contamination or malfunction, percentage of problems resolved • Availability and clarity of surveillance reports, frequency of published reports • Assessment of direct water quality, review of the result of the water quality monitoring and water safety plan audit and annual report • The number of village water supply systems that have undergone water quality inspection • Percentage increase in the frequency of surveillance activities for water quality
Community participation indicators	• Efficiency in satisfactory response/reaction to customer complaints (%) • Awareness and educational workshops and seminars are conducted to inform and educate the community, and to notify them in case of any emergency • Number of communities actively engaged and participating in planning, implementation and monitoring of WASH services • Village-level water managers responsible for the day-to-day management and maintenance of water supply facilities in villages • Number of village Health and Water Committees in place

'Output-level' indicator domains

The GLAAS 2024 country survey included questions for three 'output' indicator domains (B2.b.(ix) to (xi)) are presented below in Table 7.

Table 7. Outputs: Number of countries with national monitoring indicators for three indicator domains (*n*=64)

GLAAS 2024 Survey question	Indicator Domain	Agreed, tracked against baseline data	Agreed and baseline data established	Being developed or agreed and not implemented	No such indicators	No answer
B2.b.ix.1	Service delivery indicators	39	9	3	10	3
B2.b.x.1	Service quality indicators	36	12	6	9	1
B2.b.xii.1	Affordability indicators	22	7	4	26	5

Service delivery. In total, 51 out of 64 countries with defined national monitoring indicators (80%) have defined or are in the process of developing 'service delivery' indicators. Of these 39 countries track progress against baseline data, which is the second highest among the 16 indicator domains. Fifty countries provided a diverse array of 'service delivery' indicators. Some of the common topics include:

- **Continuity, accessibility, availability, quality.** Countries reported indicators such as hours of service, water delivered at premises, water supply per capita, water quality compliance, number of water connections, metering ratio and service disruptions.
- **Wastewater treatment**. Several countries specifically mentioned SDG indicator 6.3.1 *Proportion of domestic and industrial wastewater flows safely treated*. Other indicators were related to untreated discharges, treatment of sludge.
- **Coverage.** A significant number of countries have aligned monitoring indicators with 6.1.1 *Proportion of population using safely managed drinking water services* and 6.2.1 *Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water*.
- **Water losses, leakage and nonrevenue water.** More than a few countries provided indicators related to non-revenue water, reduction of leakage, and water losses in the network.
- **Water use and abstraction.** Total water used (million m3) and quantity of water abstracted for drinking water.
- **New construction and connections.** Indicators such as new boreholes, new latrines, length of extension of piped networks, number of new household connections, number of new persons served. One country also included an indicator for construction of new dams and exploratory wells to increase raw water supply.
- **Customer satisfaction and complaints**. A couple countries provided indicators related to number of customer complaints, response time to resolve problems, customer satisfaction levels, call centre operations. Public awareness, training and outreach indicators were also reported.
- **KPIs and performance index.** A few countries shared a set of "key performance indicators" and others have developed composite "index" indicators. One country mentioned an approach attributing ratings to schools and health care facilities based on a set of performance indicators (e.g. number of stars).
- **Monitoring missions and technical reports.** Several countries shared indicators related to number of monitoring missions and approved technical reports.
- Additional areas include solid waste collection, staff performance evaluations, maintenance of stormwater canals, improved affordability, and number of NGOs.

Service quality. In total 54 out of 64 countries with defined national monitoring indicators (84%) have defined or are in the process of developing 'service quality' indicators. Forty-nine countries provided 'service quality' indicators. Some of the common topics include:

- **Water quality.** A significant portion of the responses by countries provide indicators related to 'water quality' for both drinking-water, wastewater effluent, and natural water bodies (e.g. lakes, rivers). These include

number of water quality tests, monitoring frequency and compliance rates (generally and for specific water quality parameters), and completion of a national drinking-water quality survey. One country reported a "water quality risk index" composite indicator for rural and urban areas.

- **Technical quality and functionality of infrastructure.** Indicators included processes such as "technical quality regulation" and number of monitoring/oversight missions as well as specific indicators such as system pressure inadequacy ratio, service disruptions, functionality, irregularities, rationing of water, water losses, burst pipes and faults on pipes.
- **Similar/same 'Service delivery indicators' repeated.** Many of the other responses report indicators for 'service quality' that are similar and, in some cases, identical to the responses for 'service delivery'. These include service continuity, non-revenue water, customer satisfaction and complaints, service coverage, performance indexes, and public awareness. This likely reflects that the distinction between service delivery vs. service quality indicator domains was not clear to countries (a point to note for further consideration in Section 5).
- Additional areas mentioned include capacity building of local entities for roles in improved sanitation goods and services, and remediation of pollution sources from the hydrocarbon industry.

Affordability. Far fewer countries reported monitoring 'affordability' indicators. Just over half (33) of the countries with national monitoring indicators have defined or are in the process of developing indicators for 'affordability'. Twenty-nine countries shared 'affordability indicators'; however, only a few provide details on how the indicator is defined or calculated. Several common approaches to 'affordability indicators' are the following:

- **Affordable services policy objective.** A few countries provided indicators such as 'All communities include vulnerable people can access WASH;' 'Water prices are affordable for rural residents and generally do not exceed five per cent of disposable household income;' and 'the payment for water supply and sanitation services does not present a barrier to access or prevent people from meeting other basic human needs.'
- **Household expenditure.** Countries shared indicators used to measure and track the affordability of household expenditures on water and sanitation relative to household income. Some examples include 'Cost of the service/minimum family income', 'Monthly water bill of poor consumers is less than 3-5% of their monthly income (minimum wage of 2 persons)'; and 'Water prices are affordable for rural residents and generally do not exceed 5 per cent of disposable household income.'
- **Subsidies.** One country has an indicator that tracks the allocation of a cross-subsidy from an eco-tax to the WASH sector, another indicated that ministries are responsible for bearing most of the costs for water.
- **Tariff collection.** One country shared an indicator that measures the 'average number of debtor days' and a collection index.
- **Cost recovery.** Indicators related to cost recovery are 'unit cost of operation and average tariff rate' and 100% of regional water utilities already operating at full cost recovery by 2024.
- Other areas reported by countries for survey question B2.b.xii include payment of staff, monitoring reports and service coverage.

Table 8. Outputs: Examples of national monitoring indicators reported by countries

Indicator Domain	Examples of indicators reported by countries
Service delivery indicators	• Non-revenue water; losses in the network (m3) • Hours of supply, Continuity of service, Customer care • New construction - boreholes, dams, latrines with HW facilities, supply wells rehabilitated • Total water used (million m3), quantity of abstracted water for DWS • WASH in schools - star ratings on access to drinking-water; Access to gender-segregated toilets; Access to group handwashing facilities; Conduct of daily group handwashing; Availability of sanitary pads
Service quality indicators	• Percentage of drinking-water quality analyses meeting the norm • Frequency of drinking-water quality control; number of routine WQ tests conducted • Conduct of national water quality survey • SDG 6.3.1 Proportion of domestic and industrial wastewater flows safely treated • Proportion of wastewater effluent samples that do not meet standards • Compliance with construction standards • Functionality rate of infrastructure; faults on pipes • Non-revenue water; total linear water losses (m3 lost per km per day) • Rationing of domestic water supply for part or all of municipality
Affordability indicators	• Percentage of the population with ability to access WASH services with minimal financial constraints • Water prices are affordable for rural residents and generally do not exceed five per cent of disposable household income • Cost of service / min. family income • Monthly water bill of poor consumers is less than 3-5% of their monthly income (minimum wage of 2 persons) • Availability of stepped tariffs (%) • 100% of regional water utilities already operating at full cost recovery by 2024

'Outcome-level' indicator domains

The GLAAS 2024 country survey included questions for two 'outcome' indicator domains (B2.b.(xii) to (xiii)) which are presented below in Table 9.

Table 9. Outcomes: Number of countries with national monitoring indicators for two indicator domains (*n*=64)

GLAAS 2024 Survey question	Indicator Domain	Agreed, tracked against baseline data	Agreed and baseline data established	Being developed or agreed and not implemented	No such indicators	No answer
B2.b.xii.1	Service coverage indicators	44	11	4	2	3
B2.b.xiii.1	Equity indicators	21	6	7	21	9

Service coverage. In total, 59 out of 64 countries with defined national monitoring indicators (92%) have defined or are in the process of developing 'service coverage' indicators. Of these, 44 countries track progress against baseline data, which is the highest among the 16 indicator domains. Fifty-three countries provided a diverse array of 'service coverage' indicators. Some of the common topics include:

- **Water supply and sanitation coverage.** The most common indicators reported by countries for 'service coverage' include the percentage or number of people served with water supply and sewerage, for example number of people or households connected to public water and sewerage systems as well as coverage with wastewater treatment. One country shared an indicator that tracks the number of municipalities and respective resident populations without access to public services. A few countries disaggregated their 'service coverage' indicators by rural and urban contexts.
- **SDG indicators 6.1.1 and 6.2.1.** A significant number of countries have aligned their national monitoring indicators for 'service coverage' with SDG indicators 6.1.1 *Proportion of population using safely managed drinking water services* and 6.2.1 *Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water*. These indicators monitor the proportion of the population using the services. Some countries have indicators that are formulated with other JMP defined terms such as "improved" water sources or sanitation facilities and "basic services".
- **Water resources coverage.** Two countries shared water resources management-related indicators, "Percentage of water resources monitoring network fully operational," another "Percentage of rivers, drainage canals and stormwater drains regularly cleaned."
- **New people with access.** One country provided an indicator that tracks the number of "New people with access to adequate drinking-water solutions; New people with access to adequate wastewater management solutions."
- Additional indicators reported by countries include the reduction in water losses, hygiene practices, compliance with regulations, and status of infrastructure inventories.

Equity. Thirty-four countries reported that they have defined or are in the process of developing 'equity' indicators. Of these, 21 countries reported that they track progress against baseline data, which is the among the lowest of the 16 indicator domains. Thirty-two countries provided 'equity' indicators. Some of the common topics include:

- **Policy objectives and measures.** Examples include "Ensuring full coverage of safe drinking-water provision for all," and "Services are available to everyone without discrimination or bias." One country emphasized the enforcement of equity measures embedded in national water and sanitation norms and standards.
- **Data disaggregation.** Several countries presented indicators that disaggregate coverage by urban/rural, education level, wealth quintile/economic status, persons with disabilities, and other vulnerable populations.
- **Gender equality.** More than a few countries included indicators specific to measures to ensure gender equality including women's participation in decision-making processes, separation of toilets in schools and public places, and capacity building.
- **Tariff structure.** A couple countries mentioned equitable tariff structures and availability of stepped tariffs.
- Additionally, several countries provided weblinks to specific policy documents or regulations with references to equity measures and other considerations. Other indicator areas shared by countries include service coverage, SDG 6.1.1 and SDG 6.2.1, complaints, leakage rates, and cross-subsidies.

Table 10. Outcomes: Examples of national monitoring indicators reported by countries

Indicator Domain	Examples of indicators reported by countries
Service coverage indicators	• 6.1.1 Proportion of population using safely managed drinking water services • 6.2.1 Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water • % of the population supplied with safe/controlled drinking-water; % of population connection to public water supply systems; % of population connected to sewage systems and wastewater treatment plants; % reduction in losses in the water supply system • Number of inhabitants served / total number of inhabitants served / total number of inhabitants in the area • Municipalities without public services and relative resident population (public water supply, sewerage, urban wastewater treatment)
Equity indicators	• Equity imbedded within the Water and Sanitation Norms and Standards which will be enforced from 2025 • Percentage of the population with access to improved WASH facilities in urban and rural, education level and economic status • Proportion of the population in the last quintile of monthly expenditure per household with a) drinking-water service through a network or public source; b) access to sewage service or excreta disposal. • Extent of gender, people living with disabilities, orphaned and vulnerable children mainstreaming (%) • Percentages of people living with disabilities with access to improved usable and accessible latrines within their households • The participation of women and men in the water committee structures is guaranteed for the efficient administration of water and sanitation systems

'Impact-level' indicator domains

The GLAAS 2024 country survey included questions for three 'impact' indicator domains (B2.b.(xiv) to (xvi)) which are presented below in Table 11.

Table 11. Impacts: Number of countries with national monitoring indicators for three indicator domains (*n*=64)

GLAAS 2024 Survey question	Indicator Domain	Agreed, tracked against baseline data	Agreed and baseline data established	Being developed or agreed and not implemented	No such indicators	No answer
B2.b.xiv.1	Health impacts indicators	28	9	6	17	4
B2.b.xv.1	Environmental impacts indicators	27	9	6	18	4
B2.b.xvi.1	Economic impacts indicators	21	6	2	28	7

Health impacts. In total, 43 countries reported that they have defined or are in the process of developing 'health impact' indicators. Of these, 28 countries reported that they track progress against baseline data. Thirty-six countries provided 'health impact' indicators. Some of the common topics include:

- **Burden of disease attributable to unsafe WASH.** Most of the country responses provided indicators related to the burden of disease and mortality from unsafe WASH. The burden of disease linked to unsafe WASH for

diarrhoea, acute respiratory infections, soil-transmitted helminth infections and undernutrition is monitored by SDG indicator 3.9.2. Other diseases mentioned by countries include cholera, dysentery, hepatitis, stunting, malaria, dengue, and bovine measles. Infant mortality rates were also included by a few countries. Several countries referred to a reduction in "disease outbreaks".

- **Water safety and quality.** Several countries reported indicators related to drinking-water quality as well as wastewater effluent (6.3.1) and ambient water quality (6.3.2). Two countries referred to measures to control pollution from wastewater, including from hospitals and industrial sources. One country has an indicator that monitors that water safety plans are developed, implemented, then reviewed and revised regularly.
- **Policy and regulations.** A couple countries shared policy objectives for health including, "No one should get sick from drinking the water," or links and/or references to national health plans or other related policy documents. One country referred to regulations that protect the health of users/consumers and workers.
- **Water and Health Protocol.** One country reported that they monitor all indicators defined within their national targets in accordance with Article 6 of the Protocol Water and Health.[17]
- **Coverage of WASH services.** Several countries provided their WASH service coverage indicators. Coverage of WASH facilities in health care facilities was specifically mentioned by several countries.
- Additionally, countries shared indicators that track health expenditures and a composite health status index.

Environmental impacts. In total, 42 countries reported that they have defined or are in the process of developing 'environmental impact' indicators. Of these, 27 countries reported that they track progress against baseline data. Thirty-four countries provided 'environmental impact' indicators. Some of the common topics include:

- **Water resources and freshwater eco-systems.** Many countries shared indicators related to ambient water quality. A significant number of countries have aligned their national monitoring indicators for 'environmental impact' with SDG indicators 6.3.2 *Proportion of bodies of water with good ambient water quality* and SDG 6.6.1 *Change in the extent of water-related ecosystems over time*. Several countries also shared indicators related to watershed management, water storage capacity, flooding and stormwater drainage.
- **Pollution.** Indicators related to the wastewater treatment and effluent standards were shared by more than a few countries. Several countries specifically mentioned SDG indicator 6.3.1 *Proportion of domestic and industrial wastewater flows safely treated*. One country shared an indicator that tracks the proportion of the population exposed to pollution. A couple countries provided indicators on reducing open defecation. One country shared an indicator on carbon emissions.
- **Environmental assessments and impacts of WASH**. Countries shared similar indicators related to the reduction in adverse environmental impacts due to improved WASH resources management and WASH infrastructure. Several also provided indicators like '*Number of Environmental Impact Assessment (EIAs) completed*.'
- One country specifically referred to monitoring indicators in the defined targets of Article 6 of the WHO/UNECE Water and Health Protocol.[18]
- Additional indicators shared by countries include improving the sanitation conditions of the population, manual desludging of latrines, waste recovery rate (circularity).

Economic impacts. Only 29 countries out of 64 countries with defined national monitoring indicators (45%) have defined or are in the process of developing 'economic impact' indicators. Of these, 21 countries reported that

[17] Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes. Available at https://www.who.int/europe/initiatives/protocol-on-water-and-health
[18] Ibid.

they track progress against baseline data. Twenty-two countries provided 'economic impact' indicators. Some of the common topics include:

- **Economic return on investment.** A few countries shared indicators on monitoring the economic returns on investment in WASH, economic internal rate of return, profitability of assets.
- **Contribution to GDP.** A couple countries are monitoring the WASH contribution to Gross Domestic Product. One country shared an indicator to monitor the percentage of health expenditure is relative to the GDP.
- **Economic improvements and poverty reduction.** A range of indicators were shared by countries including improved incomes, reduced health expenditures, increased labour productivity and employment rate, consumer price index, poverty income consumption and expenditure, poverty datum line, enhanced educational outcomes and general improved living conditions of the population.
- **Cost recovery, tariff collection and reducing losses.** More than a few countries provided indicators related to the percentage of WASH costs covered by revenues, level of water invoicing (%), billing collection rate for water tariffs, number of months in default on bill payments, and reduction of water losses in the system (non-revenue water).
- Countries also shared indicators for affordability (average service cost/average revenue) and average energy consumption. One country shared a reference to their tariff methodology that includes rewards and penalties for technical quality of services.

Table 12. Impacts: Examples of national monitoring indicators reported by countries

Indicator Domain	Examples of indicators reported by countries
Health impacts indicators	• Percentage reduction of the national disease burden due to WASH related causes • Mortality and morbidity linked to WASH (diarrheal diseases, malaria, dengue, cholera); the prevalence of acute malnutrition • All indicators defined within national targets in accordance with Article 6 of the Protocol Water and Health • Reduced stunting prevalence from 30.8% in 2018 to 14% in 2024 • Regulations are put in place to protect the health of users/consumers and workers • Reduce sickness expenses
Environmental impacts indicators	• SDG 6.3.2 Proportion of bodies of water with good ambient water quality • SDG 6.6.1 Change in the extent of water-related ecosystems over time • Population exposed to water pollution • Environmental impact indicators: Water pollution levels, percentage of wastewater treated and disposed of safely • Environmental sustainability indicators: Sustainable use of water resources, reduction of negative environmental impacts of WASH infrastructure • Elimination of open defecation • Percentage reduction in adverse environmental impacts due to improved WASH resources management • Energy efficiency; carbon emissions • Compliance to EIA requirements (%)
Economic impacts indicators	• % of WASH contribution to GDP (WASH Accounts) • Percentage increase in economic returns on investment in WASH • Percentage of coverage of water supply-sewerage costs with revenues • % reduction loses in the water supply system • Household water bill recovery rate • Economic internal rate of return • Reduced healthcare costs and improved labour productivity to enhanced educational outcomes and increased economic returns on investment

Main findings and key considerations for A2A:

5. **There is already widespread practice by countries of using national monitoring indicators to report on national WASH plans and strategies.** More than three-quarters (77%) of the 83 countries that responded to the GLAAS 2024 country survey questions on national monitoring indicators,[19] reported that national monitoring indicators have been defined to monitor progress of implementing the national WASH plan(s)/strategy(ies). Of these 64 countries, 67% reported that they have less than 50 indicators to monitor plans/strategies, 65% regularly monitor and review their national monitoring indicators, and 86% reported that subnational data is collected and consolidated at the national level.
   - These detailed responses and supporting documentation shared by countries in their responses to the GLAAS 2024 country survey provide an invaluable input towards understanding the current practice of national WASH monitoring approaches and indicators across a large and diverse sample size of countries.
6. **The indicator domains currently monitored by the greatest number of countries are *infrastructure, service delivery, service quality* and *service coverage*.** These are the areas where countries already have data collection capacities and pipelines to collect, aggregate (as needed) and report data. It was observed that there are varying levels of alignment with existing national, regional or benchmarking indicators and monitoring frameworks.
   - For areas currently monitored by countries, A2A can assess whether there is an opportunity for greater alignment around a core indicator or whether there is an existing internationally agreed or commonly used indicator that could be directly included as part of the set of core indicators.
7. **The indicator domains currently monitored by the least number of countries are *governance, finance, human resources, community participation, affordability, equity*, and *economic impacts*.** These are areas where there are potential gaps in national monitoring.
   - For these areas, A2A can add value by offering countries a core indicator that could be used to expand monitoring to these areas. The indicators shared by countries that already use these indicators in their national monitoring systems to track progress on national WASH plans and strategies can be an important input to the process of identifying and selecting suitable core indicators. Additionally, the national monitoring focal points from these countries could be invited to participate as part of the "expert groups" or as a key informant to share their experience with the respective indicator domain.

3. Status of evidence and learning on WASH systems approaches

This evolution of the WASH sector, from an emphasis on construction of infrastructure and ad hoc behaviour change engagement alone, towards a recognition that the ultimate goal is delivery of safely managed WASH services that are sustained over time, is resulting in convergence in the sector towards a "WASH systems" approach. However, while there are many on-going programming efforts to strengthen WASH systems, at the present time there is general consensus that the evidence base for "WASH systems approaches" is still nascent.

A2A issued a "call for evidence" following the webinar held on 17th June 2024 which received submissions from academic institutions and researchers, UN entities, international NGOs, the World Bank, and other stakeholders. Additionally, numerous research and learning initiatives are currently underway that will progressively contribute new evidence to inform sector practice.[20] As a joint initiative, A2A will draw from the extensive collective

[19] Preliminary results as of 10 January 2025, 83 countries responded to question B2.

[20] Some research and learning initiatives on WASH systems strengthening include FCDO WASH Systems for Health programme, REACH: Improving water security for the urban poor, Resilient Water and Sanitation Services Research at University of Bristol, UNICEF:

experience and documented learning from the participating countries and development partners throughout the initiative. The A2A initiative will continue to build on this existing evidence and learning, while also designing a process for Phase 2 and subsequent phases that brings in new learning and allows for adaptation, as new evidence becomes available. As such it will be a collective responsibility/endeavour of those involved in A2A to bring evidence and learning into the process, as well as to identify and reduce any potential gaps and blind spots throughout the initiative.

Within this broader context, this section of the *A2A Background Paper* just 'scratches the surface' of the available content. It aims to provide a brief snapshot of the current status of academic evidence and learning (3.1) and summarize topline findings from two recent studies particularly relevant to the A2A initiative that have large sample sizes of participating countries: an extended analysis of data from the GLAAS 2021/2022 cycle (3.2) and the "Listening to Water Leaders" surveys by the Water Policy Group (3.3).

3.1 Status of academic evidence and learning

The most recent and comprehensive systematic literature review on WASH systems approaches identified during the call for evidence is "*System Approaches to Water, Sanitation, and Hygiene: A Systematic Literature Review*" by Valcourt et al published in the International Journal of Environmental Research and Public Health in January 2020.[21] The study objective was to characterize the breadth of methods employed for WASH systems[22] approaches, the use of these methods in WASH projects, the impacts these approaches have on service outcomes, as well as identify key knowledge gaps in the existing knowledge base. The study identified an initial 8139 articles from databases searches and 100 from hand searches that were potentially eligible for the review. As the result of the screening processes, a total of 133 studies were included in the final review. A majority of the studies (75) were classified as peer-reviewed literature, 35 were classified as grey literature, and 23 as organizational literature.

Some of the main findings from this paper relevant to understanding the current state of the evidence are summarised below:

- To identify the scope of the different elements, aspects, and components of the WASH systems that the included studies evaluated, factor categories were coded into the review. Forty unique factors were referenced by at least two or more studies from the factor coding. Of these, Financial (74%) was overwhelmingly the most common factor, followed by Technical (53%), Institutional (43%), Social (41%), and Environmental (40%) factors.
- There was a high propensity for rural (74%) and community-focused (59%) study scopes. Urban contexts were studied notably less (43%), but 23% of studies purported to be applicable to both rural and urban contexts. However, only 11% of the studies focused solely on city-level scope, highlighting the traditional lack of attention paid to peri-urban contexts. Many studies were focused at a regional level (32%), reflecting current trends of district-wide approaches in the WASH sector, while fewer were focused on national-level systems (20%). Only 8% of the studies focused purely on sector-level issues.

Strengthening water, sanitation and hygiene (WASH) systems, USAID Sustainable WASH Systems: A learning partnership, UTS Research contributions to WASH systems strengthening, Water, Sanitation and Health at University of Leeds, World Bank Global Water Security & Sanitation Partnership among many more.

[21] Valcourt N, Javernick-Will A, Walters J, Linden K. System Approaches to Water, Sanitation, and Hygiene: A Systematic Literature Review. Int J Environ Res Public Health. 2020 Jan 21;17(3):702. doi: 10.3390/ijerph17030702. PMID: 31973179; PMCID: PMC7037755.

[22] This study defines a WASH system as a collection of all the factors and their interactions which influence WASH service delivery within a given contextual, institutional or geopolitical boundary. We conceptualize factors as any tangible or abstract element, aspect or component thought to directly or indirectly influence the WASH system. Examples include finances, hardware, actors, gender, and socio-economic conditions, among others.

- While an overwhelming majority of studies had some form of project application (116 of 133), results indicated that 35% of all studies represented case studies that focused on only one geographic context, which may limit the generalizability of these studies. Studies that included a project application were mostly equally distributed between countries in East Africa (40%), South Asia (32%), and West Africa (24%). The review also showed the disproportionate focus of studies that assessed projects in India (15%), Ghana (14%), and Uganda (13%). Overall, applications in 60 countries were represented in the literature.
- The evaluation of study impacts showed that 32 of the 133 studies (24%) reported some form of impacts that resulted because of the use of the analysis, tool, framework or approach. Non-exclusive open coding of the study impacts identified eight types of reported impacts, including: uptake of the tool, framework or approach (12%); effects on services (7%); policy changes (6%); improvements in coordination (4%); behavior change (3%); financial impacts (2%;, impacts on users (2%); health impacts (>1%); and changes in levels of access to services (>1%).
- The low incidence of studies reporting on impacts on WASH services (7%) presents a challenge for developing the evidence base for the effect that systems approaches have directly on the sustainability of WASH services. Thus, in order to determine the effectiveness of these approaches, more information is required that connects the implementation of these approaches to tangible service delivery outcomes, and ultimately, improvements in public health.
- Overall, while the review identified a large number of studies with a wide variety of methods, scopes, and project applications, we found that studies generally tended to represent one-off case studies (41%) that employed a method requiring medium-to-high analytical complexity (75%), most commonly applied to the analysis of a rural water context (48%), that generally focused on financial (75%) or technical factors (54%), and did not explicitly consider interactions between factors (75%).
- Key recommendations call for: (i) a diversification of the methods, scopes, and applications of systems approaches for WASH; (ii) further investigation and application of system approaches that explicitly consider factor interactions; (iii) increased reporting of resources required to implement the approaches; and (iv) more documentation of the impacts to WASH services that result from the application of a systems analysis, tool, framework or approach. Overall, these findings provide a robust survey of the existing landscape of systems approaches for WASH and illuminate a path for future research in this emerging field.

The research and learning component[23] of the *WASH for Systems for Health* (WS4H) programme supported by FCDO is currently in the preparatory phase for a Systematic Literature Review that will examine the effects of WASH systems strengthening initiatives on access, availability (continuity and functionality), affordability and equity of WASH services. These findings will be incorporated into A2A during future phases of the initiative.

As part of the same initiative, a global Delphi exercise was conducted to identify *priority research questions to inform WASH system strengthening initiatives. The results were presented during the 2024 UNC Water for Health Conference. The exercise was conducted with two rounds of Expert Panels involving a diverse group of 81 individuals in the first round and 69 individuals in the second round. Twenty-five priority questions were identified during both rounds of the Expert Panels. The research priorities reflected* priorities across the spectrum of WASH systems building blocks. Key areas of agreement include understanding the functioning of WASH systems, identifying pathways of change, and addressing systemic challenges of resilience, inclusion, sustainability and governance. The results also highlight five overarching themes affecting WASH service delivery: 1) integrating climate resilience into systems strengthening, 2) enhancing gender, equity and social inclusion into system

[23] IRC, LSHTM, University of Leeds, UK International Development (FCDO). Research and Learning Agenda WASH Systems for Health 2024-2028. Available at https://www.ircwash.org/sites/default/files/ws4h_research_and_learning_agenda.pdf.

approaches, 3) strengthening governance, financing, and accountability mechanisms, 4) improving monitoring, evaluation, and measurement of WASH system change, and (5) understanding the political economy of WASH service delivery. The study emphasises the need for improved knowledge sharing to bridge gaps between research, policy and practice**.** The results are presented in Annex E.

Additionally, there have been literature reviews on specific WASH sub-sectors and topics as part of other indicator selection processes, such as, *A Review of Measures and Indicators for Gender in WASH*[24] and currently in progress by the consortium leading the JMP/GLAAS review of indicators for global monitoring of climate resilient WASH. There have also been numerous WASH systems multi-country programmes that have documented learning (e.g. USAID Sustainable WASH Systems: A learning partnership) as well as numerous efforts to document country case studies of progress[25] which can offer additional insights into how progress has been achieved and solutions to unlock common WASH sector bottlenecks and constraints.

Main findings and key considerations for A2A

8. **A2A can benefit from new evidence and learning generated on WASH systems.** There are many synergies and opportunities for complementarity between the current research and learning efforts on WASH systems and the A2A initiative. Through close coordination, the latest findings and evidence can be used to inform the identification and selection of the core indicators during A2A Phase 2 and during future phases of A2A. Moreover, A2A can provide a pathway for incorporating latest evidence and learning into national monitoring systems at scale.
    - The A2A methodology and processes put in place for selection, testing and review of the set of core indicators and the common monitoring and review framework should be designed to be 'iterative' in order to provide frequent opportunities for new evidence and learning to be incorporated.
9. **A2A initiative can contribute to building the evidence base for WASH systems.** Research and learning efforts can use A2A as a platform to collect data, generate evidence and synthesize learning on WASH systems from a large, diverse group of countries.
    - Close coordination between the research and learning efforts and A2A initiative will be vital to fully capitalize on opportunities for research and learning through the piloting process (Phase 3) and implementation and scale-up phase (Phase 4).

[24] A Review of Measures and Indicators for Gender in WASH, Bethany A. Caruso, Allison Salinger, Madeleine Patrick, Amelia Conrad, and Sheela Sinharoy June 2021. https://washdata.org/sites/default/files/2021-10/jmp-2021-gender-review-final-report.pdf

[25] Some examples of case studies submitted to the 'A2A Call for evidence', UNC consultations or identified during the desk review include World Bank's Water Supply and Sanitation Policies, Institutions, and Regulation: Adapting to a Changing World—Synthesis Report, Applying WASH systems Approaches in Fragile contexts (Aguaconsult, Oxfam, Water for Good, Juliane Shillinger), A Handbook of What Works: Solutions for the local implementation of the OECD Principles on Water Governance, UN-Water Country Acceleration Case Studies, Achieving total sanitation and hygiene coverage within a generation: lessons from East Asia (WaterAid), Agenda for Change Systems Strengthening Tools among many others.

3.2 Indicators where "on track" countries perform well: Extended analysis from the GLAAS 2021/2022 cycle

The GLAAS 2021/2022 cycle, featuring data from over 120 countries, included updated information on coverage targets for drinking-water and sanitation. The main findings from that GLAAS cycle are presented in the GLAAS 2022 report.[26] While previous GLAAS cycles have provided valuable insights on national target-setting in response to SDG 6, it is not known if these coverage targets are realistic, how much progress is needed to reach them or what factors may contribute to the likelihood that countries reach their national targets.

To examine this issue in greater depth, WHO conducted further analysis that is presented in a supplementary report, *National drinking-water and sanitation targets: Extendedmethodology and results from the GLAAS 2021/2022 cycle*.[27] The analysis aimed to answer three questions:

- *Are countries on track to meet their national targets?*
- *What progress is needed to reach national drinking-water and sanitation targets?*
- *What distinguishes countries that are on track from those in need of acceleration to meet their national targets?*

The third question is particularly relevant for A2A's central objective to define a core set of indicators. This section presents the results of this additional analysis that identified WASH system indicators that differed between the "on track" and "acceleration needed" countries. In interpreting the results, it is not appropriate to draw direct causal links between any of these factors and performance, as there are likely additional underlying factors leading to specific elements being in place in "on track" countries that are absent in "acceleration needed" countries. However, the results do identify which WASH system elements are lacking in countries that are further behind with their targets.

Another analysis is underway, looking at comparing WASH systems indicators across countries that have shown rapid progress in expanding population coverage of water supply and sanitation services with countries that have shown little, or no progress based on JMP estimates. While the methodology is similar, the country groupings are substantially different, as it is possible for a country to be on track to reach its targets yet show very little progress from year to year. Hence it is not expected that this analysis will yield the same set of indicators as the analysis based on national targets shown below. Results are expected to be available in time to feed into discussions on indicator selection for A2A and will contribute to the evidence base for these discussions.

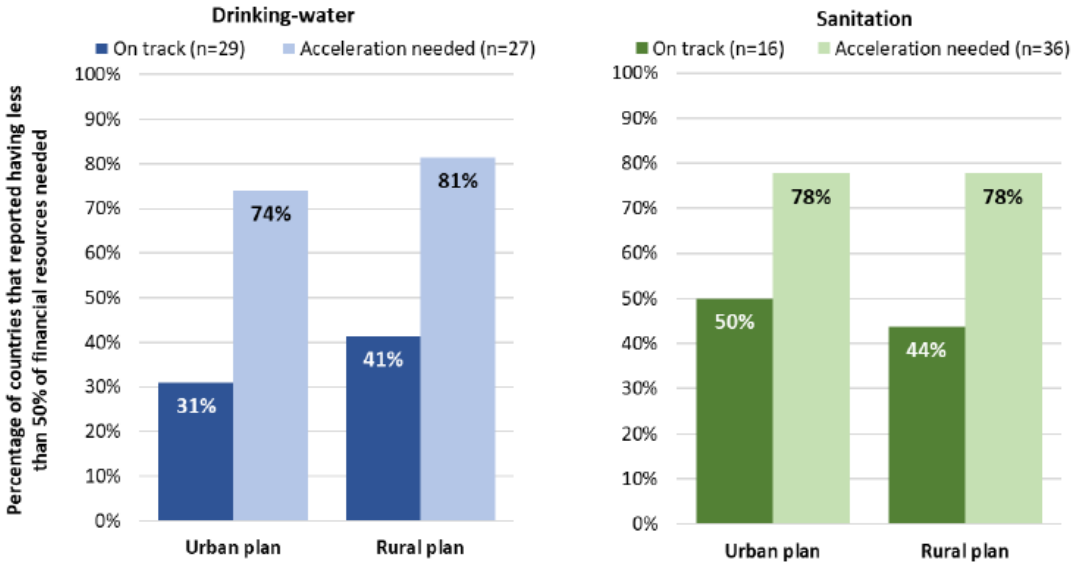
The WASH system indicators identified in the analysis where the "on track" countries perform well compared to "acceleration needed" countries are the following:

- **Resourced national WASH plans.** "On track" countries are more likely to have human and financial resources in place to implement their plans (Figure 5). For urban and rural drinking-water plans, approximately two-to-three times as many countries in the "acceleration needed" group reported that they have less than 50% of human and financial resources to support implementation of their plans compared to "on track" countries. For sanitation, gaps between "on track" and "acceleration needed" countries are smaller than for drinking-water for financial and human resources for urban and rural plans.

[26] Strong systems and sound investments: evidence on and key insights into accelerating progress on sanitation, drinking-water and hygiene. UN-Water global analysis and assessment of sanitation and drinking-water (GLAAS) 2022 report. Available at: https://glaas.who.int/glaas/un-water-global-analysis-and-assessment-of-sanitation-and-drinking-water-(glaas)-2022-report

[27] National drinking-water and sanitation targets: Extended methodology and results from the GLAAS 2021/2022 cycle, Available at : https://glaas.who.int/docs/librariesprovider2/default-document-library/national-drinking-water-and-sanitation-targets_extended-methodology-and-results-from-the-glaas-2021-2022-cycle.pdf?sfvrsn=40cd5816_5

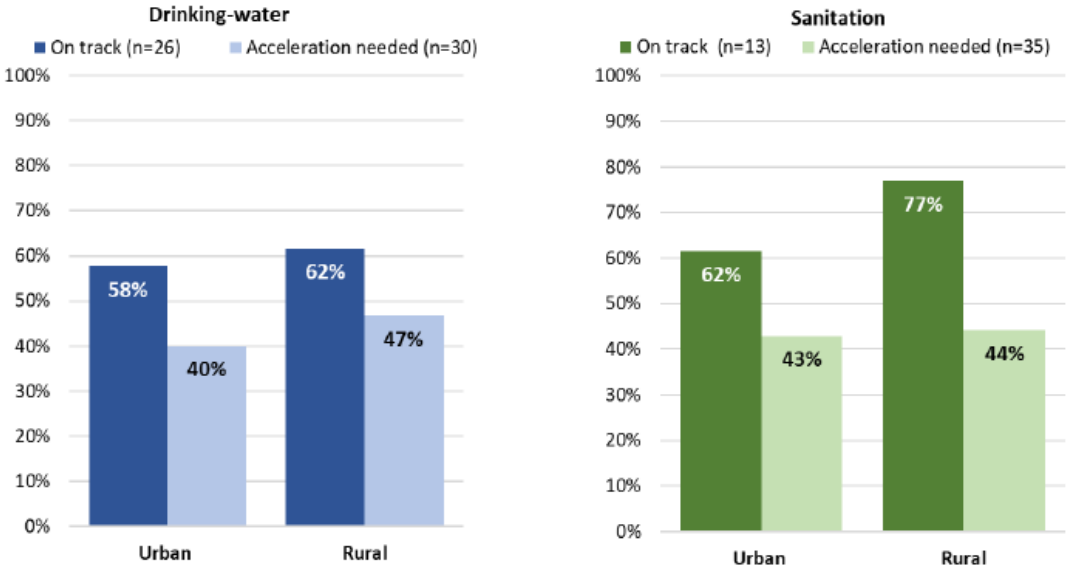
Figure 5. Percentage of "on track" and "acceleration needed" countries that reported having less than 50% of financial resources needed to implement national drinking-water and sanitation plans.



Source. National drinking-water and sanitation targets: Extended methodology and results from the GLAAS 2021/2022 cycle.

- **Absorption of domestic capital commitments.** Less than half of "acceleration needed" countries reported over 75% absorption of domestic capital commitments for all four subsectors (Figure 6). "Acceleration needed" countries have lower utilization of domestic capital commitments.

Figure 6. Percentage of countries with over 75% utilization of domestic capital commitments for drinking-water and sanitation



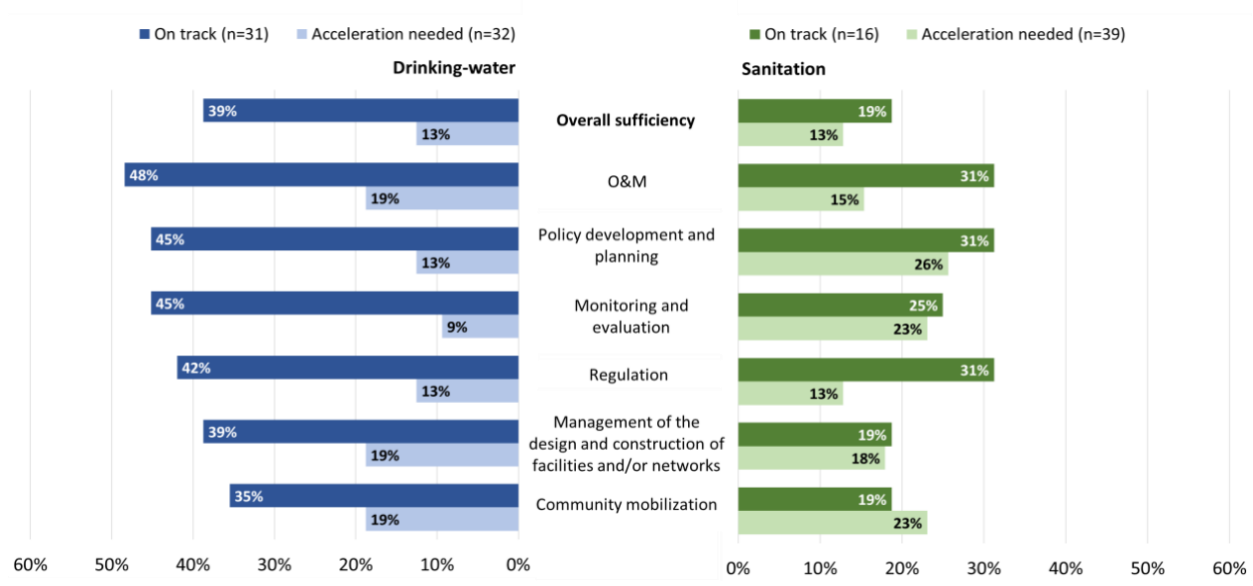
Source. National drinking-water and sanitation targets: Extended methodology and results from the GLAAS 2021/2022 cycle.

- **Cost recovery.** Similarly, cost recovery is higher for countries on track to reach their national targets, in particular for rural drinking-water. Forty-three per cent of "on track" countries recover 80% or more of operations and maintenance (O&M) costs from tariffs compared to only 19% of "acceleration needed" countries.

- **Affordability schemes.** Affordability schemes that are widely used are more common in "on track" countries. For example, only 38% of "acceleration needed" countries reported widely used affordability schemes for urban drinking-water, while 55% of "on track" countries reported widely used schemes.

- **Human resources for WASH**. In terms of overall sufficiency of human resources, "on track" countries are three times more likely to have over 75% of human resources needed in place for drinking-water. Large differences are seen between "on track" and "acceleration needed" countries for drinking-water functions. For sanitation, the differences tend to be smaller and reflect a lack of human resources overall for all functions, even in "on track" countries. However, substantial differences are seen for sanitation regulation, and policy development and planning. "Acceleration needed" countries are more likely to have critical human resources gaps for key WASH functions (Figure 7).

Figure 7. Percentage of countries that reported having 75% or more of the human resources needed for drinking-water and sanitation



Source. National drinking-water and sanitation targets: Extended methodology and results from the GLAAS 2021/2022 cycle.

- **Implementation of risk management approaches.** "On track" countries are more likely to implement water safety planning (WSP) and sanitation safety planning (SSP) compared to "acceleration needed" countries. The largest gap between the "on track" and "acceleration needed" countries is for WSP in rural areas.
- **Performing independent surveillance.** Countries that are on track to meet their national targets are more likely to perform independent surveillance that informs planning and action. Differences in independent surveillance functions between "on track" and "acceleration needed" countries are seen across subsectors – for on-site sanitation, faecal sludge management and sewered sanitation, as well as for urban and rural drinking- water. The largest discrepancies are seen in aspects of independent surveillance for on-site sanitation.

- **Regulatory authorities that perform key functions.** "On track" countries are more likely to have regulatory authorities that perform key functions for urban and rural drinking-water and sanitation (Figure 8). These functions include setting standards, collecting data, publishing reports, enforcing implementation and taking corrective actions to improve performance and address non-compliance with national standards. "Acceleration needed" countries are much more likely to report that they did not implement these functions.

Figure 8(a). Percentage of countries fully implementing regulatory functions for urban drinking-water

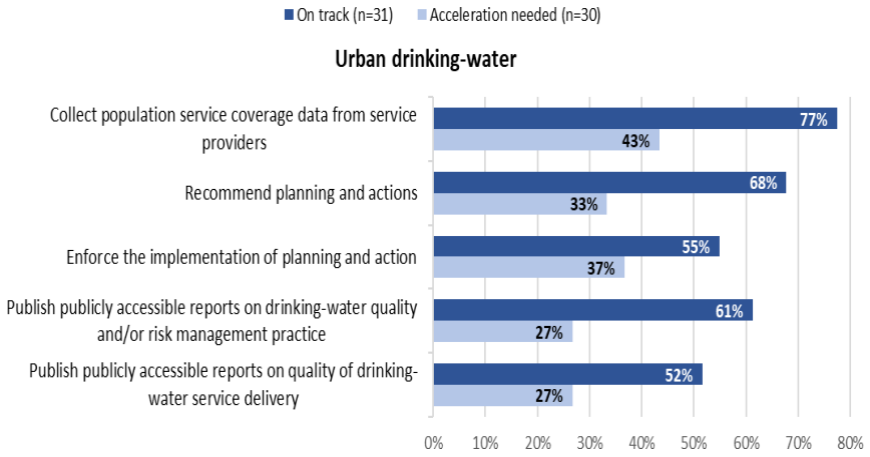


Figure 8(b). Percentage of countries fully implementing regulatory functions for rural drinking-water

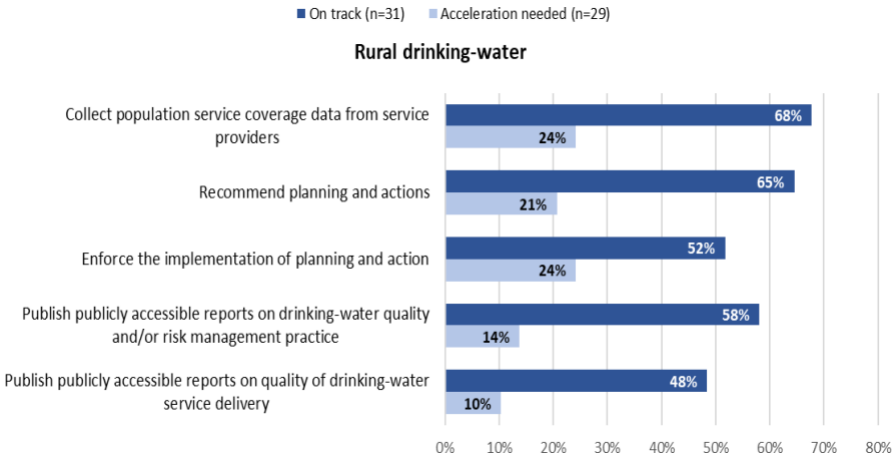


Figure 8(c). Percentage of countries fully implementing regulatory functions for urban sanitation

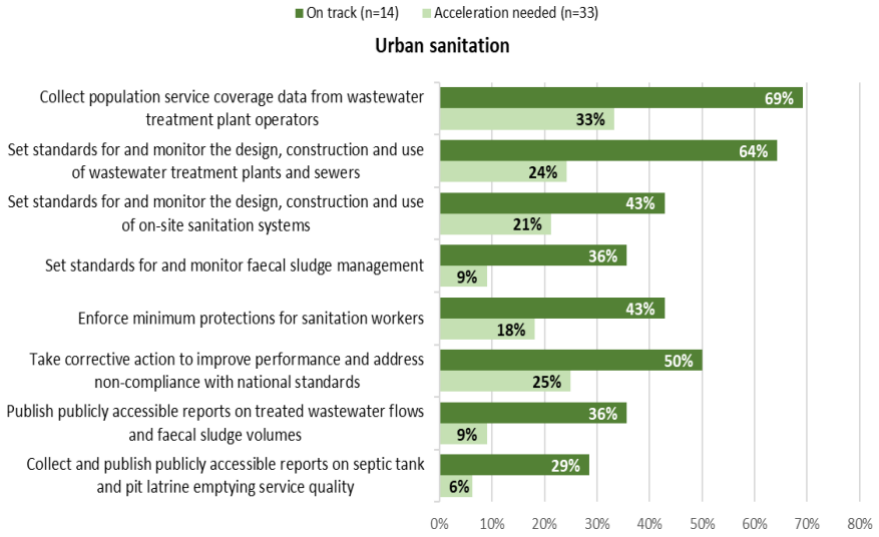
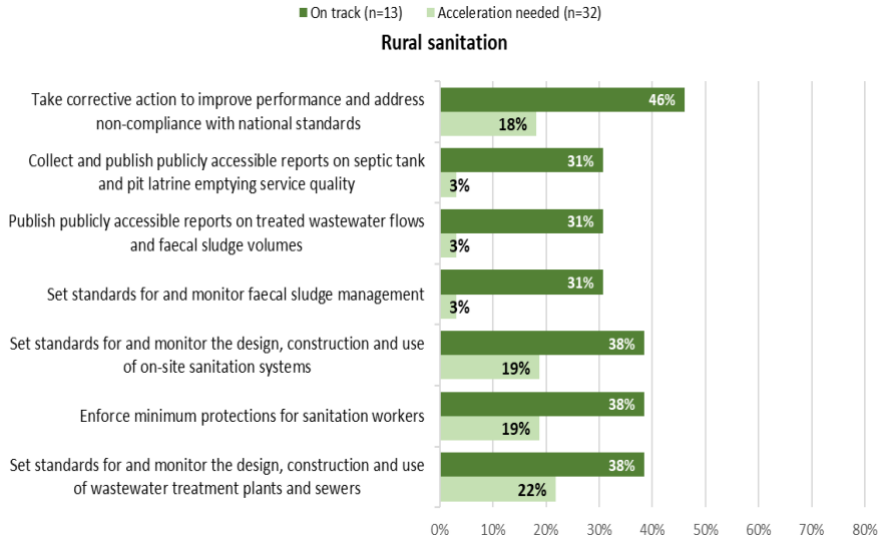


Figure 8(d). Percentage of countries fully implementing regulatory functions for rural sanitation



Source: National drinking-water and sanitation targets: Extended methodology and results from the GLAAS 2021/2022 cycle.

Main findings and key considerations for A2A

10. **WASH system indicators where "on track" countries perform well compared to "acceleration needed" countries have been identified through an extended analysis of GLAAS 2021/2022 data.**
    - The areas and indicators where "on-track countries perform well" should be considered for prioritization in the selection of the A2A indicator domains and core indicators. These indicators include resourced national WASH plans, absorption of domestic capital commitments, cost recovery, affordability schemes, human resources for WASH, implementation of risk management approaches, performing independent surveillance, and regulatory authorities that perform key functions.

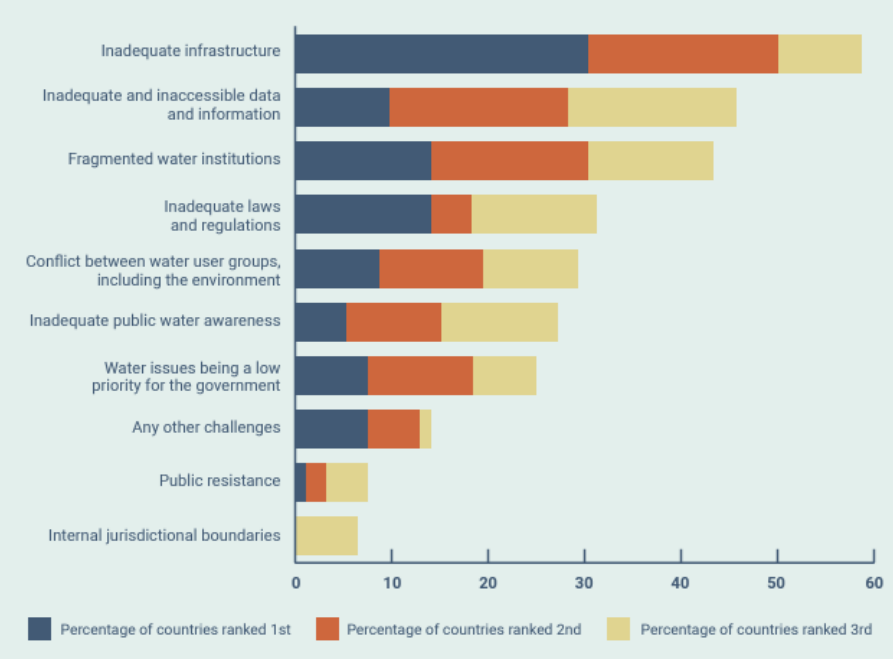
3.3 Listening to National Water Leaders, Global Water Policy Reports 2021 & 2021

Given that countries are at the centre of the A2A initiative, it is vital that A2A responds to their needs and priorities and addresses their major water and sanitation challenges. The Global Water Policy Reports prepared by the Water Global Policy Group[28] are intended to support the achievement of better water outcomes globally. This Report is derived from and reflects the opinions, perspectives and experience of Ministers, agency heads, senior officials and others whose job it is to make difficult decisions on water management in their respective countries.

National water leaders were asked to identify from a list of nine 'challenges' which they think are the greatest challenges to maintaining or achieving good water management in their country and to rank them in order of importance. These 'challenges' are issues largely of a policy and administrative nature which are within the control of governments.

The greatest 'challenges' faced by water leaders of the 93 countries reported in the 2023 Global Water Policy Report were '*Inadequate infrastructure*', '*Inadequate and inaccessible data and information*', '*Fragmented water institutions*', and '*Inadequate laws and regulations*' in that order (based on the top three of the ten choices).

Figure 9. Challenges to achieving or maintaining good water management nationally (2023)



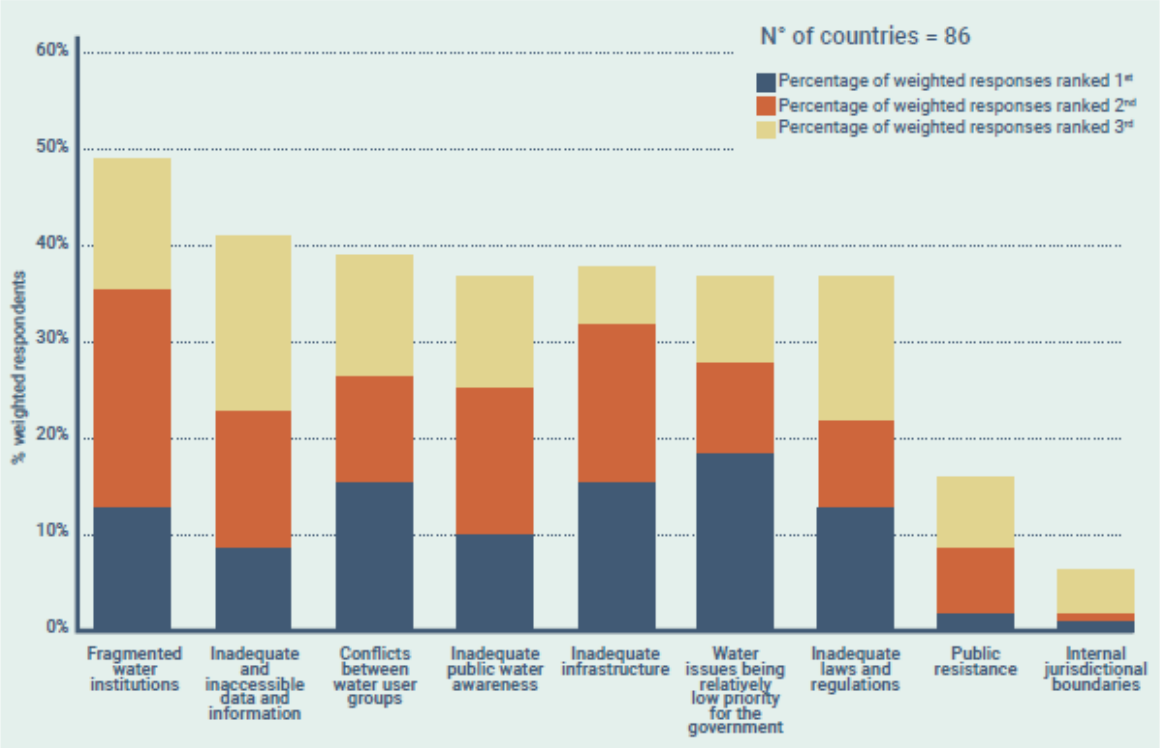
Source: 2023 Global Water Policy Report: Listening to national water leaders

[28] Water Policy Group, https://waterpolicygroup.com/

For the 2021 Global Water Policy report, the greatest 'challenges' faced by water leaders of the 86 responding countries when only the first ranked challenge is considered, '*water issues being a relatively low priority for the government*' is the most often identified challenge.

When the 'top two' and 'top three' ranked challenges are considered, '*fragmented water institutions'* is the most often identified challenge. The other greatest challenges in the same 'top three' terms featuring as major concerns were '*Inadequate and inaccessible data and information'*, '*conflicts between user groups'*, '*inadequate public water awareness*', '*inadequate infrastructure'*, '*water being a low priority in the government'* and '*inadequate laws and regulations*.'

Figure 10. Challenges to achieving good water management for all surveyed countries (2021)



Source: Global Water Policy Report 2021: Listening to national water leaders

Considerable differences emerge when these results are broken down by country income group. For example, '*inadequate and inaccessible data and information'* and '*inadequate infrastructure*' ranks more highly for low- and middle-income group countries, with national water leaders of high-income group countries more concerned about other governance issues such as '*conflict between user groups*' and '*inadequate public awareness*'.

The 2021 Water Leaders Survey also sought the perspectives of national water leaders on what they see as the main issues in achieving each of the SDG 6 'water targets' within their country. National Water leaders were asked why it is so difficult to achieve each SDG 6 target they rated as 'impossible or 'challenging' for their country, ranking reasons based on the five SDG 6 global accelerators. This question aimed to discern which of the accelerators were likely to be the most (and least) useful for countries in different income groups in achieving each target.

For the 58 percent of surveyed countries where '*safe and affordable drinking water for all'* is considered to be an '*impossible*' or '*challenging*' target, the most cited highest ranked reason is '*lack of financing'*. The next most

cited highest ranked reason is '*governance problems*'. Interestingly, for low-income group countries, '*governance*' rates higher than '*finance*' as the most cited first ranked reason for this target being challenging or impossible.

Table 14. Relative importance of reasons for SDG 6.1 (drinking water) being rated 'challenging' or 'impossible': by income group (2021)

Table 3.2: Relative importance of reasons for SDG 6.1 (drinking water) being rated 'challenging' or 'impossible': by income group

Income Group	Considered 'Impossible or Challenging' (by %age of surveyed countries)	Reasons for considering 'Safe and Affordable Drinking Water' to be Impossible or Challenging (Relative Importance)				
		Lack of Financing	Lack of Information	Lack of Capability	Lack of Innovation	Governance Problems
All Countries	58% (N=88)	**	*	*	–	**
High Income	22% (N=28)	**	*	*	–	**
Upper Middle	75% (N=21)	**	–	**	–	*
Lower Middle	63% (N=24)	***	*	–	–	**
Low	75% (N=15)	*	*	*	–	*

Note: the relative importance of the 5 key Reasons is assessed using the following. *** = ranked as a 'top two' reason by 75%+ of surveyed countries, ** = ranked as a 'top two' reason by 50-74% of surveyed countries, * = ranked as a 'top two' reason by 25-49% of surveyed countries, – = ranked as a 'top two reason' by 0-24% of surveyed countries. Scores on the boundary between groups have been rounded up.

Source: Global Water Policy Report 2021: Listening to national water leaders

Main findings and key considerations for A2A:

11. **National water leaders have identified their main challenges to achieving and maintaining good water management and the main reasons they consider 'safe and affordable drinking-water' (SDG 6.1) to be impossible or challenging to achieve.**
    - The areas reported by National water leaders as the main challenges and top reasons for not achieving SDG 6.1 should be considered as part of the criteria for the selection of the A2A indicator domains and core indicators. This can help ensure that the core indicators are responsive to countries needs to address and monitor progress on overcoming these challenges. The main challenges according to National water leaders include inadequate infrastructure, inadequate and inaccessible data and information, fragmented water institutions, inadequate laws and regulations, Inadequate and inaccessible data and information, conflicts between user groups, inadequate public water awareness, inadequate infrastructure, and water being a low priority in the government. The top reasons for not achieving SDG 6 are lack of financing and governance problems.

4. Looking ahead – WASH beyond 2030

With only five years before the end of the United Nations 2030 Agenda and its SDGs, it is not too soon to look ahead to the next planning horizon. With the world already dramatically off-track on meeting the water and sanitation targets set for the 2030 Agenda, it is a strategic moment to reflect on what comes next for water and sanitation. In simple terms, *what will the world look like in 2050? and what will WASH systems need to deliver to meet future needs in an evolving context?*

Numerous stakeholders have raised the importance of ensuring that the A2A initiative incorporates a forward-looking perspective in the selection of the core set of indicators. As a point of departure in tackling such an ambitious topic, this *A2A Background Paper* will first briefly explore the megatrends expected to shape the world in 2050 and the implications for the WASH sector (Section 4.1). It will provide a succinct overview of the global political landscape and processes to develop the post-2030 United Nations Sustainable Development Agenda (Section 4.2). Lastly, a short summary has been prepared of relevant main findings and recommendations from the recent SDG 6 MOI strategic assessment concerning the priorities for monitoring the means of implementation for water and sanitation in the post-2030 agenda (Section 4.3).

4.1 The world in 2050 - forward-looking issues and trends for WASH Sector

As a basis for understanding possible future WASH needs and contextual factors that will affect them, this section briefly summarizes the megatrends and future-oriented insights identified in a limited set of flagship global data and foresight reports. While certainly not comprehensive, this limited review aims to provide some contours to orient forward-looking discussions on future priority WASH issues and the possible indicators to monitor them. Based on this rapid scan, major megatrends relevant to the future of WASH services include population trends and demographic transitions, urbanisation, climate change and its impacts on the water cycle, and technological innovation. Geopolitical and economic factors, as well as pollution, are also highlighted as areas of risk and uncertainty

Population trends and demographic transition. The United Nations report, *World Population Prospects 2024: Summary of Results*[29], prepared by the Population Division of the United Nations Department of Economic and Social Affairs provides an analysis of population trends and offers policy recommendations for adjusting to changing population sizes, age structures, and distributions. Population growth, population ageing, urbanization and international migration are four major demographic trends.

- **The world's population is likely to peak within the current century.** The world's population is expected to continue growing for another 50 or 60 years, reaching a peak of around 10.3 billion people in the mid-2080s, up from 8.2 billion in 2024. After peaking, it is projected to start declining, gradually falling to 10.2 billion people by the end of the century.
- **One in four people globally lives in a country whose population has already peaked in size**. In 63 countries and areas, containing 28 per cent of the world's population in 2024, the size of the population peaked before 2024. In 126 countries and areas, the population is likely to continue growing through 2054, potentially reaching a peak later in the century or beyond 2100.
- **Countries with youthful populations and declining fertility have a limited time to benefit economically from an increasing concentration of population in the working ages.** In about 100 countries or areas, the working-age population (between 20 and 64 years) will grow through 2054, offering a window of opportunity

[29] United Nations (2024). World Population Prospects 2024: Summary of Results. UN DESA/POP/2024/TR/NO. 9. New York: United Nations. https://desapublications.un.org/publications/world-population-prospects-2024-summary-results

known as the demographic dividend. To capitalize on this opportunity, countries must invest in education, health, and infrastructure, and implement reforms to create jobs and improve government efficiency.

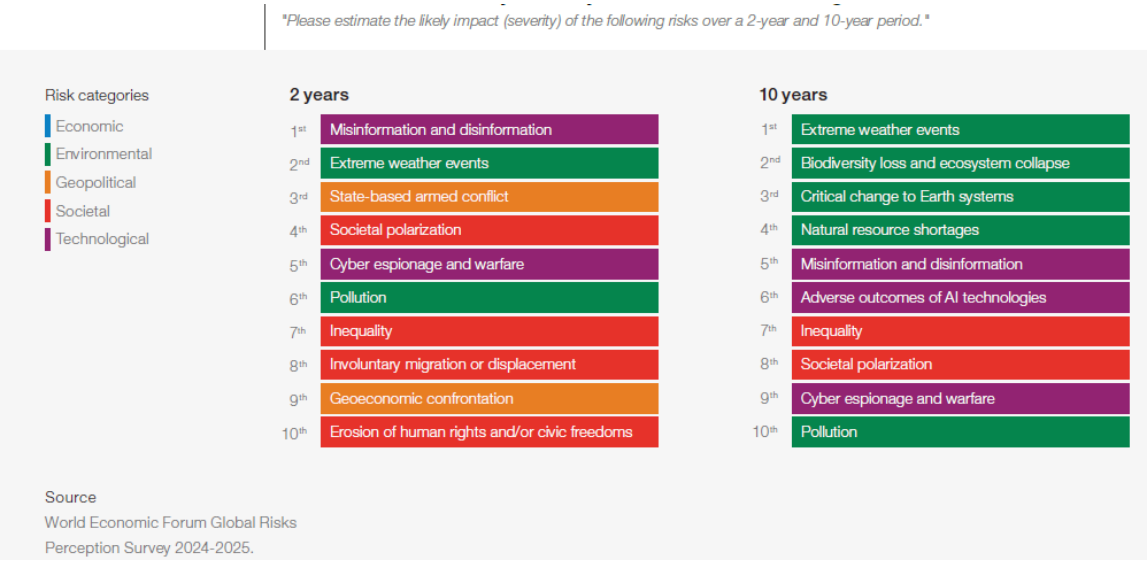
- *For some populations, immigration will be the main driver of future growth.* In 50 countries and areas, immigration is projected to attenuate the decline in population size due to sustained low levels of fertility and an older age structure.

Urbanisation trends. The *United Nations Sustainable Development Report 2023: Special Edition*[30] section on Goal 11: Sustainable cities and communities published the following data and projections:

- An estimated 55 per cent of the world's population, or around 4.4 billion people, currently reside in urban areas, a figure projected to rise to 70 per cent by 2050.
- Most of the urban growth is taking place in small cities and intermediate towns, exacerbating inequalities and urban poverty.
- While the proportion of the urban population living in slums declined slightly, from 25.4 to 24.2 per cent between 2014 and 2020, the total number of slum dwellers continues to rise with increasing urbanization. In 2020, an estimated 1.1 billion urban residents lived in slums or slum-like conditions. Over the next 30 years, an additional 2 billion people are expected to live in such settlements – some 183,000 people daily – mostly in developing countries.
- The escalating slum population is a manifestation of the housing crisis, highlighting the need for diverse housing options and basic services, including water supply and sanitation, to meet the varied needs of urban residents.

Global Risks - *Pollution*. The World Economic Forum's (WEF) *Global Risk Report 2025*[31] presents the findings of the Global Risks Perception Survey (GRPS), which captures insights from over 900 global experts across academia, business, government, international organizations and civil society. The report analyses global risks through three timeframes to support decision-makers in balancing current crises and longer-term priorities. The global risks ranked by severity over the short term (2 years) and long term (10 years) are shown in Figure 11 below.

Figure 11. Global risks ranked by severity over the short and long term (2025)



Source. World Economic Forum (2025). The Global Risks Report 2025 20th Edition Insight Report

[30] https://unstats.un.org/sdgs/report/2023/

[31] World Economic Forum (2025). The Global Risks Report 2025 20th Edition Insight Report. Available at:https://www.weforum.org/publications/global-risks-report-2025/

A number of risks have direct and indirect impacts on different aspects of water resources and WASH. The report mentions water within the definitions of following global risks: extreme weather events (floods), natural resource shortages (water), non-weather-related natural disasters (tsunamis), pollution (water). However, there are other risks that can impact water and sanitation such as state-based armed conflict, cyber espionage and warfare (targeting WASH infrastructure), migration and displacement (increasing WASH demand), as well as inequality and erosion of human rights that could impact affordability and the human rights to water and sanitation.

The 2025 report includes a chapter that focuses on the risks emerging in the long term (to 2035). This chapter provides in-depth assessments of three risk themes – pollution, biotech and super-ageing societies. Pollution is highlighted as an under-appreciated risk that needs to become more prominent in policy agendas by 2035.

The report recommends three "actions for today" to address pollution that are highly relevant for A2A: (a) Improve monitoring, reporting and evaluation systems, (b) strengthen regulatory frameworks and (c) unlock ambitious funding. *National and local regulations* was identified by the GRPS respondents as the approach with the most potential for driving action on risk reduction and preparedness for pollution over the next 10 years.

Climate Change and Water. The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report, *Climate Change 2022: Impacts, Adaptation, and Vulnerability, Chapter 4: Water* [32] assesses observed and projected climate-induced changes in the water cycle, their current impacts and future risks on human and natural systems and the benefits and effectiveness of water-related adaptation efforts now and in the future.

Currently, roughly half of worlds ~8 billion people are estimated to experience severe water scarcity for at least some part of the year due to climatic and non-climatic factors (medium confidence[33]). Since the 1970s, 44% of all disaster events have been flood-related. Not surprisingly, a large share of adaptation interventions (~60%) are forged in response to water-related hazards (high confidence).

- Intensification of the hydrological cycle due to human-induced climate change is affecting physical aspects of water security (high confidence), thereby exacerbating existing water-related vulnerabilities caused by other socioeconomic factors.
- Extreme weather events causing highly impactful floods and droughts have become more likely and (or) more severe due to anthropogenic climate change (high confidence).
- There is increasing evidence of observed changes in the hydrological cycle on people and ecosystems. A significant share of those impacts are negative and felt disproportionately by already vulnerable communities (high confidence).
- Water-related risks are projected to increase with every degree of global warming (high confidence), and more vulnerable and exposed regions and peoples are projected to face greater risks (medium confidence).
- Drought and flood risks and societal damages are projected to increase with every degree of global warming (medium confidence).
- Limiting global warming to 1.5°C would reduce water-related risks across regions and sectors (high confidence).

[32] Caretta, M.A., A. Mukherji, M. Arfanuzzaman, R.A. Betts, A. Gelfan, Y. Hirabayashi, T.K. Lissner, J. Liu, E. Lopez Gunn, R. Morgan, S. Mwanga, and S. Supratid, 2022: Water. In: *Climate Change 2022: Impacts, Adaptation, and Vulnerability.* Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 551-712, doi:10.1017/9781009325844.006.

33 In this Report, the following summary terms are used to describe the available evidence: limited, medium, or robust; and for the degree of agreement: low, medium, or high. A level of confidence is expressed using five qualifiers: very low, low, medium, high, and very high, and typeset in italics, e.g., medium confidence. For a given evidence and agreement statement, different confidence levels can be assigned, but increasing levels of evidence and degrees of agreement are correlated with increasing confidence.

- Observed water adaptation responses have multiple benefits (high confidence), yet evidence of effectiveness of adaptation in reducing climate risks is not clear due to methodological challenges (medium confidence).
- Future projected adaptations are effective in reducing risks to a varying extent (medium confidence), but effectiveness falls sharply beyond 2°C, emphasizing the need for limiting warming to 1.5°C (high confidence).
- Water security is critical for meeting Sustainable Development Goals (SDGs) and systems transitions needed for climate resilient development, yet many mitigation measures have a high water footprint which can compromise SDGs and adaptation outcomes (high confidence).
- A common set of enabling principles underpinned by strong political support can help meet the triple goals of water security, sustainable and climate resilient development (high confidence).

Climate Change and Sanitation. Sanitation is also affected by and contributes to climate change. According to the IPCC, key sanitation infrastructure systems will be increasingly vulnerable if design standards do not account for changing climate conditions. Non-climate-resilient sanitation services pose a substantial public health hazard. During more frequent and severe flooding, damaged toilets and sanitation systems have spread disease across entire communities. In drought-affected areas, non-resilient sanitation systems can exacerbate water stress or cease to function, causing families to revert to open defecation. This impact is greatest on the poorest families, especially women and girls and persons with disabilities. Furthermore, safe use of sanitation wastewater and sludge from sanitation systems for irrigation and energy recovery has a large unmet potential to contribute to adaptation and mitigation in the agriculture and energy sectors.

The Climate Resilient Sanitation Coalition, formed in 2022, launched a Sanitation Call to Action[34] at UNFCC COP27. UNICEF, the Global Green Growth Institute, the University of Technology Sydney, the Bill & Melinda Gates Foundation, UN-Habitat, the World Health Organization, the Asian Development Bank, the African Development Bank, Resilient Cities Network, WaterAid and SNV are calling on all stakeholders to work collectively to ensure the resilience of sanitation systems to maximize the public health outcome and explore the opportunities of reducing emissions along the sanitation service chain. Key messages from the Call to Action highlight cross-cutting opportunities for incorporating climate-resilient sanitation across the WASH system, including strengthening monitoring systems.

Some examples from the Call to Action where governments can incorporate climate resilience into the sanitation/ WASH system:

- **Policies and plans.** To incorporate climate resilience in sanitation *policies, legislations, plans, budgets, systems and services* at national and subnational levels; and increase *political commitments* for the provision of climate-resilient sanitation services for the poorest and most climate-affected communities.
- **Political prioritization.** To incorporate climate-resilient sanitation in the Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs) as a demonstration of commitment and a major step towards supporting the mobilization of the financing required to support resilient sanitation services at large scale.
- **Service delivery models.** To promote appropriate approaches, management practices, *service delivery models* and to *strengthen systems and capacities* that ensure that the entire sanitation service chain is made climate-resilient.

[34] Ensuring access to climate-resilient sanitation services for 3.6 billion people by 2030: A call to action for acceleration. Available at: https://www.unicef.org/documents/ensuring-access-climate-resilient-sanitation-services-36-billion-people-2030

- **Data and risk assessment.** To utilize *climate projection data* at the national and local levels in *risk assessment* for sanitation systems to select adaptation and mitigation measures based on local climate scenarios.
- **Funding and pro-poor measures.** To increase funding for climate-resilient sanitation services through the mobilization of domestic resources to support accelerated and sustained access to resilient sanitation services, particularly for the poorest and most climate-affected households. Where appropriate, targeted subsidies may be provided to the poorest to support them in accessing climate-resilient sanitation services.
- **Inter-sectoral coordination.** To plan sanitation system improvements in coordination with adaptation planning in other sectors, particularly water supply, urban planning, agriculture and energy, to ensure the sustainability of sanitation investments and to support adaptation and mitigation in other sectors.
- **Private sector participation.** To encourage and incentivize the private sector to invest in and to support climate-resilient sanitation products and services, in addition to promoting local demand, and develop quality assurance and oversight mechanisms to ensure that services provided are sustainable and climate resilient.
- **Data and early warning systems.** To build early warning systems that provide real-time data on extreme weather events and epidemic outbreaks, and to put mechanisms in place on how these data can be used to design or improve climate-resilient sanitation services.
- **Behaviour change.** To strengthen the enabling environment for climate-resilient sanitation behaviour change and awareness campaigns that lead to its scale-up.
- **Monitoring and regulation.** To monitor access to climate-resilient sanitation services (including through the use of household surveys and *regulation*) and rapid assessments after extreme events, to monitor their effectiveness.

The Economics of Water. The recently launched final report of the Global Commission on the Economics of Water (GCEW), *The Economics of Water — Valuing the Hydrological Cycle as a Global Common Good*[35] presents a new economic approach that refines how water is valued and how the water cycle is governed. The report proposes "five mission areas" that are critical adaptive pathways to address the water crisis- Mission 3 and 5 are particularly relevant to WASH.

- **Mission 1: Launch a new revolution in food systems.** Make radical gains in water productivity – maximising yield per drop of water – and in preserving soil moisture.
- **Mission 2: Conserve and restore natural habitats critical to protect green water.** Integrate the benefits of green water into how we manage land use and natural habitats and guide investments for their conservation.
- **Mission 3: Establish a circular water economy.** Establish a circular water economy that captures the full value of every drop. About 8% of today's total freshwater withdrawals, close to the total amount distributed by municipalities worldwide, can be reclaimed from wastewater every year. Massive inefficiencies also exist in water distribution, with roughly 40% of urban water lost through leakage, for example from ageing pipelines. Beyond just water, wastewater treatment offers the potential to recover valuable resources such as nutrients, energy, heavy metals, and minerals – generating new revenue streams and enhancing the sustainability of our water systems.
- **Mission 4: Enable a clean-energy and AI- rich era with much lower water intensity.** Water-efficient clean energy solutions are being introduced and must now be scaled up – from waterless cleaning for solar panels, to second- generation biofuels, to water-efficient cooling towers for nuclear and geothermal plants.

[35] Global Commission on the Economics of Water (2024), The Economics of Water: Valuing the Hydrological Cycle as a Global Common Good. Available at: https://watercommission.org/#report

- **Mission 5: Ensure that no child dies from unsafe water by 2030**. We need a paradigm shift to ensure access to rural and hard-to-reach communities. Advances in technologies and capacity-development have reached a point where decentralised water treatment and sanitation systems are a viable complement to centralised utilities. Affordable, off-grid water treatment solutions can now deliver clean water to these communities, and with much less discharge or pollutive sludge. Low-cost point- of-use chlorination can also be scaled up in low- income countries. National public finance and central government funding should support decentralised systems and provide technical assistance to local districts to enhance water and sanitation capabilities.

The GCEW report identifies several critical enablers of change: (i) govern partnerships, property rights, and contracts for an efficient, equitable and sustainable future, (ii) shape finance for a just and sustainable, (iii) harness data as a foundation for action, and (iv) build global water governance. Finally, the GCEW offers nine action-oriented recommendations to value and govern water to stabilise the hydrological cycle, enable food security and human dignity, and keep the Earth system safe for humanity.

Water science, research and management. The *International Water Associations Global Trend Report third edition*[36] launched in September 2022 drew upon the expertise of 28 IWAs Specialist Groups who had identified hot topics, innovations and global trends in water science, research and management that have impact on solving global water challenges. This edition is organised into three main themes each with 8 to 11 topics.

- **Innovative Technologies.** Hydroinformatics; instrumentation, control and automation; intermittent water supply; membrane technology; modelling and integrated assessment; nutrient removal and recovery; strategic assets management; and wetland systems for water pollution control.
- **Water and Health.** Assessment and control of hazardous substances in water; biofilms; design, operation and maintenance of drinking water treatment plants; diffuse pollution and eutrophication; disinfection; groundwater restoration and management; health-related microbiology; metals and related substances in drinking water; and tastes odours, and algal toxins in drinking water.
- **Resource Recovery and Circular Economy.** Anaerobic digestion, nutrient removal and recovery; particle separation; sludge management; small water and wastewater systems; statistics and economics; sustainability in the water sector; urban drainage; water in ancient civilisations; water reuse; and pre-treatment of industrial wastewaters.

4.2 United Nations political landscape and preparing for post-2030

This section provides a succinct overview of some future-oriented issues under discussion at the United Nations notably those addressed in the Pact for the Future (2024), SDG Summit (2023), Rio Convention processes, as well as other United Nations mandated processes related to water and sanitation.

A Pact for the Future

On the occasion of the Commemoration of the 75th Anniversary of the United Nations, Member States pledged to strengthen global governance and reinvigorate multilateralism for the common future of present and coming generations. As a follow-up, Member States agreed to convene a "Summit of the Future" in September 2024 to forge an international consensus on delivering a better present and safeguarding the future. World leaders adopted the Pact for the Future outcome document[37] on 22 September 2024.

[36] Kapelan, Zoran & Demir, Ibrahim & Freni, Gabriele. (2022). IWA Global Trends & Challenges Water Science, Research and Management - 3rd Edition. Available at: https://iwa-network.org/wp-content/uploads/2022/09/IWA_2022_Global_Trend_SG_WEB.pdf
[37] United Nations General Assembly, Resolution A/RES/79/1 adopted on 22 September 2024. Available at: https://www.undocs.org/en/A/RES/79/1

The Pact for the Future is an action-oriented document that is comprised of 56 actions organized under five themes: (1) Sustainable Development and financing for development (Actions 1-12); (2) International peace and security (Actions 13-27); Science, technology and innovation and digital cooperation (Actions 28-33); and Youth and future generations (Actions 34-56). With the Pact, water and sanitation are referred to under four sub-actions:

- Action 6(f). Address and promote the prevention of water scarcity and build resilience to drought to achieve a world in which water is a sustainable resource and ensure the availability and sustainable management of clean and safe water, sanitation and hygiene for all;
- Action 10(b). Take ambitious action to improve the health, productivity, sustainable use and resilience of the ocean and its ecosystems, and conserve and sustainably use and restore seas and freshwater resources, as well as forests, mountains, glaciers and drylands, and protect, conserve and restore biodiversity, ecosystems and wildlife;
- Action 10(d). Accelerate efforts to address the pollution of air, land and soil, fresh water and the ocean;
- Action 21(a). Ensure that science, technology and innovation contribute to our efforts to eradicate poverty in all its forms and dimensions and hunger, and to reduce inequalities, in addition to areas such as food security and nutrition, health, education, social protection, water and sanitation, energy, climate and environment.

Additionally, it is important to take note under Action 12(b), Member States agreed to "*invite the high-level political forum, under the auspices of the General Assembly, to consider in September 2027 how we will advance sustainable development by 2030 and beyond, as a priority and at the centre of our work*."

This decision officially "starts the clock" on the preparatory process for the discussion on the sustainable development agenda "beyond 2030." There will strategic opportunities to provide input into the processes leading up to the High-level Political Forum (HLPF) that will be held in 2027, notably through the in-depth review of SDG 6 that will take place during HLPF 2026 and the UN 2026 Water Conference that will be co-hosted by Senegal and the United Arab Emirates in December 2026.

2030 Agenda and emerging perspectives on possible approaches to post-2030

SDG Summit and HLPF 2023. The key message from the 2023 SDG Summit was, "Halfway to 2030, the promises enshrined in the SDGs are in peril."[38] The latest global-level data and assessments[39] paint a concerning picture: of the approximately 140 targets that can be evaluated, half of them show moderate or severe deviations from the desired trajectory.[40] Furthermore, more than 30 per cent of these targets have experienced no progress or, even worse, regression below the 2015 baseline.[41] Figure 12 below provides the progress assessment for the 17 Goals, including SDG 6. What stands out for SDG 6 is that while there is sufficient data for all targets, none are on-track to meet the target by 2030 and one-third of the targets are in stagnation or regression.

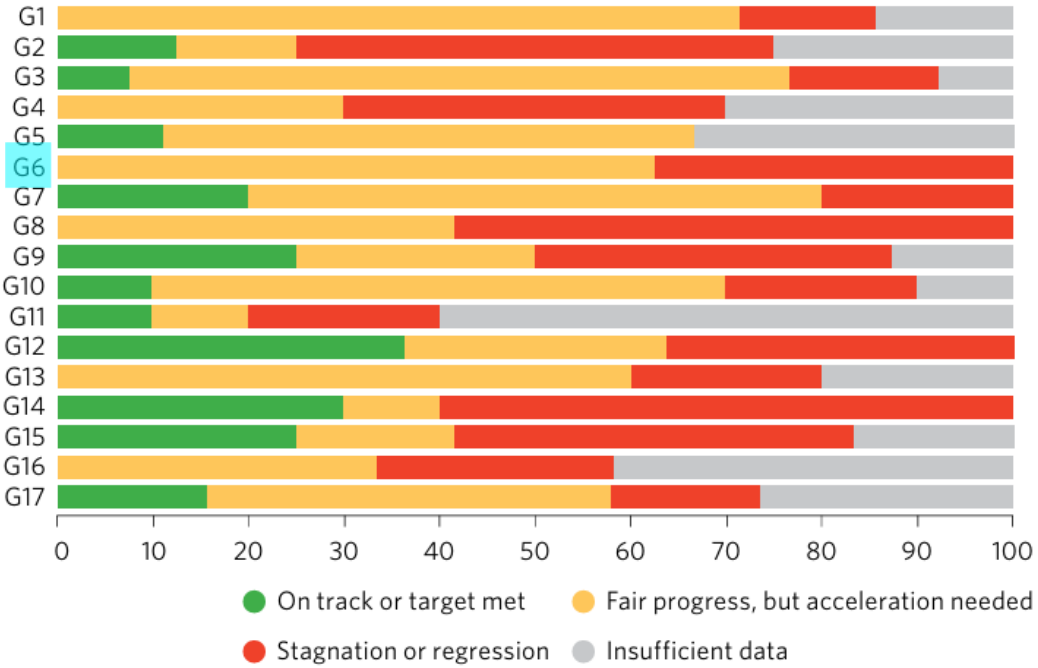
[38] United Nations, 2023. The Sustainable Development Goals Report 2023: Special Edition, Key Messages. Available at: https://unstats.un.org/sdgs/files/report/2023/SDGs_Report_Key_Messages_2023.pdf

[39] The Global and regional data and assessments for all targets and indicators for which information is available can be found in the Statistical Annex at https://unstats.un.org/sdgs/

[40] United Nations, 2023. The Sustainable Development Goals Report 2023: Special Edition. Available at: https://unstats.un.org/sdgs/report/2023/

[41] Ibid

Figure 12. Progress assessment for the 17 Goals based on assessed targets, 2023 or latest data (percentage)



Source: United Nations, *The Sustainable Development Goals Report 2023: Special Edition*

As a follow-up to the UN 2023 Water Conference and as an input to the in-depth review of SDG at HLPF 2023, UN-Water produced the *Blueprint for acceleration: SDG 6 Synthesis Report 2023*[42] which summarized progress on SDG 6 and provided recommendations based on the five SDG 6 global accelerators: financing, data and information, capacity development, innovation and governance.

Global Sustainable Development Report 2023. An independent group of experts were tasked by the United Nations General Assembly to prepare a The *United Nations Global Sustainable Development Report 2023: Times of Crisis, Times of Change: Science for Accelerating Transformations to Sustainable Development*[43] (GSDR 2023) as an input to the 2023 SDG Summit. The report highlights key transformations needed in different sectors that could significantly accelerate SDG achievement. "*Six entry points*" for sustainable development transformations were put forward in the 2019 GSDR[44]: human well-being and capabilities, sustainable and just economies, food systems and nutrition patterns, energy decarbonization and universal access, urban and peri-urban development, and the global environmental commons. The Report also identifies four levers, which related to the can be coherently deployed through each entry point to bring about the necessary transformations: governance, economy and finance, individual and collective action, and science and technology. The "levers" relate to the means of implementation and contribute to systemic change. While water and sanitation are not explicitly identified as one of the six entry points, the GSDR 2023 does find that in studies on SDG interlinkages, seven SDGs come across as particularly synergistic: SDG 1 (no poverty), SDG 3 (good health and well-being), SDG 4 (quality education), SDG 5 (gender equality), SDG 6 (water and sanitation), SDG 7 (clean and affordable energy), and SDG 17 (partnerships). These goals are repeatedly associated with co-benefits or identified as drivers of progress. Hence, strategic interventions targeting these synergistic Goals could generate simultaneous progress and important gains on several other Goals.

[42] https://www.unwater.org/publications/sdg-6-synthesis-report-2023
[43] Independent Group of Scientists appointed by the Secretary-General, Global Sustainable Development Report 2023: Times of crisis, times of change: Science for accelerating transformations to sustainable development, (United Nations, New York, 2023). https://sdgs.un.org/gsdr/gsdr2023
[44] https://sdgs.un.org/gsdr/gsdr2019

Perspectives on a possible UN global sustainable development agenda post-2030. A future post-2030 global sustainable development agenda will be decided by Member States through negotiated political processes. The process to develop the SDGs was undertaken over several years and involved a wide range of diverse stakeholders in the process.[45] While it is still early days, a few papers have already been published exploring and/or proposing possible scenarios for post-2030. A central question across all papers is whether (or not) the international consensus on the SDGs adopted in 2015 will remain.

- The journal Nature published an editorial following the 2023 SDG Summit, "*The worlds goals for saving humanity are still the best option*."[46] This article identified several challenges in the current implementation: lack of evidence that SDGs are driving changes in government policies or spending, measurement of progress towards the SDGs needs to be improved, the current structure of goals with targets and indicators has led to siloed thinking and does not capture SDG interlinkages and they cite lack of use of evidence by policy-makers as another challenge. The editors suggest that despite these limitations, "replacing the goals after 2030 would be wrong-headed", while also acknowledging that "making no adjustments would be foolhardy."
- A group of authors published a comment article in Nature, "*Extending the Sustainable Development Goals to 2050- a roadmap*[47]", which proposes to "extend and bolster the [SDG] framework." They proposed a revised global actions and timetables for several goals, including SDG 6, "*By 2050: Water systems should be aligned with the Paris climate goals, show resilience and adaptability to climate change and have net-zero emission*."
- An editorial was published in Nature, "*We must act now to save sustainability"* [48] that draws on studies of SDG interactions, that suggests the option to focus on a smaller number of cross-cutting goals — including human well-being, energy decarbonization and sustainable and just economies. It emphasizes the need to give more consideration to complementarities and trade-offs between the different SDGs.

Other relevant United Nations-related processes

There are a number of other UN-related processes with direct and indirect links to WASH systems and global monitoring that are relevant for consideration in selecting a set of core indicators for WASH to ensure alignment with global monitoring taking place as part of other inter-governmental processes.

- **Water Action Decade 2018-2028**. The on-going Water Action Decade adopted by UNGA resolution 71/222 adopted on 21 December 2016 is an important mandate for water and sanitation issues to be discussed at the United Nations. The UN 2023 Water Conference was convened as the Mid-term Comprehensive Review of the Water Action Decade. The follow-up resolution 77/334 provided five new mandates that include two water conferences in 2026 and 2028, a request to the UN Secretary-General to prepare a report during the 81st session of the UNGA, and the UN system-wide strategy for water and sanitation. The Decade will culminate with the UN 2028 Water Conference that will take place in Dushanbe, Tajikistan.
- **UN 2026 Water Conference**. The General Assembly resolution (A/78/327) entitled "*Modalities of the 2026 United Nations Water Conference to Accelerate the Implementation of Sustainable Development Goal 6: Ensure availability and sustainable management of water and sanitation for all*" has been adopted by on 6 September 2024. The Conference will be co-hosted by Senegal and the United Arab Emirates (UAE) and will be held in the UAE from 2-4 December 2026 to support the implementation of SDG 6. This Conference offers

[45] Kamau, M., Chasek, P., & O'Connor, D. (2018) Transforming Multilateral Diplomacy: The Inside Story of the Sustainable Development Goals. Routledge, New York.
[46] The world's goals to save humanity are hugely ambitious - but they are still the best option. Nature. 2023 Sep;621(7978):227-229. doi: 10.1038/d41586-023-02844-7. PMID: 37700047. https://www.nature.com/articles/d41586-023-02844-7
[47] Fuso Nerini F, Mazzucato M, Rockström J, van Asselt H, Hall JW, Matos S, Persson Å, Sovacool B, Vinuesa R, Sachs J. Extending the Sustainable Development Goals to 2050 - a road map. Nature. 2024 Jun;630(8017):555-558. doi: 10.1038/d41586-024-01754-6. PMID: 38886551. https://www.nature.com/articles/d41586-024-01754-6
[48] The Sustainable Development Goals are failing. Science can do more to save them. Nature. 2023 Jun;618(7966):647. doi: 10.1038/d41586-023-01989-9. PMID: 37340131.

a strategically timed opportunity to share proposals and build support for water and sanitation in the post-2030 sustainable development agenda.

- **UN system-wide strategy for water and sanitation (SWS).** UN SWS was endorsed by the UN System Chief Executives Board for Coordination in May 2023. UN-Water is coordinating the preparation of a four-year Collaborative Implementation Plan (CIP). ***A2A*** has been officially included by WHO and UNICEF as a Contributing Action to the CIP which will provide opportunities for greater attention and support for the initiative in upcoming UN-led and supported processes.
- **The United Nations Framework Convention on Climate Change.** Belém work programme on indicators for measuring progress achieved towards the targets of the UAE Framework for Global Climate Resilience is currently developing indicators to for measuring progress achieved towards the targets established in paragraphs 9 and 10 of the Decision[49], with a view to identifying and as needed, developing indicators and potential quantified elements for those targets. To date, two Joint UN-Water submissions have been made, co-coordinated by UNICEF and SWA in March 2024 and July 2024. Additionally, the first "Baku Water Dialogue" took place during COP 29 in Azerbaijan and is likely to continue as part of future UNFCCC COPs.
- **Financing for Development.** High-level dialogue on FFD and the UN SG launched an SDG Stimulus package. These efforts will be parlayed into the *Fourth Conference on Financing for Development* that will take place in Spain in June 2025. The Third Financing for Development Conference held in 2015 produced the Addis Ababa Action Agenda, which fed into the development of the Means of Implementation component of the 2030 Agenda and its Sustainable Development Goals. This Conference will be an opportunity for possible action related to the reform of the international financial architecture which could potentially open the door for new opportunities to amplify financing for water and sanitation. The *Zero draft: Outcome document of the Fourth International Conference on Financing for Development*[50] includes two references to "water and sanitation" as a "critical social sector" facing underinvestment (para 14) and a "significant infrastructure gap in critical sectors" (para 21).

4.3 What should be monitored in the future- *Findings from SDG 6 MOI assessment*

The WHO GLAAS team recently developed a white paper, *Improving monitoring of the Means of Implementation for water and sanitation: A strategic assessment of opportunities through 2030 and towards "post-2030,"* to provide a concise, forward-looking analysis of opportunities to further develop and improve monitoring of the means of implementation for water and sanitation (SDG 6) through 2030 and in preparation for the negotiations of the next global sustainable development agenda "post-2030". The concept and definition of 'means of implementation' is closely linked to the concepts and definitions used by many A2A partners for the "WASH system".

> The notion of ***'Means of implementation'*** describes the interdependent mix of financial resources, technology development and transfer, capacity building, inclusive and equitable globalization and trade, regional integration, as well as the creation of a national enabling environment required to implement the new sustainable development agenda, particularly in developing countries.
>
> *Source:* TST Issues Brief: Means of Implementation; Global Partnership for achieving sustainable development, 2014.

When United Nations Member States adopted the universal, integrated and transformative 2030 Agenda and its 17 Sustainable Development Goals (SDGs) in September 2015, they expressed their determination "to mobilize the means required to implement" it.[51] Given

[49] Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation referred to in decision 7/CMA.3, https://unfccc.int/documents/636595

[50] United Nations General Assembly, Zero draft: Outcome document of the Fourth International Conference on Financing for Development released on 17 January 2025. Available at https://financing.desa.un.org/ffd4/outcome

[51] United Nations General Assembly resolution A/RES/70/1, "Transforming our world: the 2030 Agenda for Sustainable Development," adopted on 25 September 2015. URL: https://undocs.org/A/RES/70/1.

the central importance of sufficient "means of implementation" to achieve the Sustainable Development Goals, Member States adopted 43 "MoI Targets" under Goals 1-16 (the MoI targets are denoted by letters- e.g., 6a, 6b) and a dedicated Goal 17: *Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development*. The MoI targets were further supported and complemented by the Third Financing for Development Conference that resulted in the Addis Ababa Action Agenda.[52] Subsequently indicators were developed to monitor and measure all the SDG targets.[53]

Two of the eight targets adopted for SDG 6: *Ensure availability and sustainable management of water and sanitation for all*, are "MoI targets". Target 6a addresses international cooperation, and Target 6b focuses on local participation to improve water and sanitation management. The UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS), led by the World Health Organization (WHO), is responsible, in collaboration with the Organisation for Economic Co-operation and Development (OECD) and United Nations Environment Programme (UNEP), for monitoring and reporting on the MoI indicators for SDG 6.

While the commitment from Member States to include "means of implementation" in the SDG agenda brings a welcome focus on the factors that enable countries to drive progress towards outcome targets, in practice the definition of MoI indicators and the monitoring thereof has proved difficult. For example, the translation of the multi-faceted MoI targets into measurable indicators has been problematic. The MoI indicators lack directionality, making meaningful data aggregation and interpretation difficult. And, unlike the SDG 6 outcome targets (6.1-6.6), the SDG MoI targets and indicators apply across all areas of SDG 6 which spans the entire water and sanitation cycle and water-relevant sectors including agriculture, energy, urban development/ municipal, industry, and the environment.

Looking ahead to the development of a possible post-2030 sustainable development agenda, key informants for the white paper generally shared the common view that future global MoI monitoring should focus on a limited number of issues that drive progress across water and sanitation-related targets and more broadly, across Goal areas of the United Nations sustainable development agenda. The topics should have the potential to significantly move the needle towards the achievement of the goals and targets over the timeframe of the Agenda. Three broad topic areas of interest for future MoI-type monitoring were highlighted: (i) financial flows for water and sanitation, (ii) other drivers of progress of sanitation, and (iii) interlinkages across the sustainable development agenda.

Financial flows for water and sanitation. Tracking funding and financing for water and sanitation were identified by most key informants as the most useful topic for future global MoI monitoring for water and sanitation. The importance of expanding SDG reporting on finance flows beyond Official Development Assistance (ODA) captured by 6.a.1 was emphasized. At present, credible data sources for government expenditure data at global level is limited for all sectors, including water and sanitation. Key informants identified two priorities for the development of potential MOI-candidate indicators: (i) tracking international cooperation financial flows beyond ODA and (ii) tracking all financial flows.

Other drivers of progress for water and sanitation. Many respondents concurred that a key criterion for the selection of MoI-type indicators should be evidence that they are "drivers of progress" or "accelerators" for water and sanitation, of which finance is the most prominent. Understanding the other vital factors that accelerate country progress and aligning across government and partners to take action to address them can lead to the transformational changes required to put the sector on course. Some of the possible topic areas suggested by

[52] Kamau, M., Chasek, P., & O'Connor, D. (2018). Transforming Multilateral Diplomacy: The Inside Story of the Sustainable Development Goals (1st ed.). Routledge. https://doi.org/10.4324/9780429491276

[53] United Nations General Assembly resolution A/RES/71/313, "Work of the Statistical Commission pertaining to the 2030 Agenda for Sustainable Development, Annex. Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda" adopted on 6 July 2017. URL: https://undocs.org/A/RES/71/313.

key informants during the review include the following: governance, capacity development, innovation and technology, data availability and quality, and human rights including "leave no one behind".

Interlinkages across the sustainable development agenda. Capturing ***interlinkages across SDGs*** more systematically was identified as an important element for consideration in post-2030 discussions. One main theme from the 2030 SDG Summit is the interlinked nature of the SDGs. While the Goals themselves tend to be centred on sectors or silos, the emerging narrative is the interconnectedness and interactions between them, that are essential to deliver sustainable development outcomes using a systems approach.

Main findings and key considerations for A2A

12. **Global megatrends and risks will affect the future demand for water and sanitation services and the challenges faced in delivering them.** A sustainable and resilient WASH-future depends on understanding these issues and strengthening WASH systems to address them.
    - Ensure forward-looking perspective by including it as a criterion for the selection of the core indicators.
    - This scan of global trends and risks only scratches the surface of frontier issues facing the WASH sector. Consider including an indicator domain dedicated to "Frontier Issues" for exploration of horizon issues and experimental new thinking on potential indicators to address them.

13. **The next two years are critical to define the international agenda for WASH post-2030.** A2A can be a platform to develop potential candidate indicators for consideration in post-2030 processes, particularly for the 'means of implementation-related' aspects.
    - Map, track and engage in international meetings and intergovernmental processes to highlight A2A approaches and learning and convene stakeholders for dialogue on WASH systems monitoring.

5. Learning from similar processes to select a set of core indicators

The process of defining and agreeing on a core set of indicators and common monitoring and review framework is not a new endeavour. The Health Sector first undertook a similar exercise over a decade ago to develop a common monitoring framework for national health system strategies, including core indicators[54] and subsequently generated a global reference list of 100 core health indicators.[55]

Similar multistakeholder processes to agree on indicators have also been facilitated by the WASH community. Examples include the development of potential candidate indicators for the post-2015 UN sustainable development agenda (e.g. future SDGs),[56] identification of priority gender-specific WASH indicators,[57] guidelines on hand hygiene in community settings,[58] as well as the on-going process to develop indicators for climate-resilient WASH services.[59]

The proposed technical approach for Phase 2 will draw on experience and learning from the Health Sector and other previous efforts by the WASH community to agree on common indicators. Section 5 will present terminology and definitions used by similar processes that can be adapted for A2A initiative (5.1), share findings from the recent SDG 6 Means of Implementation (MoI) assessment on what makes a good MoI-type indicator (5.2) and provide several examples of processes and criteria used by other similar initiatives to select and prioritize core indicators that can potentially be adapted for A2A (5.3).

5.1 Terminology and definitions

Establishing a common set of terms and their definitions is an important initial step towards the development of a core set of indicators and common monitoring and review framework.

This section will present a possible list of terms that can be useful for A2A alongside standard definitions for the same or similar terms in other processes and a proposed A2A definition. To avoid over-footnoting in this section, the list of source documents is presented in the table below. The definitions in the list of terms will reference the number of the source in this list.

[54] WHO (2011). Monitoring, evaluation and review of national health strategies: a country-led platform for information and accountability. Geneva. Available at: https://iris.who.int/bitstream/handle/10665/85877/9789241502276_eng.pdf?sequence=1
[55] 2018 Global reference list of 100 core health indicators (plus health-related SDGs). Geneva: World Health Organization; 2018 (https://iris.who.int/handle/10665/259951).
[56] https://washdata.org/sites/default/files/documents/reports/2018-03/JMP-2014-post-2015-WASH-targets-12pp.pdf
[57] https://washdata.org/reports/emory-2024-priority-gender-specific-indicators-for-wash-monitoring
[58] WHO & UNICEF are developing new global Guidelines on Hand Hygiene in Community Settings. Concept note, "Global workshop on systems for hand hygiene in community settings," Kathmandu: 24 June 2024.
[59] Climate resilient WASH, JMP/GLAAS review of indicators for global monitoring of climate resilient WASH, Available at: https://www.who.int/teams/environment-climate-change-and-health/water-sanitation-and-health/monitoring-and-evidence/monitoring-of-climate-resilience

Table 15. Source documents for terms and definitions

Source Number	Source references
1	2018 Global reference list of 100 core health indicators (plus health-related SDGs). Geneva: World Health Organization; 2018 (https://iris.who.int/handle/10665/259951).
2	An introduction to indicators. Geneva: Joint United Nations Programme on HIV/AIDS (UNAIDS); 2010 (https://www.unaids.org/sites/default/files/sub_landing/files/8_2-Intro-to-IndicatorsFMEF.pdf)
3	Common metrics for health system performance: Initial list of candidate indicators for inclusion in the slim common metrics for review and consideration by countries and partners. Strengthening PHC-oriented health system performance measurement: Aligning behind country-led plans and systems to drive impact, 25-26 June 2024. WHO, UNICEF, World Bank, Gavi, Global Financing Facility, Global Fund, USAID
4	GLAAS 2024 country survey guidance. Geneva: World Health Organization; 2024 (https://www.who.int/publications/m/item/glaas-2024-2025-country-survey)
5	Health indicators. Conceptual and operational considerations. Washington DC: Pan American Health Organization; 2018 (https://iris.paho.org/handle/10665.2/49056).
6	Huston, A. and Moriarty, P. (2021) Building Strong WASH Systems for the SDGs: Understanding the WASH System and Its Building Blocks. IRC Working Paper. (https://www.ircwash.org/washsystems)
7	OECD (2018), *Implementing the OECD Principles on Water Governance: Indicator Framework and Evolving Practices*, OECD Studies on Water, OECD Publishing, Paris, https://doi.org/10.1787/9789264292659-en.
8	UNEP-WCMC (2024) Guidance for developing plans for national monitoring systems in support of the Kunming-Montreal Global Biodiversity Framework. 26pp. Cambridge, UK. (https://www.learningfornature.org/wp-content/uploads/2024/10/Guidance-for-plans-for-national-monitoring-systems-Final-Sept24-ENGLISH.pdf)
9	UNICEF WASH systems strengthening: reference guide for programming; 2025 (https://knowledge.unicef.org/wash/resource/unicef-wash-systems-strengthening-framework)
10	UN General Assembly Resolution 70/1 (2015) - Transforming our world: the 2030 Agenda for Sustainable Development.
11	Water, Sanitation and Hygiene Terminology Guide, UNICEF; 2024 (https://knowledge.unicef.org/wash/resource/water-sanitation-and-hygiene-terminology-guideunicef)
12	WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) (https://washdata.org/)
13	WHO (2011) Monitoring, Evaluation and Review of National Health Strategies: Country Platform for Information and Accountability. Geneva (https://www.who.int/publications/i/item/9789241502276)
14	World Health Organization (https://www.who.int/health-topics/water-sanitation-and-hygiene-wash#)
15	Wong, C. (2014). Indicator Selection Criteria. In: Michalos, A.C. (eds) Encyclopedia of Quality of Life and Well-Being Research. Springer, Dordrecht. https://doi.org/10.1007/978-94-007-0753-5_1428
16	Demystifying the M&E framework: A guide for effective evaluation [website]. Evalcommunity (https://www.evalcommunity.com/career-center/me-framework/

A list of relevant terms, definitions from published literature and proposed definitions for A2A are presented below in Table 16.

Table 16. Proposed list of A2 terms and definitions

Term	Definition	Source[60]
Core indicator	Core indicators may be defined in collaboration with all key stakeholders (e.g. ministry of health, national statistics office, other relevant ministries, professional organizations, experts, and major disease-focused programmes), and depends on the priority monitoring requirements related to health and health-related SDGs, among other health priorities.	1
Data	Specific quantitative and qualitative information or facts that are collected and analyzed.	2
External Factors	Factors that influence the WASH sector, but that are not within the mandates of the WASH sector. These include inter alia: structural factors such as demography, geography, economy, and institutional factors such as decentralization, social norms, anti-corruption means and provisions and public finance management	9
Impact	Higher level long-term goals	4
Impact indicator	impact indicators measure usually long-term results (e.g. improved health, water security)	7
	Measures the ultimate objective that programmes are designed to affect, such as decreases in mortality and morbidity. Sometimes referred to as long-term outcome (21).	1
Indicator	A quantitative or qualitative variable that provides a valid and reliable way to measure achievement, assess performance or reflect changes connected to an activity, project or programme.	2
Indicator definition	How the indicator is measured, including numerators, denominators, data type and disaggregation in common use. The indicator definition should be unambiguous and be expressed in universally applicable terms.	5
Indicator domain	Categorization of health-related indicators into general groupings.	1
	Proposed A2A definition. Categorization of WASH-related indicators into general groupings.	*for review*
Indicator domain family	A collection of inter-related indicator domains or sub-domains	*for review*
Indicator Selection Criteria	Indicator selection criteria are a set of guiding principles used to systematically assess the value and practicalities of potential indicators for measuring the phenomenon concerned. This should be seen as part of the indicator methodology.	15
Indicator set	A useful collection or grouping of related indicators. The nature of the relationship between indicators in a set can vary; for example, there can be indicators grouped by their utility in global, national, subnational, thematic and/or project settings.	2
Input	Financial, human, and other resources mobilized to support activities undertaken to achieve results	4

[60] The number in the 'source' column refers to table 15 above.

Input indicator	Input indicators can measure the inputs needed to produce the outputs, e.g. in terms of legal and policy instruments, human/financial resources; process indicators monitor actions contributing to the achievement of outcomes (e.g. planning, budgeting, service delivery, etc.)	7
	Measures human and financial resources, physical facilities, equipment and operational policies that enable programme activities to be implemented.	1
Logical framework (or results chain)	Management tool used in the design of a programme or project. It correlates key strategic elements, including objectives, inputs, outputs, outcomes and impact, with indicators as well as the assumptions and risks that may affect the implementation of the programme or project. Logframes are useful for the planning, execution and evaluation of programmes and projects.	2
Measure	A standard unit used to express the size, amount, or degree of something.	5
Measurement	Refers to the extent, dimension, quantity, etc. of an attribute.	5
Metric	A standard of measurement. For example, indicators use a quantitative or qualitative metric to measure the impact of programmes, projects and activities.	2
Monitoring	Routine tracking and reporting of priority information about a programme and its intended outputs and outcomes.	2
	A continuous process of collecting and analysing data for performance indicators to compare how well a development intervention, partnership or policy reform is being implemented against expected results (achievement of outputs and progress toward outcomes).	11
Monitoring and evaluation (M&E) framework	A structured and systematic tool used in project management and programme implementation to assess performance, measure outcomes, and ensure the achievement of objectives. It consists of several core components, including clear project objectives, key performance indicators, data collection methods, data sources, and responsibilities. It defines how data will be collected, analysed and reported, ensuring that the project or programme remains on track (100,101).	16
	Monitoring, evaluation and review of activities of the national health strategy. It provides a logical and results-chain representation of the key components of the national health system monitoring and evaluation.	13
Monitoring and review framework	***Proposed definition for A2A.*** Guidance on operationalizing monitoring and review of activities as part of National WASH policies, plans, and/or strategies	*for review*
National monitoring indicators	***Proposed definition for A2A.*** A set of indicators that are monitored to assess progress of the National WASH policies, plans, and/or strategies. These indicators may be established within the National WASH policies, plans, and/or strategies or may be defined in a separate monitoring and evaluation plan for the respective strategy/plan/ policy. *(based on GLAAS country survey guidance*)	*for review*

National monitoring system	A nationally-mandated system for the production of data, indicators and reports to periodically measure and monitor implementation of the GBF through NBSAPs.	8
	Proposed definition for A2A. A nationally-mandated system for the production of data, indicators and reports to periodically measure and monitor implementation of National WASH policies, plans, and/or strategies	*for review*
Outcome	Uptake, adoption or use of outputs by beneficiaries	4
Outcome indicator	Outcome indicators measure short- to medium-term results generated by such outputs (e.g. service expansion and quality improvement)	7
	Measures whether the programme is achieving the expected effects/changes in the short, intermediate and long term, such as changes in intervention coverage or health-related behaviours. Some programmes refer to their longest-term/most distal outcome indicators as impact indicators (21).	1
Output	Events, products, capital goods or services that result from an intervention (e.g. process/activity)	4
Output indicator	Output indicators are related to results of inputs and process, for example in terms of the number of wastewater treatment plants built, the volume of water produced, fees collected, etc.	7
	Measures the immediate products provided or services delivered as a result of the processes conducted in a programme or project	1
Process	Action taken or work performed by which inputs are converted into specific outputs	4
Process indicator	Measures a programme's activities. This indicates whether the programme is being implemented as planned.	1
Set of core indicators	A slim sub-set of indicators with standard definitions that can be used by countries and can help provide a shared understanding among country stakeholders, partners and donors on how countries are making progress towards PHC oriented health systems. They can be used to guide country level action and investment and to inform global partner reporting and to demonstrate the impact of investments.	3
	Proposed definition for A2A. A useful, slim collection of indicators with standard definitions that can be used by countries and can help provide a shared understanding among stakeholders of the strength and performance of the WASH system. The overall set of core indicators should be coherent and balanced.	*for review*
WASH	Water supply, sanitation and hygiene (JMP)	12
	Safe drinking water, sanitation and hygiene (WHO)	14
	Water, sanitation and hygiene - as defined under the internationally-agreed Sustainable Development Goals (SDG) framework of the United Nations 2030 Agenda for Sustainable Development: Indicator 6.1.1 Safely managed drinking water services Indicator 6.2.1 (a) Safely managed sanitation services and (b) hygiene (a hand-washing facility with soap and water) Indicator 6.3.1 Proportion of domestic and industrial wastewater flows safely treated Additionally, this includes the WASH-related components of ambient water quality monitored by SDG indicator 6.3.2, as well as SDG	10

	targets 6.4 water efficiency and stress, 6.5 water resources management including transboundary, 6.6 freshwater eco-systems and the two SDG 6 means of implementation targets 6a international cooperation (official development assistance) and 6b participation and their respective indicators.	
WASH system	Refers here to the entire set of hydro-social relations that make possible the distribution of water, sanitation, and hygiene services. In this encompassing understanding, a WASH system involves a wide range of layered and interconnected actors and their interactions. Using the categories of UNICEF's Enabling Environment, the WASH system includes the WASH sector and its governance institutions and processes (the building blocks), in addition to the broader context (structural and institutional factors and political leadership) that influences the management of the sector and its policies, capacities, regulations, monitoring, institutions, and financing. When WASH systems are strong and resilient, they deliver services that last and meet people's needs. (UNICEF)	11
	All the social, technical, institutional, environmental and financial factors, actors, motivations and interactions that influence WASH service delivery in a given context. (IRC)	6

5.2 What makes a good indicator- *Findings from the strategic assessment of SDG 6 MoIs*

The recent WHO GLAAS strategic assessment of SDG 6 MOI monitoring asked key informants the following question:

> *Based on the current experience of MoI monitoring during the 2030 Agenda, how could the approach to monitoring MoI be better designed to be more useful and meaningful in the sustainable development agenda post-2030?*

Overall, key informants acknowledged that there many limitations and constraints of the current MoI targets and indicators, and that they could be better formulated in the future**.** Based on lessons learnt from current SDG MoI monitoring efforts, the strategic assessment compiled feedback from the key informants on the characteristics of "good" or at least "better" MoI-type indicators. The characteristics generally fit into three categories: form, function and feasibility (see box below).

Box. Possible criteria for the selection of future MoI targets and indicators

Function

- Central to accelerating progress, be a "driver of change," reasonable predictors of achieving success for different typologies, supported by evidence
- Useful for decision-making at national policy-making and international level (consider political dimensions)
- "Net positive" for sector, not adding negative burden elsewhere
- Has "forward-looking" relevance for the sector (what will sector look like in 2045?)
- Is an area where measurable progress and incrementable improvements can be made in the timeframe of post-2030 (re-consider binary indicators that can be stagnant for long periods)
- Have a clear results target. Necessary for transparency. Need to be able to monitor and report on where we are relative to where we need to get to.
- Reporting over time will produce a country-level and sector-wide progress narrative. Can inform discussions on how to "move the needle."
- Indicator should be responsive actions countries are taking towards their target
- Can be aggregated across countries and comparable for benchmarking
- Is relevant and can be contextualized for different settings – income level, SDG region, water resources context (water rich vs. water scarce), etc.
- Go beyond basic to provide not only a minimum but also more ambitious, aspirational levels

Form

- Credible, objective, independently verifiable sources
- Includes baseline/target values to provide a "direction of travel" for the sector to aim for and measure progress towards
- Simplify, avoid compound indicators that are impossible to decouple.
- Small number of proxy indicators
- Should not revolve around use of any specific methods or "tools"

Feasibility

- Maturity of indicators – tested and validated for country-level monitoring
- Pipeline for data availability and quality from national monitoring systems (collectable via different typologies of governance models- centralized and decentralized governance models)
- Collected through routine monitoring, measured in "real-time"
- Should have a small error bar
- Data can be aggregated at national level for global reporting

It was generally agreed that MoI indicators should be "drivers of change," useful for policy dialogue and decision-making at national and international levels, "net positives" for the sector (not adding negative burden elsewhere) and forward looking towards where the sector should strive to be in 2045. Country focal points added that the MoIs should focus on areas that are gaps and need correction through policy action or additional resources. Country focal points also recommended that MoI indicators should be designed such that progress on the indicator should be visible if action is taken within a monitoring cycle so that there is a positive feedback loop between action taken and results achieved. MoI indicators should also have a clear home for the designated responsible monitoring focal point in country – same as for example a Sanitation Department for 6.2.

Many key informants emphasized that MoI indicators should have targets and baselines to facilitate monitoring and reporting on where we are relative to where we need to get to with a clear "direction of travel" for the sector to aim for and measure progress towards. To the extent possible, data should be able to be collected through routine national monitoring systems. A more comprehensive list of possible criteria for the development and selection of future candidate MoI targets and indicators is presented below in a box.

Key informants also emphasized the need for a stronger relationship between MoI (letter) targets and indicators with outcome (number) targets across Goal 6. There was strong agreement that the means of implementation, which are inputs and processes, are only meaningful to monitor when linked to sustainable development outcomes and impacts. This recommendation reinforces the approach of A2A to link WASH systems indicators across a results chain.

5.3 Processes and criteria for selection and prioritisation of indicators – *learning from others*

This section summarises the processes and criteria used by six multi-stakeholder processes to select core indicators. These include two examples from the health sector, UNAIDS, OECD Water Governance Indicator Framework, Priority Gender-specific WASH indicators, and the SDG post-2015 process. The A2A initiative can learn from and consider how best to adapt elements from these examples to develop the technical approach to determine the indicator domains and select core indicators for the WASH system.

Common metrics for Health Systems performance. In 2023, major health systems partners undertook a process to agree on a slim set of "*Common metrics for Health Systems performance"* in response to a demand from Member States to development partners to improve alignment to reduce fragmentation and streamline monitoring and reporting processes for countries. WHO, GFF, Gavi, TGF, World Bank, UNICEF, USAID formed a technical working group (TWG) to identify a common set of health system (HS) metrics to measure the strength of health systems and track impact of health systems investments towards UHC, based on a PHC approach. The proposed candidate indicators draw from existing key health systems indicators that have already been consulted by Member States. They have been selected to reflect key health systems' functions.

Recommended assessment criteria for selection of the proposed set of common metrics for health systems includes:

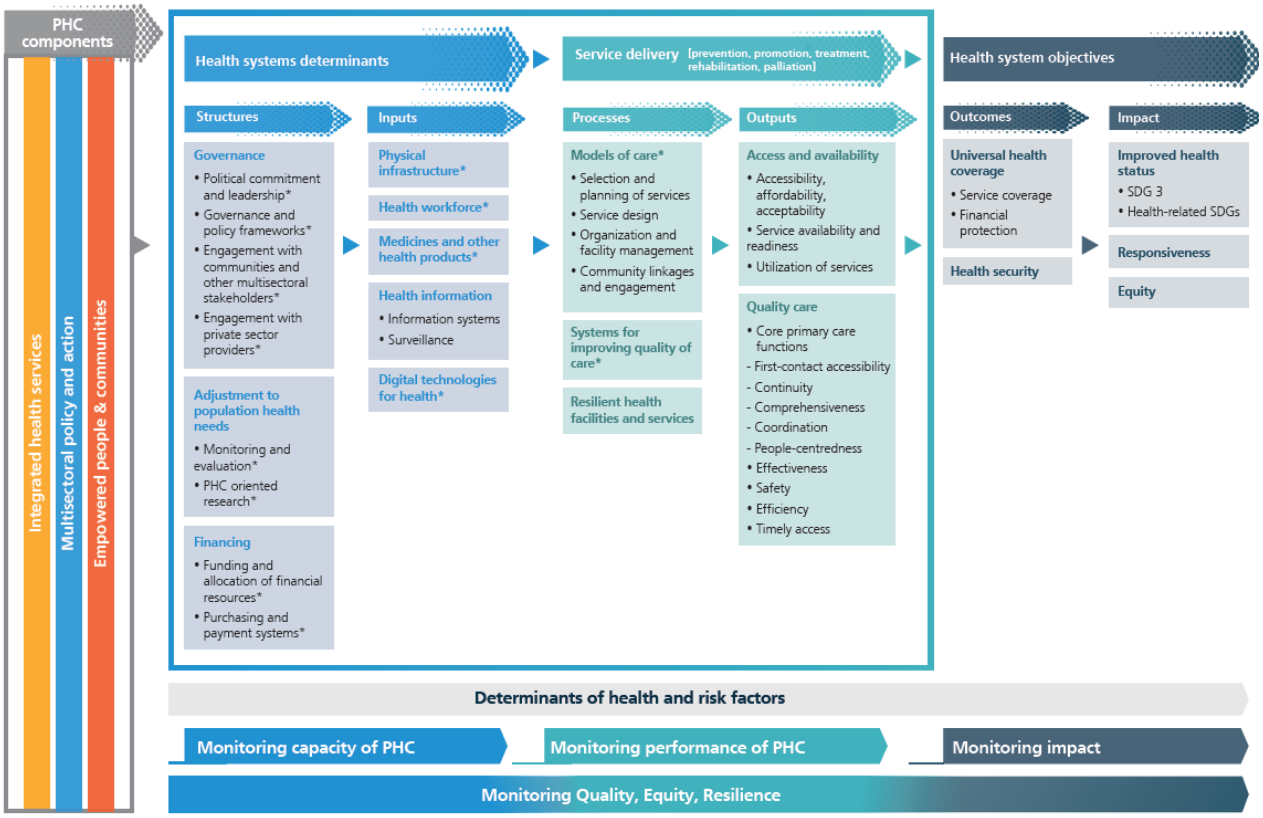
- Few in number: Ideally 16 items or less
- Relevant, actionable and sensitive to change
- High priority for countries to monitor progress and generated through country data systems
- Priority for partners and can inform partner reporting requirements
- Drawn from existing international & national lists with standard definitions

An initial working proposal of candidate indicators for the set of common health system metrics was developed for further review, inputs and validation. The initial proposal includes ***24 indicators across 8 core domains***. The

proposed subset of common metrics will be further consulted with countries to ensure that they are fit for purpose and meet their needs and that they can be generated through country data systems.

One important distinction between the WASH Sector and Health Sector is that the Health Sector had an existing agreed common framework which already defined the indicator domains from which the core indicators would be selected. For the health sector, the indicator domains are associated with specific parts of the results chain, as shown below in Figure 13.

Figure 13. Primary Health Care monitoring conceptual framework



Source. Primary health care measurement framework and indicators: monitoring health systems through a primary health care lens. Geneva: World Health Organization and the United Nations Children's Fund (UNICEF), 2022. Licence: CC BY-NC-SA 3.0 IGO.

As no such common 'conceptual monitoring framework' exists for WASH, the relevant indicator domains for the WASH system will need to be determined before preceding to the identification and prioritization of core indicators.

WHO 2018 Global reference list of health indicators[61]: The overall aim of The Global Reference List is to serve as a normative guidance for the selection of standard indicators and their definitions that countries and partners stakeholders can use for monitoring in accordance with their respective health priorities and capacity. The *2015 Global Reference List* was developed based on an initial landscaping exercise that took stock of existing global indicator sets that were developed through (i) monitoring of international commitments and resolutions by which governments have committed their countries, such as United Nations and World Health Assembly declarations and resolutions 3; and (ii) Disease and programme-specific indicators and reporting requirements

[61] 2018 Global reference list of 100 core health indicators (plus health-related SDGs). Geneva: World Health Organization; 2018 (https://iris.who.int/handle/10665/259951).

recommended through technical monitoring and evaluation reference groups and processes involving United Nations, multilateral and bilateral agencies, and countries. The 2018 Global Reference List has been updated to reflect the evolving public health priorities and new or revised indicator and reporting requirements.

Criteria for prioritizing indicators as core Indicators have been categorised as either "Core" or "Additional".

- *Core indicator*: An indicator is prioritized as "core" and included in The Global Reference List if it meets all of the following criteria:
  1. The indicator is prominent in the monitoring of major international declarations to which all member states have agreed or has been identified through international mechanisms such as reference or interagency groups as a priority indicator in specific programme areas.
  2. The indicator is scientifically robust, useful, accessible, understandable as well as specific, measurable, achievable, relevant and timebound (SMART).
  3. There is a strong track record of extensive measurement experience with the indicator (preferably supported by an international database).
  4. The indicator is being used by countries in the monitoring of national plans and programmes.
- *Additional indicator:* An indicator is categorized as "additional" if it is considered relevant and desirable but did not meet all the criteria mentioned above. In many cases, these indicators have serious measurement issues and there is little measurement experience associated with them. They have been included in the list as an additional document as they are considered important that require further development.

UNAIDS: An introduction to indicators[62]:

Indicators should be selected carefully and systematically. It is important to consider the context or the environment in which they will be deployed. It is equally important to take into account any existing or applicable indicator frameworks that are relevant to the context. In addition, all potential indicators should be evaluated using the international indicator standards to ensure that they can and will provide useful data. They should be drawn from harmonized and/ or widely used indicator sets that have a successful track record. Proven indicators and indicator sets are available through the UNAIDS Indicator Registry: www.indicatorregistry.org

Indicator standards. Under the auspices of the MERG a set of Indicator Standards & Tools has been has developed. The standards are designed to be broadly applicable in different settings with different indicators. The tools are designed to assess indicators and determine their quality and utility. Taken together, the standards and tools make it easier to deploy practical indicators that provide valuable information on changes in the epidemic and on the effectiveness of the response.

A good indicator should meet the following five standards:

a. The indicator is needed and useful.
b. The indicator has technical merit.
c. The indicator is fully defined.
d. It is feasible to measure the indicator.
e. The indicator has been field-tested or used operationally.

In addition, where indicators are presented as part of a set, this set should meet a sixth standard: *The overall set is coherent and balanced.*

[62] An introduction to indicators. Geneva: Joint United Nations Programme on HIV/AIDS (UNAIDS); 2010 (https://www.unaids.org/sites/default/files/sub_landing/files/8_2-Intro-to-IndicatorsFMEF.pdf)

OECD Water Governance Indicator Framework[63]: The Water Governance Indicator Framework is composed of 36 water governance indicators (input and process), and a checklist containing 106 questions on water governance. It is complemented by an Action Plan for discussion on future improvements. Five main key challenges can be highlighted when dealing with governance indicators. The challenges are related to the complexity of the water governance dimensions to be assessed; data availability; data collection through expert views; comparability over space and time; and the difficulty in drawing causality linkages between outcomes measured by indicators and policies aiming at generating certain impacts.

Developing governance indicators according to recognised criteria can help overcome the above-mentioned caveats. A number of criteria to assess indicators quality and adequacy are commonly used to provide guidelines for their selection, such as: Specific, Measurable, Achievable, Relevant and Time-bound (SMART); Relevant, Accepted, Credible, Easy, Robust (RACER); and Clear, Relevant, Economic, Adequate and Monitorable (CREAM) (European Commission, 2017).

Inspired by these criteria and by the discussions within the OECD Water Governance Initiative, some key characteristics for water governance indicators have been identified, such as: be relevant (according to the purpose of the measurement); be participative (in their development); be practical (in the production and collection considering resources and time constraints), and be realistic (in terms of how they will be used). Guiding questions are reported in Table 17.

Table 17. A checklist for robust indicators

Objective	Criteria	Questions
Make it relevant	Suitable	Is the indicator fit for the purpose?
	Appropriate	Is the indicator appropriate according to the scale?
	Flexible	Is the indicator adaptable to different scales, time, local circumstances?
Make it participatory	Agreed	Do stakeholders agree on exactly what the indicator measures?
	Shared	Have different views been shared to produce valuable information?
	Owned	Do stakeholders contribute to data production and collection?
Make it practical	Clear	Is the indicator clearly understandable?
	Affordable	Is information available at reasonable cost?
	Easy	Will data be easy to collect?
Make it real	Valid	Has the indicator been validated through a "test "process?
	Reliable	Will the indicator represent a consistent measure over time?
	Useful	Will the information be useful for decision making, accountability and learning?

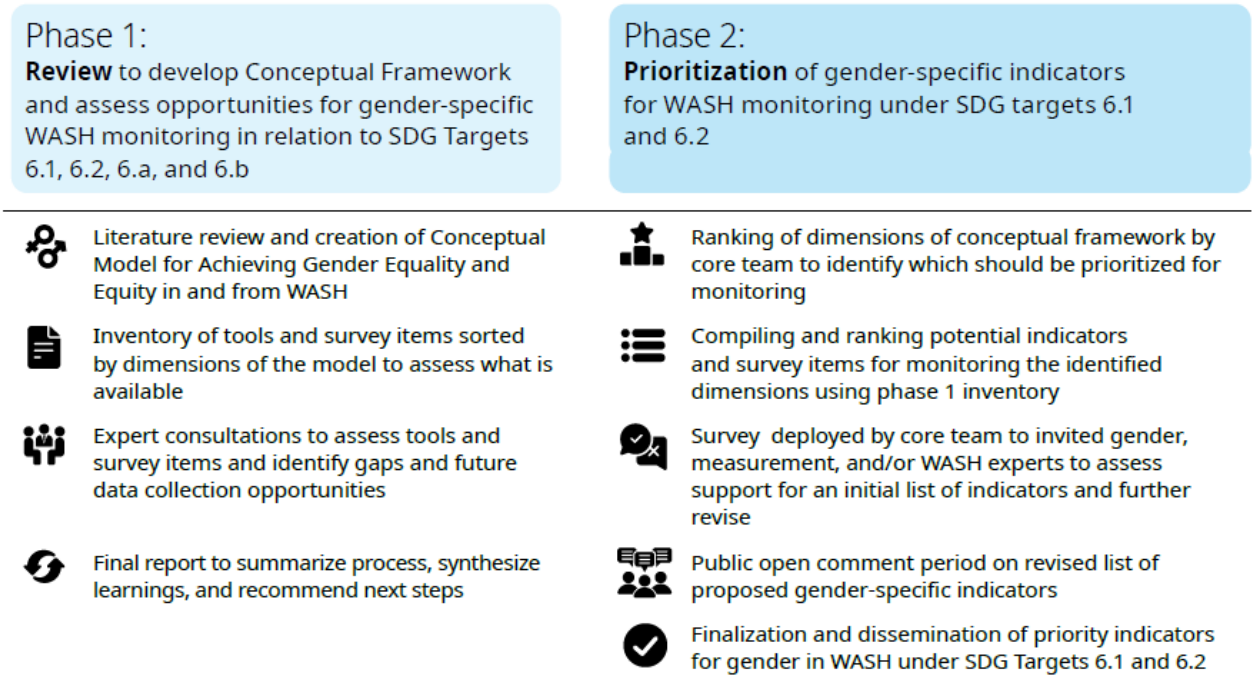
Source: OECD (2018), Implementing the OECD Principles on Water Governance: Indicator Framework and Evolving Practices, OECD Studies on Water, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264292659-en. Criteria and questions have been adapted from: Adaptation Fund (2011), "Project level results framework and baseline guideline document", www.oecd.org/env/cc/48332155.pdf.

Priority Gender-specific WASH indicators[64]. Emory University led a multi-year, multi-phase initiative to review opportunities for enhanced monitoring of gender under SDG WASH targets 6.1, 6.2, 6.a, and 6.b, and to identify priority gender-specific indicators for integration into national, regional, and global monitoring efforts. The two-phase process used to prioritize gender-specific WASH indicators is presented below in Figure 14.

[63] OECD (2018), Implementing the OECD Principles on Water Governance: Indicator Framework and Evolving Practices, OECD Studies on Water, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264292659-en

[64] Caruso, B.A., Salinger, A., Patrick, M., Conrad, A., & Sinharoy, S. 2021. A Review of Measures and Indicators for Gender in WASH. WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation, and Hygiene, June 2021.

Figure 14. Phases and Activities Informing Prioritization of Gender-Specific WASH Indicators under SDG targets 6.1 and 6.2



The dimensions of the conceptual framework were ranked by the core team using five criteria to identify which should be prioritized for monitoring. The five criteria used for ranking the dimensions are as follows:

1. **Evidence of importance/relevance.** There is evidence that the theme is important and/or relevant to measuring gender in WASH. Evidence can be of varied forms, including formal research, links to discourse on human rights, noted importance or prioritization in other realms, etc.
2. **Measurability.** The theme or components of the theme are measured (e.g. by surveys). In later stages we will assess strengths of various measure criteria more specifically.
3. **Potential for change over time.** The theme or components of the theme have the potential to change over time, and change can be seen in reasonable time frames (e.g. not only after 20 years or more) with change accomplished through WASH-specific actions.
4. **Comparability.** The theme or components of the theme are comparable across different countries, populations.
5. **Usefulness to Practitioners, Policy Makers.** Data generated by the theme has potential to be of use to and/or addressed by policy makers, practitioners.

For each dimension, the scores for each of the five criteria were visually represented using a spider graph. The results were then compared to determine which of the dimension were considered the most important to monitor. The results of the ranking for two dimensions are presented below in Figure 15.

While for this process, these criteria were used for ranking and prioritizing “dimensions” (analogous to A2A “indicator domains”) for monitoring, potentially the same or similar criteria and process could be adapted for A2A to prioritize core indicators.

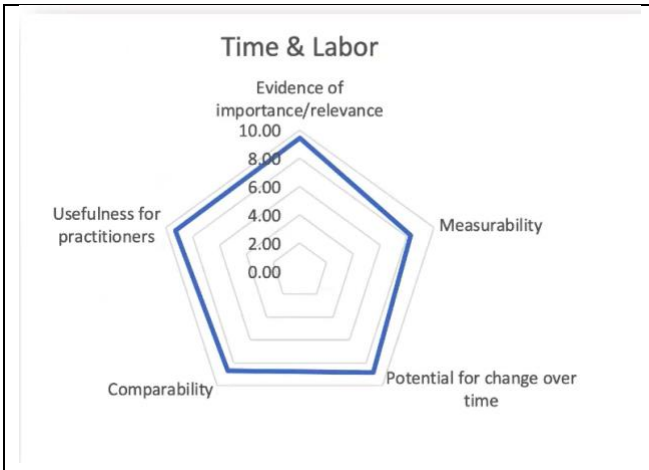


Figure 15 (a). Results of ranking for time and labor (water)

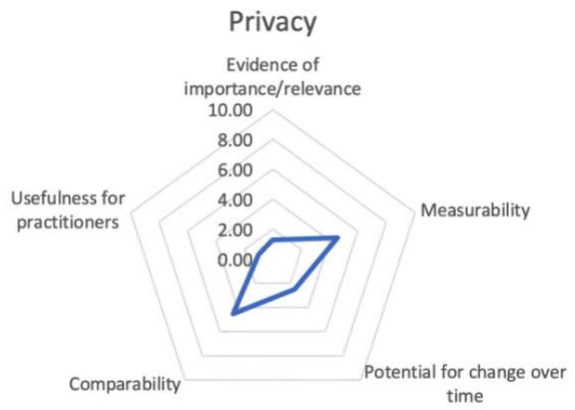


Figure 15 (b). Results of ranking for privacy (water)

Discussion paper on Principles of Using Quantification to Operationalize the SDGs and Criteria for Indicator Selection[65]**:** Building on the lessons learnt with the MDGs, this discussion paper produced by the United Nations Statistical Division proposed principles to be considered in the selection of indicators for the SDG indicator framework:

- **Universal with national adaptation:** Setting quantified targets or quantified objectives for the indicators at the global level can effectively galvanize action around the world. Global quantified objectives must be tailored and customized to reflect country-specific circumstances in order to make them both ambitious and realistically achievable. It is essential to generate country ownership and encourage countries to strive for accelerated progress.
- **Consistent with existing international frameworks and agreements:** Numerical target or objective setting should be consistent and coherent with the numerical targets or commitments in existing international frameworks and agreements or new agreements that will be reached.
- **Ambitious but achievable:** Numerical objective setting should be realistically set – ambitious but achievable. Quantification should be ambitious enough to focus policymakers and public attention and efforts but not so ambitious or vague as to sound more aspirational than realistic. It is important to distinguish targets and long-term vision.
- **Setting a baseline:** The SDGs framework implicitly sets the baseline year as the year 2015. Setting a baseline value is an invaluable process for quantitative target or objective setting.
- **Forward looking:** Quantitative objective setting should not only be based on historical data and merely provide mechanical extrapolation of the ongoing trends. The outlook over the next 15 years may be significantly different from the past 15 years. Quantification should be forward-looking and take into consideration emerging and future changes and population dynamics.

[65] *Discussion paper on Principles of Using Quantification to Operationalize the SDGs and Criteria for Indicator Selection*, United Nations Statistical Division; Expert Group Meeting on the indicator framework for the post-2015 development agenda- New York - 25-26 February 2015. Available at: https://unstats.un.org/unsd/post-2015/activities/egm-on-indicator-framework/docs/Background%20note_Principles%20of%20using%20quantification%20to%20operationalize%20the%20SDGs%20and%20criteria%20for%20indicator%20selection_Feb2015.pdf

- **A participatory process:** Quantitative objective setting should engage all stakeholders in the process and discuss what can be expected in the future. A participatory process helps to build ownership and secure commitment to reach the target.

The "Chapeau" of the Open Working group SDGs[66] proposal states that "The sustainable development goals are accompanied by targets and will be further elaborated through indicators focused on measurable outcomes. They are action-oriented, global in nature and universally applicable. They take into account different national realities, capacities and levels of development and respect national policies and priorities". This provides the guiding principle for indicator selection. The set of proposed criteria for indicator selection are modified based on the paper "Lessons Learned from MDG Monitoring" produced by the IAEG-MDGs.

The SDGs indicators should be:

1. Relevant

1.1. Linked to the target: The indicator should be clearly linked to one or more targets and provide robust measures of progress towards the target(s).

1.2. Policy relevant: The indicator should be relevant to policy formulation and provide enough information for policy making. It should also be sensitive and responsive to policy interventions and other underlying causes of change at the appropriate level (global, regional, national, and local).

1.3. Applicable at the appropriate level: For global monitoring, the indicator should be relevant to all countries. For national monitoring, the indicator should be relevant to national priorities.

2. Methodologically sound

2.1. Based on sound methodology: The indicator should be scientifically robust and based, to the greatest extent possible, on existing internationally agreed definitions, classifications, standards, recommendations and best practices. The methodology behind the indicator (data sources, method of computation, treatment of missing values, regional estimates, need to be fully documented.

2.3. Coherent and complementary: The indicator should be consistent with and complementary to other indicators in the monitoring framework. It will be useful to develop an inter-dependency map to show the information required and the relationship between the indicators.

3. Measurable

3.1. Stable and sustainable: The indicator should be measured in a cost-effective and practical manner by countries. A regular and timely data collection mechanism has been or can be developed with reasonable costs and effort. To the greatest extent possible, indicators should be constructed from well-established sources of public and private data. The statistical capacity or potential capacity for data collection and analysis to support the indicator must exist at national and international levels.

3.2. Disaggregated: It should be possible to disaggregate the indicator by geographical region, sex, income, or special population groups where applicable and relevant.

3.3. Managed by one or more responsible agencies: There is one or more designated lead responsible agencies for timely and high quality reporting of the indicator and for undertaking the related analysis. At the international level, there should be an agency or agencies responsible for the production of country-level data, regional aggregates, development and dissemination of concepts, methods and analysis used, describing the assessment of progress made globally and by regions. In addition, the agency should provide guidance and/or assistance to countries to strengthen their capacity to produce the indicators.

[66] Open Working Group of the General Assembly on Sustainable Development Goals is issued as document A/68/970, available at http://undocs.org/A/68/970

4. Easy to communicate and access

4.1. Easy to interpret and communicate: The indicator is clear and easy to understand for policy makers, the general public and other stakeholders, and unambiguous for interpreting. Use of language and terminology and the presentation of information should be carefully considered. In some cases where scientific concepts and terminology have to be used, statistical training should be provided to policy makers and the general public.

4.2. Easily accessible: The indicator should be easily and openly accessible to the general public, policy makers and other stakeholders.

5. Limited in number and outcome focused at the global level

5.1. Limited in number: One of the main strengths of the MDGs was their focus on a limited number of indicators, which made the framework clear and manageable. A long list of indicators is neither communicable nor effective in galvanizing public support. The number of indicators at the global level should be minimal. At the national level, supplemental indicators can be added according to national priorities and circumstances to address their specific needs.

5.2. Outcome focused: When possible, indicators should be mainly outcome focused. In the absence of reliable outcome indicators, process or input indicators can be used.

Main findings and key considerations for A2A

14. **Establishing common terminology with clear definitions is an essential foundation for Phase 2.**
    - The proposed list of terms with definitions provided in Section 5.1 will be included in the *A2A Discussion Paper* for consultation.

15. **Indicator selection criteria and the processes used by others can be adapted for A2A.** While selection of core indicators is not a new endeavour, each process also has its own context and specificities. For example, as the "WASH system" does not already have an agreed conceptual framework or monitoring framework already in place, an additional step will be required to define the indicator domains (or as suggested previously, 'indicator domain families').
    - A2A can draw on the examples of criteria and processes presented in Section 5.3 to develop an "A2A-specific" technical approach for Phase 2.

6. Summary of main findings and key considerations for A2A

This *Background Paper* has identified 15 main findings and key considerations for the A2A initiative. They are summarized below in Table 18. The findings and considerations will be carried forward into the companion *A2A Discussion Paper*.

Table 18. Summary of main findings and key considerations for A2A

No.	Main Findings and key considerations
1	**Frameworks include various combinations of sub-sectors within and beyond 'WASH'.** According to the JMP, WASH is defined as safe drinking-water, sanitation and hygiene. While 'WASH' frameworks accounted for the largest portion in the assessment, it was evident that key stakeholders, notably International Financial Institutions (IFIs) and governments, tend to use frameworks that are not aligned with 'WASH': in general, they do not address 'hygiene' and do address water resources management, multiple uses of water (e.g. industrial, agricultural), and in some cases freshwater eco-systems. This can be interpreted as a concrete demonstration of a greater integration between not only water resources management and WASH, but also linkages across the whole water cycle. Additionally, WASH in institutions were clearly mentioned in some frameworks and while not explicit in others. The assessment also noted observable variations between the content included in the sub-sector-specific frameworks (e.g., market-based sanitation (MBS), faecal sludge management (FSM), Menstrual Health and Hygiene (MHH), WASH in Health Care Facilities, etc.). • *Looking ahead to Phase 2*, it will be important for the A2A initiative to a) define the sub-sectors that will be included in the selection of the set of core indicators and b) decide how to address sub-sector specificities while maintaining a "slim" subset of core indicators for the WASH system will need to be considered during Phase 2.
2	**Outlier topics merit further consideration as possible gaps in current approaches and/or potential frontier issues.** As noted previously, the main limitation of this assessment in the context of A2A, is that it maps what is 'common' across frameworks which is central to improving alignment; however, reviewing what exists does not answer the broader question of *what should be monitored* in terms of what is most meaningful to monitor. Thus, in addition to noting the most common indicator domain groupings across frameworks, it is also interesting to note some of the less frequently cited areas also reflected across the framework in only 1 or 2 frameworks. Some of the frameworks newly released or still under development bring up new topics (e.g. Utility of the Future, WaterGov benchmark, Financing scorecards, SANEMAT, etc.). The assessment also identified innovative monitoring methods such as Uganda's customer satisfaction index. • For Phase 2, 'outlier areas' could be given attention to identify potential 'frontier issues' that could be further explored and developed as a forward-looking element of the core set of indicators. It is recommended to consider dedicating an indicator domain to potential frontier issues that could be further explored in Phase 2 and developed across future phases of A2A.
3	**Common WASH frameworks topics tend to be transversal across the results chain segments.** By assessing this set of frameworks across results chain, it is readily apparent that related topics are present in varying forms at multiple segments of the results chain. A concrete example is 'Finance' which appears at input-level as "*funding, financing, external aid (6.a.1)";* at process-level as "*financial management, financial flow tracking, budgeting, spending rates*"; at output-level as "financial performance" and at outcome-level as "*increased investment, financial viability, and creditworthiness*." There is a similar 'transversal' pattern for topics related to human resources, regulation, participation, and service delivery among others. • *For the selection of indicator domains*, it is recommended to not to tie indicator domains to one segment in the results chains but rather group related domains (and sub-domains) appearing under different links in the results chain into thematic "***indicator domain families***" that span multiple segments. This approach will allow greater fluidity and during Phase 2, consideration of potential candidate core indicators at different stages of the results chain.

4	**Cross-cutting topics inter-relate with other indicator domain groupings across the results chain.** Another pattern that emerged from the assessment is the presence of several topics under different segments of the results chain that inter-relate with other indicator domain groupings. One such case is "equity, gender equality, disability and social inclusion" which appears at input-level interlinked with "policy", at process-level "finance allocations", at output-level as "service affordability, application of pro-poor measures and social inclusion in services"; at outcome-level "equitable and inclusive access to WASH services (population view)." A similar pattern is also observed for "risk and resilience". Human rights principles and approaches also underpin and interact with multiple indicator domain groupings across all segments of the results chain. • *For the selection of indicator domains*, it is recommended to establish "gender, equity, and social inclusion", "resilience and risk, including climate change", and "human rights" as explicit "***cross-cutting topics***" which will be considered within each "indicator domain family" during the selection of potential candidate indicators.
5	**There is already widespread practice by countries of using national monitoring indicators to report on National WASH plans and strategies.** More than three-quarters (77%) of the 83 countries that responded to the GLAAS 2024 country survey questions on national monitoring indicators,[67] reported that national monitoring indicators have been defined to monitor progress of implementing the national WASH plan(s)/strategy(ies). Of these 64 countries, 67% reported that they have less than 50 indicators to monitor plans/strategies, 65% regularly monitor and review their national monitoring indicators, and 86% reported that subnational data is collected and consolidated at the national level. • These detailed responses and supporting documentation shared by countries in their responses to the GLAAS 2024 country survey provide an invaluable input towards understanding the current practice of national WASH monitoring approaches and indicators across a large and diverse sample size of countries.
6	**The indicator domains currently monitored by the greatest number of countries are *infrastructure, service delivery, service quality* and *service coverage*.** These are the areas where countries already have data collection capacities and pipelines to collect, aggregate (as needed) and report data. It was observed that there are varying levels of alignment with existing national, regional or benchmarking indicators and monitoring frameworks. • For areas currently monitored by countries, A2A can assess whether there is an opportunity for greater alignment around a core indicator or whether there is an existing internationally agreed or commonly used indicator that could be directly included as part of the set of core indicators.
7	**The indicator domains currently monitored by the least number of countries are *governance, finance, human resources, community participation, affordability, equity*, and *economic impacts*.** These are areas where there are potential gaps in national indicators. • For these areas, A2A can add value by offering countries a core indicator that could be used to expand monitoring to these areas. The indicators shared by countries that already use these indicators in their national monitoring systems to track progress on national WASH plans and strategies can be an important input to the process of identifying and selecting suitable core indicators. Additionally, the national monitoring focal points from these countries could be invited to participate as part of the "expert groups" or as a key informant to share their experience with the respective indicator domain.
8	**A2A can benefit from new evidence and learning generated on WASH systems.** There are many synergies and opportunities for complementarity between the current research and learning efforts on WASH systems and the A2A initiative. Through close coordination, the latest findings and evidence can be used to inform the identification and selection of the core indicators during A2A Phase 2 and during future phases of A2A. Moreover, A2A can provide a pathway for incorporating latest evidence and learning into national monitoring systems at scale. • The A2A methodology and processes put in place for selection, testing and review of the set of core indicators and the common monitoring and review framework should be designed to be 'iterative' in order to provide frequent opportunities for new evidence and learning to be incorporated.

[67] Preliminary results as of 10 January 2025, 83 countries responded to question B2.

9	**A2A initiative can contribute to building the evidence base for WASH systems.** Research and learning efforts can use A2A as a platform to collect data, generate evidence and synthesize learning on WASH systems from a large, diverse group of countries. • Close coordination between the research and learning efforts and A2A initiative will be vital to fully capitalize on opportunities for research and learning through the piloting process (Phase 3) and implementation and scale-up phase (Phase 4).
10	**WASH system indicators where "on track" countries perform well compared to "acceleration needed" countries have been identified through an extended analysis of GLAAS 2021/2022 data.** • The areas and indicators where "on-track countries perform well" should be considered for prioritization in the selection of the A2A indicator domains and core indicators. These indicators include resourced national WASH plans, absorption of domestic capital commitments, cost recovery, affordability schemes, human resources for WASH, implementation of risk management approaches, performing independent surveillance, and regulatory authorities that perform key functions.
11	**National water leaders have identified their main challenges to achieving and maintaining good water management and the main reasons they consider 'safe and affordable drinking-water' (SDG 6.1) to be impossible or challenging to achieve.** • The areas reported by National water leaders as the main challenges and top reasons for not achieving SDG 6.1 should be considered as part of the criteria for the selection of the A2A indicator domains and core indicators. This can help ensure that the core indicators are responsive to countries needs to address and monitor progress on overcoming these challenges. The main challenges according to National water leaders include inadequate infrastructure, inadequate and inaccessible data and information, fragmented water institutions, inadequate laws and regulations, Inadequate and inaccessible data and information, conflicts between user groups, inadequate public water awareness, inadequate infrastructure, and water being a low priority in the government. The top reasons for not achieving SDG 6 are lack of financing and governance problems.
12	**Global megatrends and risks will affect the future demand for water and sanitation services and the challenges faced in delivering them.** A sustainable and resilient WASH-future depends on understanding these issues and strengthening WASH systems to address them. • Ensure forward-looking perspective by including it as a criterion for the selection of the core indicators. • This scan of global trends and risks only scratches the surface of frontier issues facing the WASH sector. Consider including an indicator domain dedicated to "Frontier Issues" for exploration of horizon issues and experimental new thinking on potential indicators to address them.
13	**The next two years are critical to define the international agenda for WASH post-2030.** A2A can be a platform to develop potential candidate indicators for consideration in post-2030 processes, particularly for the 'means of implementation-related' aspects. • Map, track and engage in international meetings and intergovernmental processes to highlight A2A approaches and learning and convene stakeholders for dialogue on WASH systems monitoring.
14	**Establishing common terminology with clear definitions is an essential foundation for Phase 2.** • The proposed list of terms with definitions provided in Section 5.1 will be included in the *A2A Discussion Paper* for consultation.
15	**Indicator selection criteria and the processes used by others can be adapted for A2A.** While selection of core indicators is not a new endeavour, each process also has its own context and specificities. For example, as the "WASH system" does not already have an agreed conceptual framework or monitoring framework already in place, an additional step will be required to define the indicator domains (or as suggested previously, 'indicator domain families'). • A2A can draw on the examples of criteria and processes presented in Section 5.3 to develop an "A2A-specific" technical approach for Phase 2.

Annexes

Annex A	List of WASH Frameworks
Annex B	Results from the assessment of WASH frameworks
Annex C	GLAAS 2024 Country Survey Question B2: National monitoring systems
Annex D	Country responses to GLAAS Survey Questions B2: National monitoring systems

ANNEX A. List of WASH Frameworks

No.	Framework Name	Lead Entity(ies)	Weblink, citation
GLOBAL FRAMEWORKS			
1	UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS)	WHO	https://glaas.who.int/
2	GLAAS Country Highlight	WHO	https://www.who.int/teams/environment-climate-change-and-health/water-sanitation-and-health/monitoring-and-evidence/wash-systems-monitoring/un-water-global-analysis-and-assessment-of-sanitation-and-drinking-water/2018-2019-cycle/country-highlights
3	SWA Results Framework	SWA Partnership	https://www.sanitationandwaterforall.org/impact/monitoring-and-evaluation#section-ResultsFramework
4	SWA Collaborative Behaviours Country Profiles- indicators	SWA Partnership	https://www.sanitationandwaterforall.org/about/our-work/priority-areas/collaborative-behaviours
5	UNICEF WASH systems strengthening: framework	UNICEF	https://knowledge.unicef.org/wash/resource/unicef-wash-systems-strengthening-framework
6	WASH-BAT	UNICEF	https://www.washbat.org/
7	Sector-wide Sustainability check Tool	UNICEF	https://knowledge.unicef.org/resource/unicef-sector-wide-sustainability-check-tool-guidance-designing-and-implementing-sector
8	The Measurement and Monitoring of Water Supply, Sanitation and Hygiene (WASH) Affordability	WHO/UNICEF	https://www.unicef.org/reports/measurement-and-monitoring-water-supply-sanitation-and-hygiene-wash-affordability
9	Handbook on realizing the human rights to water and sanitation	Special Rapporteur (OHCHR)	https://www.ohchr.org/sites/default/files/Documents/Issues/Water/Handbook/Book8_Checklists.pdf
10	WASH Systems Index Tool	WASH for Health Consortium (FCDO, IRC)	Submitted by IRC through the 'Call for evidence"
11	FCDO Results Chain for WASH for Health Programme	FCDO & WASH for Health Consortium	Submitted by IRC through the 'Call for evidence" "Results Framework Process and approach for partners" "FCDO monitoring and baseline_internal use only"
12	WASH System building block assessment tool	IRC	https://www.ircwash.org/tools/wash-system-building-block-assessment-tool

13	WASH System building block assessment tool	WaterAid	https://wateraid.sharepoint.com/:w:/r/sites/s18v7vwq/_layouts/15/Doc.aspx?sourcedoc=%7B31B1BFEA-6713-43A2-86FC-F03C2652F24D%7D&file=Annex2-WASH_system_building_block_Tool-21Aug2023.docx&action=default&mobileredirect=true
14	SSI Conceptual Framework of WASH System & SSI Building Block checklist tool	Sustainable Services Initiative (German Toilet Organization, welt hunger hilfe, Viva con Agua, Agua Consult)	https://www.susana.org/en/knowledge-hub/resources-and-publications/library/details/3839#
15	Policies, Institutions, and Regulation (PIR) (Agile PIR Tool)	World Bank	PiR Framework - Water Supply and Sanitation Policies, Institutions, and Regulation Agile PiR Prototype Tool - Policies, Institutions, and Regulation tool for an agile sector analysis
16	Utility of the Future	World Bank	https://www.worldbank.org/en/topic/water/publication/utility-of-the-future#Overview
17	WB Country Status Overviews	World Bank	https://documents.worldbank.org/en/publication/documents-reports/documentdetail/388761467990386267/pathways-to-progress-transitioning-to-country-led-service-delivery-pathways-to-meet-africas-water-supply-and-sanitation-targets
18	IBNet 2.0 draft	World Bank	https://newibnet.org
19	Universal metrics for rural Water	World Bank	https://documents.worldbank.org/en/publication/documents-reports/documentdetail/607191503560633102/toward-a-universal-measure-of-what-works-on-rural-water-supply-rural-water-metrics-global-framework
20	Water for Systems Change	FSG	https://www.fsg.org/resource/water_of_systems_change
21	Sector Functionality Frameworks for Urban Water and Sanitation	WSUP	https://wsup.com/wash-experts/sector-functionality-framework
22	WASHREG	SIWI, UNICEF, WHO, IDB	SIWI/UNICEF/WHO/IADB (2021) “The WASHREG Approach: An Overview” Stockholm and New York. Available from www.siwi.org
23	UN-Water SDG 6 Global Acceleration Framework (& UN SWS)	UN-Water	https://www.unwater.org/our-work/sdg-6-global-acceleration-framework
24	SDG 6a.1 Cooperation	WHO, OECD (UNEP)	https://www.sdg6data.org/en/indicator/6.a.1

25	SDG 6b.1 Participation	WHO, OECD (UNEP)	https://www.sdg6data.org/en/indicator/6.b.1
26	Joint Monitoring Programme for Water and Sanitation [SDG Targets 1.4.1, 4a.1 schools, 6.1, 6.2, WASH in HCF]	WHO/UNICEF	https://washdata.org
27	SDG 6.3.1 Wastewater	WHO/ UN-Habitat	https://www.sdg6data.org/en/indicator/6.3.1
28	SDG 6.3.2 Water quality	UNEP	https://www.sdg6data.org/en/indicator/6.3.2
29	6.4.1 Water use efficiency	FAO	https://www.sdg6data.org/en/indicator/6.4.1
30	6.4.2 Water stress	FAO	https://www.sdg6data.org/en/indicator/6.4.2
31	SDG 6.5.1 Integrated Water Resources Management	UNEP/ GWP	https://www.sdg6data.org/en/indicator/6.5.1
32	SDG 6.5.2 Transboundary Water Cooperation	UNECE	https://www.sdg6data.org/en/indicator/6.5.2
33	6.6.1 Water-related ecosystems	UNEP	https://www.sdg6data.org/en/indicator/6.6.1
34	OECD Water Governance	OECD/ WGI initiative	https://www.oecd.org/en/topics/sub-issues/water-governance/the-oecd-principles-on-water-governance-and-implementation-strategy.html
35	Assessing the Enabling conditions for investment in water security: Scorecard pilot test	OECD Water	https://www.oecd.org/en/publications/assessing-the-enabling-conditions-for-investment-in-water-security_b96936c4-en.html
36	Sanitation Game Plan- Monitoring incremental progress of SSS	UNICEF - Ecopsis and University of Bristol	ECOPSIS in association with University of Bristol for UNICEF, ***Monitoring Incremental Progress on Sanitation Systems Strengthening: reviewed framework***, 25 July 2024 (RFPS-NYH-2023-503605: Component 3: Deliverable 10) UNICEF Game Plan to Reach Safely Managed Sanitation 2022–2030, https://www.unicef.org/documents/sanitation-game-plan Steps to Achieve Universal Access to Safely Managed Sanitation, https://knowledge.unicef.org/wash/resource/steps-achieve-universal-access-safely-managed-sanitation

37	Sanitation Economy Maturity Assessment Tool (SANEMAT) *Zero draft- for consultation.*	SHF	Proposal for the Sanitation Economy Maturity Assessment Tool (SANEMAT): Zero Draft. 6 June 2024
38	Global Framework for Action 2024–2030: Universal water, sanitation, hygiene, waste and electricity services in all health care facilities to achieve quality health care services [WASH in HCF res 78/130]	WHO/ UNICEF	https://www.who.int/publications/i/item/9789240095366
39	WASH in HCF Country Tracker	WHO/UNICEF	www.washinhcf.org/country-progress-tracker
40	Guidelines on Hand Hygiene in Community Settings	WHO/ UNICEF with Monash University	Submitted by WHO as part of the 'Call for evidence": Draft Global Framework of a system for HH in Community settings, "System factors, functions and actors for hand hygiene in community setting".
41	Global monitoring of climate resilient WASH	JMP/ GLAAS with Leeds University et al.	https://www.who.int/teams/environment-climate-change-and-health/water-sanitation-and-health/monitoring-and-evidence/monitoring-of-climate-resilience
42	GWP-UNICEF Strategic Framework for Climate Resilient WASH	GWP-UNICEF	https://www.gwp.org/globalassets/global/about-gwp/publications/unicef-gwp/gwp_unicef_monitoring-and-evaluation-brief.pdf
43	Priority Gender-specific WASH indicators	WHO/UNICEF JMP with Emory	https://washdata.org/reports/emory-2024-priority-gender-specific-indicators-for-wash-monitoring
44	Priority List of Indicators for Girls Menstrual Health and Hygiene: Technical Guidance for National Monitoring	Columbia University et al, Global Menstrual collective	https://www.publichealth.columbia.edu/sites/default/files/priority_list_of_indicators_for_girls_menstrual_health_and_hygiene-_technical_guidance_for_national_monitoring.pdf
45	SDG- PSS	UNU/ UN Office of Sustainable Development (DESA)	https://sdgpss.net/en/home
46	JSR Review – SKAT 2016	World Bank - prepared by SKAT	https://www.researchgate.net/publication/313836943_Effective_Joint_Sector_Reviews_for_Water_Sanitation_and_Hygiene_WASH_A_Study_and_Guidance-2016
47	The Global WASH Sector Resilience Index (GWSRI)	UNICEF and SIWI	https://knowledge.unicef.org/wash/resource/preventive-agenda-advancing-resilient-wash-sectors-and-communities

48	Equal Aqua HR Survey	World Bank	https://wbwaterdata.org/breakingbarriers/en/tool/
49	HR Assessment Methodology [IWA Human Resources Capacity Gap study (HRCG)]	International Water Association (IWA)	IWA (2014) An Avoidable Crisis: WASH Human resource capacity gaps in 15 developing economies. https://iwa-network.org/wp-content/uploads/2015/12/1422745887-an-avoidable-crisis-wash-gaps.pdf
50	WASH: Burden of Disease Monitoring SDG 3.9.2	WHO	https://www.who.int/data/gho/data/themes/topics/water-sanitation-and-hygiene-burden-of-disease
51	WASH Insecurity Analysis	Global WASH Cluster (UNICEF)	https://www.washcluster.net/WASH-insecurity-analysis
52	Citywide Inclusive Sanitation	BMGF, Athena Infonomics	https://www.cwiscities.com/Dashboard/DashboardInfo
53	Prioritized list of benchmarking KPIs, Lessons and good practices for benchmarking FSM	USAID URBAN WASH; The Aquaya Institute and Tetra Tech	https://www.globalwaters.org/resources/assets/lessons-and-good-practices-benchmarking-fecal-sludge-management
54	American Water Works Association Utility Benchmarking, Performance Indicators 2025	AWWA	https://www.awwa.org/programs/benchmarking/
55	Aquarating: An International Standard for Assessing Water and Wastewater Services	InterAmerican Development Bank and IWA	https://publications.iadb.org/en/aquarating-international-standard-assessing-water-and-wastewater-services https://aquarating.org/en/
56	Global Water Security and Sanitation Partnership Results Framework	World Bank	https://www.worldbank.org/en/programs/global-water-security-sanitation-partnership https://www.worldbank.org/en/topic/water/publication/the-gwsp-2024-annual-report
57	Sustainable Services Checklist Tool- Sample	Water for People	https://thewashroom.waterforpeople.org/resources/2021-sustainable-services-checklist-analysis/
58	Framework for Integrity in Infrastructure Planning (FIIP)	Water Integrity Network (WIN), Infrastructure Transparency Initiative (CoST), InterAmerican Development Bank (IDB)	https://www.waterintegritynetwork.net/post/framework-for-integrity-in-infrastructure-planning-fiip
59	Annotated Water Integrity Scan (AWIS)	Water Integrity Network	https://www.waterintegritynetwork.net/post/annotated-water-integrity-scan-awis

60	WaterGov Benchmark - Reference model of good regulatory policies and practices	InterAmerican Development Bank (IDB) Lisbon International Centre for Water (LIS-Water), Association of Water and Sanitation Regulatory Entities of the Americas (ADERASA), support from Government of Portugal	https://watergov.org/en/benchmark https://publications.iadb.org/es/guia-de-accion-mejores-politicas-y-regulacion-de-los-servicios-de-agua-y-saneamiento
61	UNICEF Guidance for Market-based Sanitation- 4.2 Monitoring	UNICEF	https://www.unicef.org/documents/guidance-market-based-sanitation
62	Supplemental Market-based Sanitation Indicators (forthcoming, 2025)	USAID/ WASHPaLs #2	WASHPaLS #2 - Draft Supplemental Market-based Sanitation Indicators (unpublished- still in pilot testing)
63	Users Guide on Assessing Water Governance	UNDP Water Governance facility, SIWI, Water Integrity Network	https://www.undp.org/publications/users-guide-assessing-water-governance
REGIONAL FRAMEWORKS			
1	WASSMO	AMCOW	https://amcow-online.org/water-sector-and-sanitation-monitoring-and-reporting-wassmo/
2	Water and Health Protocol	UNECE/ WHO	https://unece.org/environment-policy/water/protocol-on-water-and-health/about-the-protocol/introduction
3	Latin American and Caribbean Water and Sanitation Observatory (OLAS)	Inter-American Development Bank	https://www.olasdata.org/home
4	AIP-PIDA Scorecard	AUDA- NEPAD GWPSA Secretariat	https://aipwater.org/implementation/aip-water-investment-scorecard
5	Afrobarometer	Afrobarometer	https://www.afrobarometer.org/publication/ad784-water-and-sanitation-still-major-challenges-in-africa-especially-for-rural-and-poor-citizens
6	ESAWAS Regional benchmarking of large utilities	ESAWAS	https://www.esawas.org/publications/regional-benchmarking
7	African Sanitation Policy Guidelines (ASPG)	AMCOW (2021)	https://amcow-online.org/african-sanitation-policy-guidelines-aspg/

8	Strategy 2030 Water Sector Directional Guide	Asian Development Bank	https://www.adb.org/documents/strategy-2030-water-sector-directional-guide https://www.adb.org/what-we-do/funds/water-financing-partnership-facility https://www.adb.org/documents/water-financing-partnership-facility-annual-report-2023
9	Water, Sanitation and Solid Waste Sector Framework Document	Inter-American Development Bank	https://www.iadb.org/en/who-we-are/topics/water-and-sanitation/sector-framework-water-and-sanitation
COUNTRY FRAMEWORKS			
1	Lettre de Politique Sectorielle de Developpement	Senegal	https://www.fao.org/faolex/results/details/fr/c/LEX-FAOC192050/
2	National Strategy for Sanitation and Hygiene	Sierra Leone	Submitted to GLAAS Country Survey 2021: Directorate of Environmental Health and Sanitation Ministry of Health and Sanitation Government of Sierra Leone October 2020
3	Guide to Monitoring of Water Supply, Sanitation and Hygiene Sector Indicators	Uganda	Submitted to GLAAS
4	National Water, Sanitation and Hygiene Policy	Papua New Guinea	Submitted to GLAAS
5	Politique Sectorielle "Environnement, Eau Et Assainissement"	Burkina Faso	https://www.fao.org/faolex/results/details/fr/c/LEX-FAOC184861/
6	Water Sector Development Programme Phase Three (WSDP III)	Tanzania	https://www.maji.go.tz/uploads/publications/sw1664866566-WSDP%20III%20FINAL%20FINAL%202022%20(1).pdf
7	Nomenclatures et Indicateurs du Secteur Eau, Assainissesment, et lHygiene (EHA)	Madagascar	Submitted to GLAAS
8	National Water Resources Plan	Egypt	https://www.fao.org/faolex/results/details/en/c/LEX-FAOC147082/
9	National Water Supply and Sanitation Policy	Zambia	https://www.nwasco.org.zm/index.php/media-center/publications/booklets?task=download.send&id=71&catid=7&m=0
10	National Water and Sanitation Master Plan, Volume 2 Plan to Action	South Africa	https://www.dws.gov.za/National%20Water%20and%20Sanitation%20Master%20Plan/Documents/Volume2%20(Printed%20version%20).pdf

ANNEX B. Results from assessment of frameworks

No	Inputs Domain Groupings	Number of Global & Regional frameworks-total (*n*=53)	Number of Country frameworks-total (*n*=10)	Total Frameworks (*n*=63)
1	Funding, financing, financing frameworks, mechanisms, budget lines, ODA, external support (SDG 6.a.1)	36	4	40
2	Legislation, policy frameworks	29	7	36
3	Institutional framework, roles and responsibilities, capacities; Institutional arrangements	26	6	32
4	Regulatory frameworks, technical standards	18	5	23
5	Data and information	21	1	22
6	Human capital, human resources, WASH workforce	21	1	22
7	Equity, Human rights, Gender mainstreaming, social inclusion, disability, affordability in policies	16	0	16
8	Participation policies and procedures (SDG 6.b.1), Stakeholder engagement policy, Demand	12	2	14
9	Service delivery models, service provider frameworks; frameworks for private sector participation	8	6	14
10	Governance - general	13	1	14
11	Resilience, risks, hazards, shocks assessments, incorporated in policy frameworks	10	0	10
12	Government leadership & political will	9	1	10
13	Water Resources, transboundary cooperation agreements	6	1	7
14	Infrastructure assets	5	2	7
15	Private sector, markets, market rules, technology, supply chains	5	1	6
16	Innovation governance, eco-system, readiness	4	0	4
17	Anti-corruption frameworks	3	0	3
18	Attitudes, behaviours, mental models	2	0	2
19	Environmental Management Framework	1	0	1
20	Public Goods	1	0	1

No	Process Domain Groupings	Number of Global & Regional frameworks-total (*n*=53)	Number of Country frameworks-total (*n*=10)	Total Frameworks (*n*=63)
1	Planning, organization strategy, monitoring, review, learning	32	6	38
2	Financial management, financing strategy, financial flow tracking, budgeting, spending, expenditure rate (absoption, utilisation)	25	8	33
3	Regulatory functions, strong accountability mechanisms, surveillance	16	8	24
4	Human resources management, training & capacity building programmes, staffing levels (recruit, retain, succession), Worker safety, gender mainstreaming	17	6	23
5	Technical management, capacity and support; asset management; operations, maintenance, service delivery	16	3	19
6	Water resources management implementation (SDG 6.5.1, 6.5.2)	14	4	18
7	Coordination (intersectoral, levels of government, multistakeholder)	10	5	15
8	Partnerships, International cooperation, collaborative behaviours, includes private sector participation, PPPs	8	6	14
9	Community/ stakeholder engagement, implementation of participatory processes, public awareness and outreach programmes	10	3	13
10	Risk-informed management, climate adaptation actions, emergency planning/ training	9	3	12
11	Innovation, research and development, technological advancement	6	6	12
12	Equity in targeting resources, finance allocations, design standards, gender and socially inclusive decision-making	8	3	11
13	Audits, corporate governance, transparency in decision-making, integrity, management control	7	3	10
14	Infrastructure development, project preparation pipelines (bankable), investment preparation, procurement	6	3	9
15	Commercial Management, customer services	8	0	8
16	Progress toward strengthening identified systemic bottlenecks	6	0	6
17	Sector reform implementation	2	4	6

18	Government leadership (process to strengthen)	2	3	5
19	Hygiene behaviour change programmes	1	3	4
20	Environmental and Social impact assessments	1	1	2
21	Support for markets	0	1	1

No	Outputs Domain Groupings	Number of Global & Regional frameworks-total (*n*=39)	Number of Country frameworks-total (*n*=10)	Total Frameworks (*n*=49)
1	Service level & quality (access, availability, continuity, quality, reliability), water quality, chlorination, volume of WW treated, volume of water produced, service delivery performance KPIs,	19	7	26
2	Infrastructure outputs (new construction, expansion of service, capital projects)	7	9	16
3	Operational sustainability & efficiency (Non-revenue water, operating cost recovery, energy efficiency)	10	3	13
4	Service affordability, pro-poor measures; social inclusion in service delivery	8	3	11
5	Regulatory compliance, monitoring and performance reporting	7	3	10
6	Functionality (physical condition)	6	4	10
7	National proportion of domestic and industrial wastewater flows safely treated (SDG 6.3.1)	4	4	8
8	Environmental management and sustainability, circular economy/ reuse, pollution control and remediation, greenhouse gas emissions	6	2	8
9	Level of public/ local community participation	6	1	7
10	Increased water resources availability, water storage capacity, reduced demand, efficient use of water resources	5	2	7
11	Commercial Operations/ Management performance (meter ratio, billing, complaints resolved);	6	0	6
12	Behaviour change, IEC	5	0	5
13	Financial performance, investment performance and sustainability (includes per capital investment cost)	4	1	5
14	Risk-informed, climate smart measures implemented/ applied; infrastructure, services resilient to climate change shocks	3	1	4

15	Product availability, quality, market performance, competition	4	0	4
16	System performance - composite score	3	0	3
17	Job creation	2	0	2
18	Worker and public safety in operations	1	0	1
19	Adoption of innovative solutions	1	0	1

No	Outcome Domain Groupings	Number of Global & Regional frameworks-total (*n*=39)	Number of Country frameworks-total (*n*=10)	Total Frameworks (*n*=48)
1	National WASH coverage estimates - population using safely managed WASH services, includes schools and HCF (SDG 6.1, 6.2, 1.4, 4a)	25	8	33
2	Equitable and inclusive access to WASH services (population view), includes disaggregated data and resources targeted to LNOB	10	1	11
3	Public/ customer satisfaction with quality of service, User experience	6	1	7
4	Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (SDG 6.4.2); reduction in future water demand	5	1	6
5	National and local WASH systems are strengthened (sustainable, bottlenecks removed)	6	0	6
6	WASH systems are resilient to shocks and stresses - climate, conflict, humanitarian emergencies	5	1	6
7	Water for economic growth, productivity, Water use efficiency improved (SDG 6.4.1)	4	2	6
8	Political and social prioritization of WASH	4	1	5
9	Affordability of services (population view)	4	0	4
10	Increased investment, improved financial viability and creditworthiness	3	0	3
11	Sustainable development objectives of other sectors (education, health, nutrition, environment etc.)	2	1	3
12	Systemic Change - Change in relationships, power dynamics, norms and behaviours	2	0	2
13	Strengthened accountability; effective management of public services	1	1	2

14	Improved menstrual health and hygiene	1	1	2
15	Effective international cooperation and partnership	1	0	1
16	Market maturity	1	0	1

No	Impact Domain Groupings	Number of Global & Regional frameworks-total (*n*=21)	Number of Country frameworks-total (*n*=8)	Total Frameworks (*n*=29)
1	Health (SDG 3.9.2)	10	3	13
2	Environment, environmental sustainability, including improved ambient water quality and freshwater ecosystems (SDG 6.3.2, SDG 6.6.1)	7	6	13
3	Economic growth, green growth, circular economy, job creation, livelihoods, prosperity	5	5	10
4	Human Rights and dignity; universal access to services	5	1	6
5	Nutrition and food security (SDG 2)	3	2	5
6	Gender equality and social inclusion	3	1	4
7	Peace; International cooperation	2	2	4
8	Water security	3	1	4
9	Education (SDG 4)	3	0	3
10	Human well-being, living conditions	2	1	3
11	Resilience, including climate adaptation	3	0	3
12	Sustainable development - general	2	0	2
13	Safety, freedom from violence	2	0	2
14	End extreme poverty; poverty reduction (SDG 1)	2	0	2
15	Responsible production and consumption (SDG 12)	0	1	1
16	Governance- responsive, accountable, efficient, effective	0	1	1
17	Urban development	0	1	1

ANNEX C. GLAAS 2024 Country Survey Question B2

B2: National monitoring indicators for WASH plans/strategies

National strategies and plans for drinking-water, sanitation, and hygiene will often include a set of indicators that will be monitored to assess progress of the strategy/plan. These indicators may be established within the strategy/plan or may be defined in a separate monitoring and evaluation plan for the strategy/plan.

B2.b asks for more detailed information about these indicators. If national monitoring indicators exist for more than one WASH plan/strategy, please provide information on indicators across all plans/strategies. The question follows a results chain for the WASH system which includes inputs, process/activity, outputs, outcomes and impact. A results chain is way to show the steps and connections between the steps to achieve a desired result, from the resources needed and the actions taken to achieve the result to its immediate and longer-term effects.

GLAAS 2024 country survey

NATIONAL MONITORING INDICATORS FOR WASH PLANS/STRATEGIES

B2. Use of national indicators for WASH:

a. Are there national monitoring indicators that have been defined to monitor progress of implementing the national WASH plan(s)/strategy(ies)? *If no, proceed to B3.*

Yes	No
☐	☐

b. *If yes,* please indicate if national indicators have been defined for each of the following areas of the result chain (inputs, processes/activities, outputs, outcomes, impacts). *Please see the survey guidance for additional information about results chains and example indicators.*

	Indicators are:				Please list the main indicator(s):
	No such indicators	Being developed or agreed but not yet implemented	Agreed and baseline data established	Agreed, tracked against established baseline data	
INPUTS					
i. Governance	☐	☐	☐	☐	
ii. Finance	☐	☐	☐	☐	
iii. Human resources	☐	☐	☐	☐	
iv. Infrastructure (e.g. functionality)	☐	☐	☐	☐	
v. Regulation	☐	☐	☐	☐	
PROCESS/ACTIVITY					
vi. Service planning	☐	☐	☐	☐	
vii. Surveillance	☐	☐	☐	☐	
viii. Community participation	☐	☐	☐	☐	

OUTPUTS					
ix. Service delivery	☐	☐	☐	☐	
x. Service quality	☐	☐	☐	☐	
xi. Affordability	☐	☐	☐	☐	
OUTCOMES					
xii. Service coverage	☐	☐	☐	☐	
xiii. Equity	☐	☐	☐	☐	
IMPACTS					
xiv. Health impacts	☐	☐	☐	☐	
xv. Environmental impacts	☐	☐	☐	☐	
xvi. Economic impacts	☐	☐	☐	☐	

Source: GLAAS 2024/2025 country survey. Available at: https://www.who.int/publications/m/item/glaas-2024-2025-country-survey

ANNEX D. Preliminary[68] GLAAS 2024 Country Survey responses to question B2

WHO Country Name	Governance main indicators B2.b.i.2
Bhutan	There are no specific indicators for the inputs, however, the progress is tracked by the WASH outcome indicators in 13 FYP.
Brazil	Número de municípios com política municipal de saneamento básico / Total de municípios
Burkina Faso	Taux daccès à leau potable Taux daccès à lassainissement Proportion de communes urbaines disposant dun système fonctionnel de gestion des déchets solides Proportion de la population satisfaite de la qualité du cadre de vie dans les trois plus grandes villes du Burkina Faso
Burundi	Création des Inspections Générales des Ministères et Inspection Générale de lEtat, Elaboration des actions phares
Cabo Verde	Acesso das mulheres a lugares de chefias na governança do sector de água e saneamento
Chad	NOMBRE DE LOIS NORMES POLITIQUES SUR LE WASH
China	The State requires the implementation of the "three responsibilities" for rural drinking water safety, i.e., local peoples governments bear the main responsibility for rural drinking water safety, water administrative authorities and other departments bear the responsibility for industry supervision, and water supply units bear the responsibility for operation and management.
Colombia	Organizaciones comunitarias fortalecidas para la gestión del abastecimiento de agua y el saneamiento básico
Congo	*Existence dune stratégie nationale de WASH dans les écoles *Existence dun mécanisme de coordination de groupe fonctionnel pour le WASH
Cuba	Proporción de la población servida por empresas públicas de agua y saneamiento. Proporción de asientos en el registro de aguas terrestres. Grado de implementación del gobierno y comercio electrónico.
Democratic Republic of the Congo	Pourcentage dapplication des mesures relatives à leau (PNEHA)
Ecuador	El OEI 2 se alinea a una (1) política y dos (2) metas del Objetivo 7 del PND (Plan Nacional de Desarrollo), en el marco de la responsabilidad establecida en el Plan Nacional de Desarrollo 2024-2025 y sus documentos de sustento (ficha metodológica de indicador y ficha metodológica de metas), respecto a los ámbitos de competencia de esta Cartera de Estado y sus atribuciones sobre agua potable, saneamiento, riego y drenaje, por lo que es necesario visualizar la alineación a todas las metas del PND a cargo de este Ministerio. El OEI 3 se alinea a dos (2) políticas y dos (2) metas del Objetivo 7 del PND, en el marco de la responsabilidad y corresponsabilidad establecidas en el Plan Nacional de Desarrollo 2024-2025 y sus documentos de sustento (ficha metodológica de indicador y ficha metodológica de metas). Además, con la finalidad de guardar congruencia en todos los niveles operativos y de proyectos de inversión, se acoge lo determinado por la SNP (Secretaría Nacional de Planeación) mediante Oficio Nro. SNP-SGP-SPN-2024-0554-OF de fecha 18 de junio de 2024.
Guinea	1. Transparence et Accès à lInformation 2. Responsabilité et Lutte contre la Corruption 3. Efficacité et Performance des Institutions. 4. Participation et Inclusion 5. État de Droit et Justice 6. Gestion des Ressources Publiques 7. Stabilité Politique et Conflits
Haiti	taux de redevabilité, conformité des rapports daudit
Indonesia	1. Number of regulations provided or updated to support the implementation
Iran (Islamic Republic of)	1- Accumulated deficit of Water and Wastewater company

[68] Based on responses received by GLAAS as of 10 January 2025.

Italy	• Management set-up: number of water operators by service and territory for the civil water cycle from water abstraction to wastewater treatment (Istat, Urban water census: years 1999, 2005, 2008, 2012, 2015, 2018, 2020, 2022) • IWRM – integrated water resource management – SDG 6.5.1 (ISPRA, https://www.isprambiente.gov.it/pre_meteo/idro/SGD/SGD_651/SDG651_2023_Reporting_Summary_Italy_EN.pdf. Years monitored: 2017, 2020, 2023
Jordan	Percentage of administrative units involved in the policy-making process
Lao Peoples Democratic Republic	*No. of laws is revised; *One water supply and sanitation section/unit is established in each provincial Department/district Office of Public Works and Transport countrywide.
Lesotho	Legal Framework Gazetted
Madagascar	Pourcentage dadministrations locales ayant mis en place des politiques et procédures opérationnelles Nombre de réunions de coordination nationale intersectorielle réalisées Taux de mise en œuvre de la Politique Sectorielle de lEAH (PSEAH) Nombre de mécanismes mis en place pour la traçabilité des actions des secteurs EAH Pourcentage dadministrations locales ayant mis en place des politiques et des procédures operationnelles encourageant la participation de la population locale à la géstion de leau et de lassainissement
Mali	-Nombre dialogues politiques sur létat de WASH en milieu de soins; -Nombre dactivités réalisées dans le Plan dactions de la Politique Nationale dAssainissement; -Nombre de commune disposant dun Plan Stratégique dAssainissement en cours de validité
Mauritania	Indicateurs SNADEA (Stratégie Nationale pour un Accès Durable à lEau et à lAssainissement) et SCAPP (Stratégie de Croissance Accélérée et de Prospérité Partagée)
Namibia	Percentage of water basins with management plans
Nicaragua	Instrumentos de Gestión elaborados y validados para la implementación de la GIRH a nivel local y nacional. Comité de cuenca conformados en unidades priorizadas a nivel nacional. Reuniones para la articulación del sector de agua, saneamiento e higiene. Certificación de los comités de agua y saneamiento. Número de CAPS formalmente conformados y legalizados. Comisiones de de agua y saneamiento a nivel nacional.
Niger	Taux dexecution financiére du budget du ministére, Taux dexecution physique des progammes
occupied Palestinian territory, including east Jerusalem	Integrity and transparency
Oman	oman vision 2040
Pakistan	Coordination and policy
Peru	1) Relación de Trabajo. Urbano EP 2) Proporción de EPS que tienen PGRD y PMACC 3) Porcentaje de centros educativos rurales con servicio de agua potable
Serbia	The unit operating cost for water and sanitation It is calculated as total annual operating costs divided by the total quantity of invoiced water (US $/m³ invoiced water) - Tracking of the tariff levels
South Africa	Compliance with corporate governance regulatory prescripts as per the Annual Performance Plan (APP) of the Department
Thailand	The proportion of local administrative organizations that develop and implement policies and processes to ensure community participation in water and sanitation management.
Timor-Leste	Both urban and rural sanitation need to be addressed by government policy and programs, including excreta disposal, wastewater, solid waste, storm water drainage and hygienic practices
Uganda	Number of sector plans , policies, strategies developed , approved and implemented
Zambia	1. The presence of legal and institutional frameworks 2. Presence of authority for national and sub national levels 3. Presence of WASH coordination framework 4. Political Support obtained and maintained (presidential decree on improving WASH in public institutions)

Zimbabwe	Property Level Coverage of Direct Water Supply Connections (%) Average Per Capita Water Supply (litres/per capita/day) Extent of Metering of Water Connections (%) Quality of Water Supplies (%) Coverage of Toilets (%) Collection Efficiency (%) Adequacy of treatment capacity (%) Solid Waste Management (%) Coverage of Solid waste management Services (%) Door to Door collection of Waste (%) Proportion of rural Household with adequate waste disposal facilities (%) Service delivery ratio (%) Wetlands Sustainably Managed (%) General Health Facilities Availability (#) Proportion of Schools with Basic WASH Services (%) Adequacy of Community Amenities (%) Coverage of Functional Settlements (%)

WHO Country Name	Finance main indicators B2.b.ii.2
Argentina	Endeudamiento
Botswana	Government expediture
Brazil	Número de municípios cujos prestadores cobram pelo serviço de abastecimento de água / Total de municípios. 2. Número de municípios cujos prestadores cobram pelo serviço de esgotamento sanitário / Total de municípios
Burkina Faso	Taux dexécution moyen des financements mobilisés
Burundi	Existance des Plans de Travail et Budget Annuel dans les institutions de lEtat
Cabo Verde	Autonomia financeiras coberturas dos gastos totais
Chad	POURCENTAGE DU BUDGET SECTEUR WASH
China	Local government inputs as the mainstay, with appropriate subsidies from the central government
Congo	*Nombre de personnes additionnelles qui ont eu accès à des services dhygiène de base grâce aux programmes directs soutenus par lUNICEF *Coût moyen du m3 deau facturé (FCFA) *Taux de recouvrement de la facture deau des administrations
Costa Rica	6.a.1 Volumen de la asistencia oficial para el desarrollo destinada al agua y el saneamiento que forma parte de un plan de gastos coordinados por el gobierno.
Cuba	Volumen de asistencia oficial para el desarrollo destinada al abasto, que forma parte de un plan coordinado por el gobierno. Volumen de asistencia oficial para el desarrollo destinada al saneamiento, que forma parte de un plan coordinado por el gobierno. Proporción del presupuesto asignado al organismo, ejecutado en la gestión de la ciencia, la tecnología y la innovación.
Democratic Republic of the Congo	Taux de contribution financière des secteurs intervenant dans le secteur WASH (PNEHA)

Guinea	Part du Budget National Allouée au Secteur WASH : • Répartition du Budget par Sous-Secteurs • Mobilisation de Ressources • Montant Total des Financements Internationaux • Contribution des Partenaires Publics et Privés • Taux dExécution Budgétaire • Rapport Coût-Efficacité des dépenses. • Publication des Rapports Financiers • Indicateur de Conformité aux Normes Comptables • Soutien et Financement des Projets • Nombre de Projets Financés : • Durée de Financement des Projets • Efficacité du Suivi et de lAudit • Fréquence des Audits Financiers • Réactivité aux Recommandations dAudit • Planification Financière • Alignement avec les Plans Nationaux • Prévisions Budgétaires à Long Terme
Haiti	taux dabsorption et de respect du budget
Indonesia	1. Regular advocacy on safely managed water and WSP to the sub-national government are started and continued until 2030. 2. Implementation of the Special Budget Fund (SBF) for infrastructure for DW and health can be utilized to support RPAM. 2. Implemented foreign grant and loan support for DW
Iran (Islamic Republic of)	1- Current ratio (ratio of a firms current assets to its current liabilities)
Jordan	Funding ratio achieved
Kuwait	100% by the country
Lesotho	Percentage of Government Budget allocated to WASH
Madagascar	Taux daugmentation budgétaire pour le secteur EAH
Mali	Le financement des services WASH dans les établissements de santé sera assuré par les actions et initiatives de plaidoyer, la prise en compte des activités WASH des établissements de santé dans le PDSEC, - Nombre dactivités WASH intégrées dans les engagements de la Convention dAssistance Mutuelle (CAM) avec WASH Fit comme outil de recevabilité; -taux de mobilisation du financement du Plan dActions de la Politique Nationale dAssainissement; -proportion du financement exterieur dans le financement total alloué au sous-secteur Assainisssement
Mozambique	Fundos disponíveis para alcançar as metas dos ODM com estruturas de apoio in loco a funcionar;
Namibia	Percentage of the WASH budget execution rate
Nicaragua	Capacidad de Gestión de Financiamiento y Ejecución. Total, Ingresos de Operación (miles de Córdobas). Total, Egresos de Operación (miles de Córdobas). Eficiencia de la Cobranza (%)
Niger	Taux de mobilisation financière du PROSEHA
Nigeria	Amount of budget allocated for WASH service Amount of budget/resource households allocated for WASH services

occupied Palestinian territory, including east Jerusalem	collectio efficincy working ratio
Oman	oman vision 2040
Pakistan	Forecast of financial reources to achieve targets
Peru	1) Proporción de inversiones financiadas con tarifa respecto al total de inversiones sectoriales 2) Porcentaje de EPS con sistema de subsidios cruzados focalizados implementados sobre el total de EPS
Philippines	WASH in HCF - WASHFIT: Adequate budget for WASH infrastructure and operations are utilized
Serbia	Coverage of operating costs It is calculated as annual Operating Income / Annual Operating Cost (%) The quantity of sold and invoiced water
South Africa	All WASH activities have been aligned with the SDG6 Target and Indicators and implemented through the National Water and Sanitation Master Plan (2019) and the National Water Resource Strategy 3 (2024) which have their own specific financial indicators
Thailand	The percentage of service units facing financial crisis (level 7 not exceeding 6%)
Timor-Leste	1. Government Annual Plan (Short term) 2. Medium-term plan for WASH (5 years) 3. Multi-year investment plans formulated to finance the strategy
Uganda	Increased domestic financing for WASH form 0.5% of the GDP
Uruguay	Seguimiento continuo de gasto publico en Sistema Nacional de Inversión Publica
Zambia	1. Proportion of water sector budget to the national budget increased to 2.5 percent by December 2026 2. increase in the water sector budget 3. Cost coverage 4.Coordinated resource mobilization
Zimbabwe	Operating Cost Recovery in Water Supply Services (%) Efficiency in Collection of Water Supply-Related Charges (%) Operating Cost Recovery in Sanitation Management (%) Efficiency in Collection of Sanitation Charges (%) Operating Cost Recovery in SWM Services (%) Efficiency in Collection of SWM Charges (%) Status of Audited Accounts (%) Financial Sustainability (%) Adequacy of Health Financing (US$) Operating Cost Recovery in billed Housing and Community Services (%)

WHO Country Name	Human resources main indicators B2.b.iii.2
Argentina	Cantidad de empleados/ 1000 conexiones
Botswana	Number of WASH Trainings
Brazil	Número de Empregados (SNIS)
Burkina Faso	Existence de Secrétariat Technique de Gestion des Urgences WASH opérationnel
Burundi	Renforcement des capacités
Cabo Verde	Adequação dos RH Estabilidade contratual
Chad	NOMBRE DE PERSONNES FORMES EN WASH
China	Local governments implement human resources
Democratic Republic of the Congo	Proportion des personnels des institutions rajeunis (PNEHA)
Ecuador	Porcentaje de viabilidades técnicas a proyectos de Agua Potable y Saneamiento
Guinea	Ressources humaines qualifiées

Haiti	retention du personnel
Indonesia	1. Assessment of the HR needs involved in the DWQ monitoring has been completed (https://satusehat.kemkes.go.id/data/dashboard/c8b80eb9-07bd-4ac9-82c9-13993a360a34) 2. Proficiency Human resources for staffing of drinking water utilities is reported through the performance evaluation (buku kinerja PDAM)
Iran (Islamic Republic of)	1- Training and promotion of human resources indicator
Iraq	Improving the efficiency of production and distribution systems by enhancing employee performance to keep pace with contemporary developments in water project management and implementation.
Jordan	Womens participation rate in leadership positions
Lao Peoples Democratic Republic	*No of civil servants in the water supply and sanitation sector are trained; *No of specialized personnel are built at Bachelors Degree; *No of personnel holding Bachelors Degree are upgraded to Masters Degree; *No of personnel holding Masters Degree are upgraded to PhD Degree; *No of water supply state enterprise emplolyees are trained on water supply and sanitation works;
Lesotho	Staffing and capacity building plan agreed
Namibia	Number of persons employed in WASH sector
Nicaragua	Comités de Agua Potable y Saneamiento fortalecidos en la aplicación de las leyes y normas técnicas vigentes. Talleres para fortalecer las capacidades de los técnicos municipales en el sistema de información del registro central de prestadores de servicio. Comité de cuenca capacitados en GIRH.
Niger	Taux dexécution du plan de formation
occupied Palestinian territory, including east Jerusalem	staff productivity index
Oman	oman vision 2040
Pakistan	Capacity building and rationalisation
Peru	1) Porcentaje de EPS con PFC aprobado de acuerdo con lineamientos del MVCS. 2) Porcentaje de EPS que participan en programa de certificación de competencias laborales. 3) Porcentaje de OC con operador capacitado por ATM sobre el total de OC registradas.
Philippines	WASH in HCF - WASHFIT: Adequate cleaners and WASH maintenance staff
Romania	Law no. 241 of 2006 regarding the water supply and sanitation services, republished, with subsequent amendments, Art. 7 - (1) The water supply and sewerage service shall be established, organized and operated on the basis of the following principles: .... h) equal accessibility of users to the public service, on a contractual basis;
South Africa	Percentage training interventions implemented in the Department as per the Annual Performance Plan (APP) of the Department
Thailand	Number of local government organizations and trained water supply management committee members
Timor-Leste	1. Government Annual Plan (Short term) 2. Medium-term plan for WASH (5 years) 3. Capacity development programs build new capacity and strengthen existing capacity
Uganda	Increase human resources to up to 75% in the country
Uruguay	Monto invertido en capacitación por funcionario

Zambia	1. Capacity development activities undertaken 2. Increase in the workforce development 3. Staff efficiency
Zimbabwe	Efficiency in Human Resources Management (%) Extent of Gender Mainstreaming (%) Health Workforce per 10,000 Population (#)

WHO Country Name	Infrastructure main indicators B2.b.iv.2
Albania	Coverage with Water Supply for urban and rural areas; Coverage with Sewage for urban and rural areas; Coverage with Wastewater Treatment by WWTP.
Argentina	Producción de agua potable / habitante servido
Bolivia (Plurinational State of)	Número de plantas de tratamiento de aguas residuales de uso doméstico nuevas, ampliadas, mejoradas y/o rehabilitadas.
Brazil	Volume de esgoto coletado tratado / Volume de esgoto coletado
Burkina Faso	Nombre de forages équipés de PMH réalisés Nombres de PEA réalisés dans les zones dorigine Nombre de nouvelles AEPS réalisées dans les zones dorigine Nombre de latrines familiales dans les ménages daccueil des PDI Nombre de bloc de latrines réalisés dans les sites daccueil des PDI
Burundi	Améliorer les conditions de vie des populations
Cabo Verde	índice de conhecimento infraestrutural
Chad	NOMBRE DES INFRASTRURES WASH CONSTRUITES ET FONCTIONNELLES
China	Comprehensively upgrading the level of rural water supply security, i.e., two indicators, namely, the popularization rate of piped water and the scale rate
Congo	*Nombre décoles disposant dinstallation sanitaires séparées pour les garçons et filles
Cuba	Total de obras de captación. Total de obras hidráulicas con destino al abasto, que certifican sus parámetros técnicos. Obras hidráulicas con destino al saneamiento, que certifican sus parámetros técnicos.
Democratic Republic of the Congo	Nombre de laboratoires nationales dhygiène construits (PNEHA)
Dominican Republic	Porcentaje de la población con acceso a servicios sanitarios mejorados. Porcentaje de la población con acceso a agua de la red pública dentro o fuera de la vivienda
Ecuador	Número de informes técnicos aprobados de proyectos de agua potable y saneamiento.
Ethiopia	Proportion of functional water supply schemes. causes of non-fuctionality
Guinea	Nombre douvrages réalisés et fonc(tionnels
Haiti	taux de couverture
Hungary	Value of gross fixed capital formation and Change in stocks; Water supply; sewerage, waste collection and treatment, waste management and remediation activities https://www.ksh.hu/stadat_files/gdp/hu/gdp0046.html https://www.ksh.hu/stadat_files/gdp/hu/gdp0048.html
Indonesia	1. The construction of the regional Drinking Water Supply System (DWSS) as planned in the National Mid-Term Planning (RPJMN) 2020-2024 are achieved. 2. The establishment and enhancement of DWSS as planned in the RPJMN 2020-2024 are achieved. 3. The establishment and enhancement of the household distribution as planned in the RPJMN are completed

Iran (Islamic Republic of)	1- The water cutoff time period per total units included 2- Length of water distribution network per incident 3- Number of water subscription per incident
Italy	Through tariff regulation and quality standards
Jordan	Water service coverage rate
Lao Peoples Democratic Republic	*No of water treatment plants are rehabilitated/constructed; *No. of Wastewater treatment systems are constructed
Lesotho	Number of projects completed per district per year
Madagascar	Taux de la population ayant accès aux services dassainissement Pourcentage dinfrastructures nouvelles suivant les Directives nationales pour la construction des infra resistants aux aleas climatiques
Mongolia	1. Proportion of population provided by drinking water source meet requirement 2. Proportion of population provided by sanitation facility meet requirement
Mozambique	Percentagem de fontes disperas operacionais nas zonas rurais
Namibia	Number of WASH infrastructure constructed
Nicaragua	Población urbana atendida con conexiones mejoradas de agua potable. Población urbana atendida con nuevo servicio de saneamiento. Población urbana atendida con conexiones mejoradas de alcantarillado sanitario. Población rural atendida con nuevo servicio de agua potable. Población rural atendida con nuevo servicio de saneamiento.
Niger	Taux de panne
Nigeria	Resources allocated financial and technical support provided to the WASH user group availability of WASH facilities.
Norway	The sewage network should be renewed, not allowed to deteriorate Sewage and stormwater should be separated. Leakage of drinking water should be reduced. There should be no unforeseen interruptions in the drinking water supply The distribution system for drinking water should be renewed, not allowed to deteriorate
occupied Palestinian territory, including east Jerusalem	NRW %
Oman	oman vision 2040
Pakistan	Coverage and functionality
Peru	1) Porcentaje de sistemas de agua potable en estado bueno. 2) Proporción de hogares rurales con UBS operativas.
Romania	ength of water network, capacity and type and no of water treatment plant, connections no, degree of metering at users (domestic and non domestic).Service continuity, period of repair, failures number on year
Serbia	Separation of the sewage system
South Africa	Number of district municipalities (DMs) with developed 5-year water and sanitation reliability plans as per the Annual Performance Plan (APP) of the Department
Thailand	The percentage of data in the Department of Healths information system that is publicly disclosed as stipulated by the Digital Government Development Agency
Timor-Leste	1. Government Annual Plan (Short term) 2. Medium-term plan for WASH (5 years)
Uganda	Increased functionality of WASH infrastructure in communities and institutions
Uruguay	Porcentaje de nuevas conexiones a redes de agua potable en menos de 30 días en todo el país. Conexiones de saneamiento.
Zambia	1. Increase in Maintenance Ratio 2. Access to improved water and sanitation infrastructure

Zimbabwe	Property Level Coverage of Direct Water Supply Connections (%) Maintenance Coverage Ratio (%) Extent of Scientific Disposal of Waste at Landfill/ alternative Sites (%) Efficiency in Asset Management (%) Wetlands Sustainably Managed (%) Adherence to Environmental Campaigns (%)

WHO Country Name	Regulation main indicators B2.b.v.2
Belarus	data are used in the development of sanitary and epidemiological requirements, hygienic standards, building codes and regulations. Amendments have been made to the current Law of the Republic of Belarus "On Drinking Water Supply", Water Code
Bolivia (Plurinational State of)	1. Número de EPSA con seguimiento regulatorio. 2. Número de EPSA con PTAR fiscalizadas.
Bosnia and Herzegovina	Established legal basis for development end implementation of WSPs; By laws drafted and implemented related to untreated wastewater and untreated storm water overflows; By laws adopted related to removal and re-use of sewage sludge from common wastewater systems to waters; By laws adopted related to water used as sources for drinking water, bathing, aquaculture, cultivation or harvesting of shellfish.
Brazil	Número de municípios com serviços públicos de saneamento básico regulados / Total de municípios
Burkina Faso	Existence dune loi portant interdiction totale des emballages et sachets plastiques au Burkina Faso adoptée et diffusée Existence de textes sur les conditions de gestion des produits chimiques et des déchets dangereux adoptés et diffusés
Burundi	Elaboration des stratégies sectorielles WASH
Cabo Verde	Controlo de qualidade de água para o consumo humano
Chad	NOMBRE DE TEXTES REGLEMENTAIRES
China	Circular of the Ministry of Water Resources on the Establishment of a Rural Drinking Water Safety Management System Urban Water Supply Ordinance (1994) Regulation on the Quality of Urban Water Supplies(2024)
Congo	*Prix du service de leau potable toutes charges comprises au m3
Cuba	Eficacia en la regulación y el control institucional.
Democratic Republic of the Congo	Nombre darretés, normes et directives élaborés et validés (PNEHA)
Ecuador	Número de avales emitidos a fuentes de contaminación remediadas de la industria hidrocarburífera. Número de mecanismos de regularización, control y seguimiento ambiental emitidos.
Guinea	Les documents produits ou revisés
Haiti	taux dappropriation
Indonesia	1. All the relevant regulations on DW and sanitation are developed and being implemented. 2. 508 districts have developed/ updated the DWSS master plan and issued by the local government. 3. 508 districts have developed/ updated the policies and strategies on DWSS and issued by the local government.
Iraq	Reducing water loss to 10% compared to the baseline year by enforcing laws and regulations against unauthorized use of public water networks.

Italy	• Regulatory Compliance Indicators: Percentage of services compliant with regulatory standards, number of inspections performed. • Regulatory Effectiveness Indicators: Numerous regulatory violations and sanctions, average time to resolve non-conformities. • Regulatory Update Indicators: Frequency of regulatory updates, stakeholder participation in regulatory review.
Jordan	Percentage of participation of water users associations in water management in the Jordan Valley region
Kuwait	The relevant ministries and the Environmental Public Authority agree on the necessary legislation and regulations.
Lao Peoples Democratic Republic	*No of regulatory documents are revised/developed;
Lesotho	Regulation and Standards gazetted
Madagascar	Nombre de mécanismes mis en place pour la traçabilité des actions des secteurs EAH
Mauritania	Indicateurs SNADEA et SCAPP
Mongolia	Mongolias long-term development policy "Vision-2050"
Namibia	Percentage compliance to the Water Resource Management Act
Nicaragua	Licencias de operación a prestadores de servicio de agua potable y saneamiento en el sector urbano. Derechos de uso y aprovechamiento de agua. Permisos de vertidos- Aprobación de estudios tarifarios a prestadores de servicios. Inspecciones de fiscalización y regulación a prestadores de servicios. Dictámenes técnicos para mejorar la sostenibilidad de los sistemas de agua potable y saneamiento fiscalizados. Inspecciones a sistemas de abastecimiento de agua potable y saneamiento rural, administrados por CAPS certificados. Medidas de sostenibilidad y asistencia técnica a sistemas de abastecimiento de agua potable y saneamiento rural inspeccionados. Planes y medidas de protección aseguramiento y control para reducir la vulnerabilidad de las fuentes de abastecimiento rural en riesgo de contaminación. Fiscalizar la calidad del agua de las fuentes de abastecimiento rural en riesgo de contaminación. Inspecciones de oficio.
Nigeria	regulatory compliance in the WASH sector
occupied Palestinian territory, including east Jerusalem	Number of adopted regulans and by laws \ tarrif licensing)
Oman	oman vision 2040
Pakistan	Establishment of Regulatory Authority
Peru	1) Equilibrio financiero ámbito urbano 2) Financiamiento a través de la tarifa para enfoque ambiental (MRSE, GRD y ACC). Urbano 3) Equilibrio financiero ámbito rural
Romania	Degree of compliance, Degree of compliance with license condition
South Africa	Water resource regulatory prescripts developed and implemented Water economic regulator gazetted for establishment As per the Annual Performance Plan (APP) of the Department Regulation for advancement of water allocation reform finalised as per the Annual Performance Plan (APP) of the Department
Thailand	The percentage of subordinate legislation developed in response to current situations and submitted to the relevant committee (rules/regulations).
Timor-Leste	1. Medium-term plan for WASH (5 years) 2. Establishment of performance monitoring systems and annual strategic reviews
Uganda	Increased compliance to set standards
Zambia	1. Evidence of regulatory framework 2. compliance monitoring 3. Enforcement of laws and regulations

Zimbabwe	Quality of Water Supplied (%) Coverage of Households with Adequate Sanitation System Services (%) Quality of Treatment of Sanitation System (%) Extent of Scientific Disposal of Waste at Landfill/ alternative Sites (%) Payment of Statutory Obligations (%) Adherence to Mandatory Council Meetings and Policies (%) Status of Audited Accounts (%) Compliance to EIA Requirements (%) Proportion of Compliant Business Premises (%) Extent of Title Surveyed Properties (%)

WHO Country Name	Service planning main indicators B2.b.vi.2
Albania	Continuity of Water Supply (hours/day); Reduction of losses at the national level.
Bhutan	13 FYP 1. Proportion of population using safely managed drinking water services 2. Proportion of population using safely managed sanitation services
Bolivia (Plurinational State of)	1. Número de EPSA con seguimiento regulatorio.
Bosnia and Herzegovina	% of the population supplied with safe/controlled drinking water; % of population connection to public water supply systems; % of population connected to sewage systems and wastewater treatment plants; % reduction in losses in the water supply system
Botswana	Number of days for service delivery, service charge
Brazil	Número de municípios com Plano de Saneamento Básico / Total de municípios
Burkina Faso	Proportion de communes urbaines disposant dun système fonctionnel de gestion des déchets solides Proportion de la population satisfaite de la qualité du cadre de vie dans les trois plus grandes villes du Burkina Faso
Burundi	Signature des contrats de performances par le personnel
Cabo Verde	Planeamento (RASAS)
Chad	POURCENTAGE DES ACTIVITES WASH MENEES AU COURS DE LANNEE
China	Signing of water supply agreements/contracts Water supply service hours 24 hours a day to ensure water pressure
Congo	*Nombre de personnes additionnelles qui ont eu accès à des services dhygiène de base grâce aux programmes directement soutenus par lUNICEF *Nombre de personnes supplémentaires utilisant des services dassainissement de base grâce aux programmes de développement (non urgents) soutenus directement par lUNICEF au cours de lannée de référence (tel que défini par le JMP : installations améliorées non partagées avec dautres ménages) *Taux daccès au service dassainissement de base

	*Taux daccès au service dassainissement collectif *Proportion de la population utilisant les services deau gérés en toute sécurité
Costa Rica	6.1.1 Proporción de la población que utiliza servicios de suministro de agua potable gestionados sin riesgos. 6.2.1 Proporción de la población que utiliza: a) servicios de saneamiento gestionados sin riesgos y b) instalaciones para el lavado de manos con agua y jabón. 6.4.1 Cambio en el uso eficiente de los recursos hídricos con el paso del tiempo. 6.4.2 Nivel de estrés hídrico: extracción de agua dulce en proporción a los recursos de agua dulce disponibles. 6.5.1 Grado de gestión integrada de los recursos hídricos. 6.5.2 Proporción de la superficie de cuencas transfronterizas sujetas a arreglos operacionales para la cooperación en materia de aguas. Número de proyectos destinados a la protección del recurso hídrico.
Cuba	Recursos hidráulicos per cápita. Dotación de acueducto. Ciclo de desobstrucciones. Ciclo de limpieza de fosas. Proporción de lugares de inundación resueltos.
Democratic Republic of the Congo	Proportion des Provinces ayant élaboré leurs programmes dassainissement (PNEHA)
Ethiopia	Accessibility is used for planning of rural water supply. reliability, down time, NRM are used for planning urban water services
Indonesia	1. The expanding the implementation of the Prime DW Zone (ZAMP) to 34 Regional DW Enterprises (BUMD) have been completed. 2. Expansion of the WSP adoption and implementation in 190 water utilities and 340 community piped drinking water supply systems have been completed.
Iran (Islamic Republic of)	1- Urban wastewater coverage 2- Provision of wastewater coverage in prioritized rural areas
Lao Peoples Democratic Republic	3-year rolling Corporate planning is developed, implemented, then reviewed and revised every year.
Lesotho	Number of Water and Sanitation Plans
Madagascar	Nombre de documents de stratégie et de planification sectorielle vulgarisés (en nombre) et mis en œuvre Nombre de plan daction établi
Mauritania	Indicateurs SNADEA et SCAPP
Mongolia	1. The length of the water supply network newly built and to be renovated, km; 2. The length of the sewage system newly built and to be renovated, km; 3. Capacity of newly built or expanded wastewater treatment plants m3/day; 4. Number of water kiosks to be maintained.
Namibia	Percentage reduction of households practicing open defecation

Nicaragua	Licencias de operación a prestadores de servicio de agua potable y saneamiento en el sector urbano. Derechos de uso y aprovechamiento de agua. Permisos de vertidos Aprobación de estudios tarifarios a prestadores de servicios. Inspecciones de fiscalización y regulación a prestadores de servicios. Dictámenes técnicos para mejorar la sostenibilidad de los sistemas de agua potable y saneamiento fiscalizados. Inspecciones a sistemas de abastecimiento de agua potable y saneamiento rural, administrados por CAPS certificados. Medidas de sostenibilidad y asistencia técnica a sistemas de abastecimiento de agua potable y saneamiento rural inspeccionados. Planes y medidas de protección aseguramiento y control para reducir la vulnerabilidad de las fuentes de abastecimiento rural en riesgo de contaminación. Fiscalizar la calidad del agua de las fuentes de abastecimiento rural en riesgo de contaminación. Inspecciones de oficio.
Norway	There should be no unforeseen interruptions in the drinking water supply Leakage of drinking water should be reduced.
occupied Palestinian territory, including east Jerusalem	Coverage NRW
Oman	RD 131\2020 & RD 40\2023
Pakistan	Clear roles and responsibility
Philippines	WASH in Schools - Presence of WASH in Schools PPAs and budgets in School Improvement Plans and Annual Implementation Plans WASH in HCF - WASH FIT and other quality improvement/ management plan (i.e., HCWM, SSP, WSP)
Romania	Degree of compliance, Degree of compliance with license condition
Serbia	Flow measurement at the source and measuring devices
South Africa	There are a number of Indicators listed within the (Annual Performance Plan (APP), including but not limited to: Number of completed Record of Implementation Decisions (RID) for bulk raw water planning projects Number of wastewater systems assessed for compliance with the Green Drop / Blue Drop and No Drop Regulatory Requirements Number of feasibility studies for water and wastewater services projects (RBIG) completed Number of implementation readiness studies for water and wastewater services projects (RBIG) completed Number of district municipalities (DMs) with developed 5-year water and sanitation reliability plans Number of large water supply systems assessed for water losses
Thailand	Provinces driving sewage management in compliance with laws at 60%.
Timor-Leste	Sanitation services shall reach all community members, and recognize the different sanitation needs and hygiene roles of men and women, with a focus on high-risk groups such as pregnant women, carers of infants, children under-five years of age, people with functional disabilities, and other disadvantaged families.
Uganda	Percentage Increase in the use of standard WASH planning tools
Uruguay	Indicadores de agua no contabilizada Cobertura del servicio de agua potable Cobertura del servicio de saneamiento Número de muestras extraídas en redes y servicios de agua potable Incumplimientos con el vertido de las plantas de tratamiento de efluentes (Decreto 253/79) Los indicadores y metas por períodos se establecen para OSE: https://www.impo.com.uy/bases/decretos-originales/442-2022
Zambia	1. Evidence of the National Development plan 2. Availability Ministerial Implementation Plans
Zimbabwe	Property Level Coverage of Direct Water Supply Connections (%) Coverage of Toilets (%) Coverage of Households with Adequate Sanitation System Services (%) Coverage of SWM Services Through Door-to-Door Collection of Waste (%) Proportion of Rural Households with Adequate Solid Waste Disposal Facilities (%) Coverage of Receptacles (%) Availability of Estates

and Development Planning Policies (%) Adequacy of Community Amenities (%) Coverage of Functional Settlements (%)

WHO Country Name	Surveillance main indicators B2.b.vii.2
Bhutan	13 FYP 1. Proportion of population using safely managed drinking water services 2. Proportion of population using safely managed sanitation services
Bolivia (Plurinational State of)	Indicadores de desempeño de las EPSA 2022.
Bosnia and Herzegovina	Baseline analysis of water supply systems in rural areas implemented; Reports produced by WASH in schools and WASH in health care facilities.
Botswana	% compliance to BOS 93:2021, dams levels, water availability, toilet child ratio, environmental health surveillance
Brazil	Número de municípios que cumprem 75% do plano de amostragem previsto na Diretriz Nacional do Plano de Amostragem da Vigilância da Qualidade da Água para Consumo Humano para o parâmetro residual de desinfetante. Número de municípios que registrou percentual de amostras com ausência de Escherichia Coli na água distribuída superior a 99% / Total de municípios
Burundi	Suivre et évaluer les intervenants dans le secteur WASH
Cabo Verde	Qualidade para o consumo humano
Chad	NOMBRE DE MISSIONS DE SUIVI
China	Rural piped water penetration rate Living Drinking Water Indicators 106 Indicators
Congo	*Nombre de personnes additionnelles vivant dans des communautés certifiées Fin de la Défécation à lair libre (FDAL)
Costa Rica	Indicador ODS 6.3.2 Proporción de masas de agua de buena calidad. Porcentaje de cumplimiento de los parámetros de calidad con respecto a los valores máximos establecidos en la normativa nacional. 39 parámetros de medición obligatoria establecidos en el Decreto 38924-S se verifican como mínimo. Fuente: Minae, Dirección de Aguas, Sistema de monitoreo de cuerpos de agua superficiales https://www.inec.cr/objetivos-de-desarrollo-sostenible El Reglamento para la calidad del agua potable Nº 38924-S establece un porcentaje de ausencia de coliformes fecales (% de negatividad) en muestras de agua para consumo. El LNA del AYA genera anualmente el indicador de calidad de agua potable del país, con un desglose de los resultados por acueductos según la normativa nacional y su clasificación de potable o no potable
Cuba	Calidad en el servicio de abasto de agua Calidad en el servicio de saneamiento.
Democratic Republic of the Congo	Nombre de Base de recueil de données des ressources hydroliques en RDC (PNEHA)
Ethiopia	Proportion of water supply schemes providing safe water services. Proportion of households with hygienically used

Indonesia	1. Implementation of the Household DWQS in 2024 2. Proficiency of laboratory standard and needs to support the achievement of the DW safely managed by 2030 has been completed
Iran (Islamic Republic of)	Compliance rate of Residual chlorine, turbidity, microbial and chemical quality
Italy	- Quality Control Indicators: Frequency of water and service quality checks, number of samples tested. - Problem Response Indicators: Response time to reports of contamination or malfunction, percentage of problems resolved. - Reporting Indicators: Availability and clarity of surveillance reports, frequency of published reports.
Kuwait	The evidence for this is the decrease in the number of complaints from individuals.
Lao Peoples Democratic Republic	Assessment of direct water quality, review of the result of the water quality monitoring and water safety plan audit and annual report.
Lesotho	Percentage of safe water sources. Water quality pass rate of water and effluent
Madagascar	Nombre de rapports de suivi et évaluation disponibles Nombre de rapports de suivi et évaluation disponibles
Mongolia	The Water Services Regulatory Commission conducts annual monitoring and evaluation.
Nicaragua	Visitas de monitoreo de la calidad del agua a prestadores de servicio. Inspecciones sanitarias Determinación de Cloro Residual Análisis Fisicoquimico: Análisis Microbiológico. Inspecciones de vigilancia y monitoreo de fuentes de agua. Exámenes realizados de calidad del agua potable. Producción de Agua Potable (metros cúbicos). Volumen Facturado (metros cúbicos) ANF (%)
Nigeria	Urban and rural water treatment
Norway	Drinking water should not have microbiological deviations. Drinking water should not have deviations from chemical and physical criteria standards. No one should get sick from the drinking water.
occupied Palestinian territory, including east Jerusalem	number of monitored SPs
Oman	RD 131\2020 & RD 40\2023
Pakistan	Drinking Water Quality
Peru	1) PRESENCIA DEL CLORO RESIDUAL 2) PRESENCIA DE COLIFORMES TERMOTOLERANTES
Serbia	drinking water quality wastewater quality
South Africa	Performance of the South African Water Boards is overseen by the Department of Water and Sanitation through their own performance indicators approved by the Department Performane of Municipal strucutres is monitored by the Department of Corporate Governance, however the Water Services Component is monitored by the Department of Water and Sanitation through the Water Service Development Plans revised by the Water Service Authorities annually.
Thailand	The number of village water supply systems that have undergone water quality inspection.
Timor-Leste	Public relation activity (door to door, social media, community level)
Uganda	Percentage increase in the frequency of surveillance activities for water quality
Uruguay	Extracción de muestras en red de agua potable Contabilidad de no cumplimiento con la norma vigente de potabilidad en un punto, presentado por la prestadora del servicio.

Zambia	1. Number of district conducting WASH monitoring 2. Public health monitoring 3. Disease burden
Zimbabwe	Average Per Capita Water Supply (litres/per capita/day) Average Hours of Continuous Access to Water per Day (hours/day) Quality of Water Supplied (%) Coverage of Toilets (%) Coverage of Households with Adequate Sanitation System Services (%) Quality of Treatment of Sanitation System (%) Coverage of SWM Services Through Door-to-Door Collection of Waste (%) Proportion of Rural Households with Adequate Solid Waste Disposal Facilities (%) Compliance to EIA Requirements (%) Coverage of Functional Settlements (%)

WHO Country Name	Community participation main indicators B2.b.viii.2
Argentina	Cantidad de reclamos / 1000 cuentas
Bhutan	13 FYP 1. Proportion of population using safely managed drinking water services 2. Proportion of population using safely managed sanitation services
Botswana	education and awareness campaigns Number of educational campagns conducted,
Brazil	Número de municípios com órgão colegiado de controle social das ações e serviços de saneamento básico / Total de municípios
Burkina Faso	Nombre de comités dusagers de leau mis en place
Burundi	Elaboration des Plans Communaux de Développement Communautaire
Cabo Verde	Participação social Respostas a reclamações e sugestões
Chad	NOMBRE DASSOCIATIONS COMMUNAUTAIRES EXISTANTES ET FONCTIONNELLES
China	Village-level water managers responsible for the day-to-day management and maintenance of water supply facilities in villages
Congo	*Rendement moyen du réseau de distribution deau potable *Nombre de coupures deau liées au fonctionnement du réseau *Taux de réclamation pour 1000 abonnés
Costa Rica	6.b.1 Proporción de dependencias administrativas locales que han establecido políticas y procedimientos operacionales para la participación de las comunidades locales en la gestión del agua y el saneamiento.
Cuba	Disponibilidad (frecuencia de servicio de abasto a domicilio).
Ethiopia	Percentage contribution of the community in water scheme construction (in kind and in cash)

Guinea	o Pourcentage de Projets WASH Impliquant des Comités Locaux. o Nombre de Réunions Communautaires Organisées o Nombre de Membres des Comités Formés. o Évaluation de la Compétence des Comités Locaux. o Pourcentage dInfrastructure WASH Gérée Localement o Nombre de Problèmes Signalés et Résolus Localement o Pourcentage de Projets WASH Basés sur des Plans Communautaires o Inclusion des Représentants Locaux dans les Comités de Planification o Indice de Satisfaction Communautaire. o Impact des Projets WASH sur la Communauté. o Taux de Fonctionnement des Infrastructures WASH. o Nombre de Réparations Effectuées par la Communauté o Nombre de Sessions de Sensibilisation. o Taux de Couverture des Campagnes de Sensibilisation
Indonesia	1. Strengthened the role of communities in watershed protection in 10 provincies. 2. Developed a concept for cooperation berween Regional DW companies (BUMD), the Indonesan Consumers Foundation and other consumer institutions.
Iraq	Enhancing the efficiency of production and distribution systems by involving the private sector in managing water stations to ensure long-term management, maintenance, and operation.
Jordan	Percentage of participation of water users associations in water management in the Jordan Valley region
Kuwait	Awareness and educational workshops and seminars are conducted to inform and educate the community, and to notify them in case of any emergency.
Lao Peoples Democratic Republic	Communities and households are consulted about the options and issues related to the project.
Lesotho	Number of village Health and Water Committees in place
Mongolia	Every year on the 2nd week of October, the public is provided with information by organizing a "Listening to our customers"
Namibia	Number of household or community or Schools mobilised on WASH
Nicaragua	Porcentaje de reuniones para brindar asistencia técnica a los Comités de Agua Potable y Saneamiento CAPS. Número de UMAS capacitados. Número de CAPS capacitados en temas de WASH y GIRH Número de familiar capacitadas en higiene comunitaria
Nigeria	Number of meeting held by the saniation work group
occupied Palestinian territory, including east Jerusalem	number of consultation workshops
Oman	RD 131\2020 & RD 40\2023
Pakistan	Community awareness and involvement in planning
South Africa	6.b.1 Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management.
Thailand	Proportion of local administrative agencies that create and implement policies and procedures to ensure local community participation in water and sanitation management.
Timor-Leste	Public relation activity (door to door, social media, community level)
Uganda	Number of communities actively engaged and participating in planning, implementation and monitoring of WASH services

Zambia	1. Existence Community management structures 2. Community Training 3. Community accountability and feedback
Zimbabwe	Efficiency in Satisfactory Response/Reaction to Customer Complaints (%) Extent of Gender Mainstreaming (%) Compliance to EIA Requirements (%)

WHO Country Name	Service delivery main indicators B2.b.ix.2
Albania	Coverage with Water Supply for urban and rural areas; Coverage with Sewage for urban and rural areas; Coverage with Wastewater Treatment by WWTP.
Argentina	Cobertura de servicios en % de habitantes servidos
Bhutan	13 FYP 1. Proportion of population using safely managed drinking water services 2. Proportion of population using safely managed sanitation services
Bolivia (Plurinational State of)	Indicadores de desempeño de las EPSA 2022. Entre los principales para esta área: Cantidad, continuidad, cobertura (conexiones -micromedición).
Bosnia and Herzegovina	Number of schools where training was carried out related to raise awareness of the importance of adequate water supply and sanitation in public institutions in RS, FBiH and BD of BiH (educational, health, etc.).
Botswana	water availability, number of water connections,
Brazil	Índice e Atendimento total de água/ Índice de Atendimento total de Esgoto
Burkina Faso	Longueur de réseau de distribution réalisée Nombre de branchements particuliers réalisés Nombre de bornes fontaines réalisées
Burundi	Evaluation des contrats de performances par le personnel
Cabo Verde	Continuidade de abastecimento. Acessibilidade física do serviço
Chad	NOMBRE DONG OEUVRANT DANS LE SECTEUR WASH
China	Number of reports and complaints
Congo	*Rendement moyen du réseau de distribution deau potable *Nombre de coupures deau liées au fonctionnement du réseau *Taux de réclamation pour 1000 abonnés
Costa Rica	6.1.1 Proporción de la población que utiliza servicios de suministro de agua potable gestionados sin riesgos. Porcentaje de avance de las etapas del Proyecto Reducción de Agua No Contabilizada. Porcentaje acumulado de avance en la etapa de ejecución del Proyecto Alcantarillado sanitario (GAM).
Cuba	Accesibilidad (población con acceso a fuente de agua mejorada). Accesibilidad (población con acceso a instalaciones de saneamiento mejoradas).
Democratic Republic of the Congo	Pourcentage des rivières et canivaux curés régulièrement (PNEHA)
Ecuador	Número de informes técnicos aprobados de proyectos de agua potable y saneamiento.
Ethiopia	Proportion of urban water service providing (L/C/D per the the GTP-II standards
Fiji	https://waterauthority.com.fj/wp-content/uploads/2022/02/WAF_Strategic_Plan_2020-2025_1644365931.pdf
Guinea	Nombre de rapports de prestations
Haiti	Perte technique, Performance commerciale et financière,

Hungary	Ratio of treated to collected wastewater, Untreated wastewater discharges and total wastewater collected, Sewage sludge treated and total sludge at the treatment plant
Indonesia	1. DWQ is monitored in 76% of water facilities in all provinces in Indonesia in 2024
Iran (Islamic Republic of)	1- Customer satisfaction
Iraq	Ensuring complete coverage of safe drinking water supply for everyone.
Italy	- Technical quality regulation (RQTI) - https://www.arera.it/it/docs/17/917-17.htm - Water supplied per capita in public water supply (Istat, Urban water census: years 1999, 2005, 2008, 2012, 2015, 2018, 2020, 2022)
Jordan	Water and sanitation coverage rate
Lao Peoples Democratic Republic	water is delivered at premises
Lebanon	Access to Safe water/Connection to safe sanitation
Lesotho	Number of persons served by new and rehabilitated projects per year
Madagascar	pourcentage des déchets municipaux solides collectés et gérés dans des installations contrôlés
Mongolia	The Water Services Regulatory Commission conducts annual monitoring and evaluation.
Namibia	Percentage of household with access to improved WASH facilities
Nicaragua	Población total atendida con agua potable urbano. Hogares urbanos atendidos con agua potable. Índice de cobertura efectiva de agua potable en áreas urbanas (%). Población total atendida con saneamiento urbano. Hogares urbanos atendidos con conexiones de alcantarillado sanitario. Índice de acceso de la población urbana al servicio de alcantarillado (%).
Nigeria	Number of new boreholes constructed. Number of new dams constructed. Number of newly constructed household latrines with hand washing facilities Number of new boreholes constructed. Number of exploratory well rehabilitated
Norway	There should be no unforeseen interruptions in the drinking water supply. Leakage of drinking water should be reduced.
occupied Palestinian territory, including east Jerusalem	supply hours
Oman	RD 131\2020 & RD 40\2023
Pakistan	Key performance indicators
Peru	1) Agua no facturada. Urbano EPS Grandes 2) Aguas residuales domésticas tratadas de manera segura (6.3.1 a. del ODS 6). Urbano EPS
Philippines	WASH in Schools - Star ratings on access to drinking water; Access to gender-segregated toilets; Access to group handwashing facilities; Conduct of daily group handwashing; Availability of sanitary pads WASH in HCF - WASHFIT: Star ratings on water, sanitation, health care waste, environmental cleaning
Romania	Degree of compliance, Degree of compliance with license condition
Serbia	Total water used, million m3 Quantity of abstracted water for drinking water supply, thousand m3 Loses in network, m3
South Africa	6.1.1 Proportion of population using safely managed drinking water services. 6.2.1 Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water. 6.3.1 Proportion of domestic and industrial wastewater flows safely treated. 6.3.2 Proportion of bodies of water with good ambient water quality.

Thailand	The proportion of the population using (a) safely managed sanitation services and (b) handwashing facilities with soap and water
Timor-Leste	Public relation activity (door to door, social media, community level) Improve affordability of sanitation and hygiene goods and services by scaling up programs, and through the marketing of appropriate, low-cost facilities to poor, vulnerable and other disadvantaged households.
Uganda	Percentage Increase in service coverage levels across the country
Uruguay	Resolución Trámites Personales en menos de 35 minutos Metro Interior y total País Reclamos Operativos cada 1000 conexiones Metro, Interior y total País. T90 reclamos operativos sin agua, T90 reparación de perdidas Resolución de reclamos comerciales resueltos en menos de 10 días Metro, Interior y total País Reclamos por baja presión de agua Metro, Interior y total País Clientes satisfechos con la atención personalizada en el hogar Clientes satisfechos con la atención personalizada en la oficina Clientes satisfechos con la atención personalizada telefónica Tiempo promedio de espera y atención telefónica Margen Operativo Los indicadores y metas por períodos se establecen para OSE: https://www.impo.com.uy/bases/decretos-originales/442-2022
Zambia	1. Hours of supply 2. Customer care 3. Continuity of service
Zimbabwe	Efficiency in Meeting Water Demand(%) Average Hours of Continuous Access to Water per Day (hours/day) Quality of Water Supplied (%) Collection Efficiency of Sanitation System (%) Quality of Treatment of Sanitation System (%) Efficiency of Collection of Solid Waste (%)

WHO Country Name	Service quality main indicators B2.b.x.2
Argentina	Porcentaje de anaálisis de agua potable que cumplen la norma
Bhutan	13 FYP 1. Proportion of population using safely managed drinking water services 2. Proportion of population using safely managed sanitation services
Bolivia (Plurinational State of)	Indicadores de desempeño de las EPSA 2022. Entre los principales para esta área: Calidad del agua, presión de servicio, densidad de fallas (tuberías y conexiones)
Bosnia and Herzegovina	Number of controlled bathing areas in accordance with the adopted regulations; The ratio of number of samples they do not meet the standards of effluents and the total number of samples tested.
Botswana	number days for yard connection
Burkina Faso	taux de pannes taux de fonctionnalité des ouvrages WASH
Burundi	Evaluation des contrats de performances par le personnel
Cabo Verde	Acessibilidade física do serviço Qualidade de abastecimento de água
Chad	POURCENTAGE DINFRASTRUCTURES WASH RESPECTANT LES NORMES
China	Requirement of water quality and quantity to meet the standard Urban piped water penetration rate of 100%
Colombia	Índice de riesgo de la calidad del agua - IRCA urbano nacional Índice de riesgo de la calidad del agua - IRCA rural nacional
Congo	*Taux de suivi de la qualité de leau *Continuité du service (en % de jours

Costa Rica	6.3.1 Proporción de los flujos de aguas residuales domésticas e industriales tratados de manera adecuada. 6.3.2 Proporción de masas de agua de buena calidad.
Cuba	Calidad en el servicio de abasto de agua Calidad en el servicio de saneamiento.
Democratic Republic of the Congo	Pourcentage dactivités dassainissement suivies dans les Provinces (PNEHA)
Ecuador	Número de avales emitidos a fuentes de contaminación remediadas de la industria hidrocarburífera.
Ethiopia	Zero faecal coliform/100 ML
Fiji	https://waterauthority.com.fj/wp-content/uploads/2022/02/WAF_Strategic_Plan_2020-2025_1644365931.pdf
Guinea	• Indice de Potabilité de lEau • Proportion dEau Traitée. • Fréquence des Contrôles de Qualité de lEau • Conformité aux Normes de Construction • État des Installations • Taux de Fonctionnement des Infrastructures WASH • Fréquence des Interventions de Maintenance • Indice de Satisfaction des Utilisateurs. • Nombre de Réclamations et de Feedbacks • Rapport Coût-Efficacité des Services • Proportion de Services Conformes aux Normes de Qualité • Accessibilité des Services pour les Groupes Vulnérables. • Conformité aux Normes dAccessibilité. • Réduction des Maladies Liées à lEau • Impact des Programmes de Sensibilisation • Publication et Accès à lInformation. • Révision et Ajustements
Haiti	continuité et qualité de leau
Hungary	drinking water quality Service coverage (residential connections) Number of burst pipes, network faults, technical faults Number of burst pipes per 1 km of pipe section Number of complaints answered per 30 days Pipe replacement rate Availability of human resources Percentage of water not paid for Percentage of water not billed
Indonesia	1. 100% of regional DW utilities (BUMD) achieved healthy performance by 2024
Iran (Islamic Republic of)	1- Non-revenue water
Iraq	Providing drinking water that meets international standards.
Italy	- Technical quality regulation (RQTI) - https://www.arera.it/it/docs/17/917-17.htm - Total water losses in public water supply network (% of volume input into the network) (Istat, Urban water census: years 1999, 2005, 2008, 2012, 2015, 2018, 2020, 2022) - Total linear water losses in PWS (m3 lost per km per day), only for provincial or metropolitan capital cities (Istat, Urban water census: years 2015, 2018, 2020, 2022) - Irregularities in water supply (% households that reported irregularities in water supply in their dwelling) (Istat, Survey on Aspects of daily life) - Rationing of domestic water supply for part or all of the municipality; validated and disseminated only for metropolitan and provincial capitals (Istat, Environamental data in the cities)
Jordan	Response rate to complaints and malfunctions

Lao Peoples Democratic Republic	*Water Supply pressure inadequacy ratio; *No. of service interruptions
Lesotho	Number of Complaints recieved
Madagascar	pourcentage des eaux usées traités
Mongolia	The Water Services Regulatory Commission conducts annual monitoring and evaluation.
Mozambique	Percentagem de amostras de agua testadas que estao conformes
Namibia	Percentage customer satisfaction
Nicaragua	Población urbana atendida con conexiones mejoradas de agua potable. Personas atendidas con conexiones mejoradas de agua potable. Hogares urbanos con conexiones mejoradas de agua potable Población urbana atendida con nuevo servicio de saneamiento. Población urbana atendida con conexiones mejoradas de alcantarillado sanitario. Personas atendidas con conexiones mejoradas de alcantarillado sanitario. Hogares urbanos con conexiones mejoradas de alcantarillado sanitario.
Nigeria	Number of routine water quality test carried out Conduct of national drinking water quality survey Number of hydrological stations established Conduct of National wtaer quality survey
Norway	Drinking water should not have microbiological deviations. Drinking water should not have deviations from chemical and physical criteria standards. There should be no unforeseen interruptions in the drinking water supply No one should get sick from the drinking water.
occupied Palestinian territory, including east Jerusalem	continuaty
Oman	RD 131\2020 & RD 40\2023
Pakistan	Customers satisfaction and feedback
Peru	1) Continuidad del servicio de agua. Urbano 2) Agua gestionada de manera segura (indicador 6.1.1 del ODS 6). Nivel Nacional
Philippines	WASH in Schools - Star ratings on access to drinking water; Access to gender-segregated toilets; Access to group handwashing facilities; Conduct of daily group handwashing; Availability of sanitary pads WASH in HCF - WASHFIT: Star ratings on water, sanitation, health care waste, environmental cleaning
Romania	Degree of parametres compliance
Serbia	Complaints on water supply and sewerage services It is calculated as total number of complaints about water and sewage services during the year, expressed as a percentage of the total number of water supply and sewage connections (number of complains compared to total number of water and sanitation connections) (%) 2. Congestion in the sewer system It is calculated as total number of flushes during the year, expressed per km of sewerage network (flushing / km / year) 1. Continuity of service It is calculated as average daily duration of access to the service of water supply (hours/day) 2. Complaints on water supply and sewerage services It is calculated as total number of complaints about water and sewage services during the year, expressed as a percentage of the total number of water supply and sewage connections (number of complains compared to total number of water and sanitation connections) (%) 3. Faults on pipes It is calculated as total number of failures during the year, expressed per km of distribution network (breakdown / km / year) 4. Environmental Protection Agency: http://www.sepa.gov.rs/download/posebni/NedostatakVodeZaPice.pdf
South Africa	Included withing SDG6 Monitoring 6.1.1 Proportion of population using safely managed drinking water services. 6.2.1 Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water. 6.3.1 Proportion of domestic and industrial

	wastewater flows safely treated. 6.3.2 Proportion of bodies of water with good ambient water quality.
Thailand	The percentage of household members using hygienic toilets is not shared with others.
Timor-Leste	Build the capacity of local organizations, small enterprises and individuals to undertake lead roles in the improved supply of sanitation goods and services
Uganda	Percentage increase in quality of WASH services provided across the country
Uruguay	Índice de discontinuidad del servicio Metro, Interior y total País Roturas cada 100 km de red definitiva Metro, Interior y total país. Los indicadores y metas por períodos se establecen para OSE: https://www.impo.com.uy/bases/decretos-originales/442-2022 Agua no contabilizada (litro/conex/día) Metro, Interior y total País Agua no facturada sobre agua disponible Metro, Interior y total País Calidad de Agua en Montevideo, Interior y total País
Zambia	1. Continuity of Supply 2. water quality
Zimbabwe	Efficiency in Meeting Water Demand(%) Average Hours of Continuous Access to Water per Day (hours/day) Quality of Water Supplied (%) Collection Efficiency of Sanitation System (%) Quality of Treatment of Sanitation System (%) Efficiency of Collection of Solid Waste (%)

WHO Country Name	Affordability main indicators B2.b.xi.2
Argentina	Costo del servicio / ingreso miínimo familiar
Bhutan	13 FYP 1. Proportion of population using safely managed drinking water services 2. Proportion of population using safely managed sanitation services
Bolivia (Plurinational State of)	costo unitario de operación y tarifa media.
Brazil	Tarifa Média de Água / Tarifa Média de Esgoto
Burundi	Préparation/élaboration des fiches de paie
Cabo Verde	Acessibilidade econômica
Chad	MONTANT DES INVESTISSEMENTS ALLOUES
China	Water prices are affordable for rural residents and generally do not exceed 5 per cent of disposable household income
Congo	*Couverture du petit équilibre tarifaire
Costa Rica	6.1.1 Proporción de la población que utiliza servicios de suministro de agua potable gestionados sin riesgos.
Cuba	Disponibilidad (frecuencia de servicio de abasto a domicilio).
Democratic Republic of the Congo	Pourcentage de fonds de lECOTAXE alloué au secteur WASH (PNEHA)
Ecuador	Número de informes técnicos aprobados de proyectos de agua potable y saneamiento.
Fiji	https://waterauthority.com.fj/wp-content/uploads/2022/02/WAF_Strategic_Plan_2020-2025_1644365931.pdf
Haiti	taux de subvention et petit equilibre
Indonesia	1. 100% of regional water utilities already operating at Full Cost Recovery (FCR) by 2024 (as in-line with previous indicator (service quality))
Italy	Technical quality regulation (RQTI) - https://www.arera.it/it/docs/17/917-17.htm

Kuwait	The relevant ministries are responsible for bearing most of the costs as they are supported by the government in the State of Kuwait.
Lao Peoples Democratic Republic	monthly water bill of poor consumers is less than 3-5% of their montly income (minimum wage of 2 persons); *the payment for water supply and sanitation services does not present a barrier to access or prevent people from meeting other basic human needs.
Mongolia	The Water Services Regulatory Commission conducts annual monitoring and evaluation.
Nicaragua	En el área urbana existe una tarifa establecida por la Autoridad Nacional del Agua (ANA). Esta tarifa se mantiene estática desde el año 2004.
Nigeria	Amouth of households expenditure on WASH services, man power budget planing for ministry
occupied Palestinian territory, including east Jerusalem	Not yet
Oman	RD 131\2020 & RD 40\2023
South Africa	Affordability imbedded within the revised Water and Sanitation Norms and Standards which will be enforced and monitored from 2025
Timor-Leste	All communities include vulnerable people can access WASH
Uganda	Percentage of the population with ability to access WASH services with minimal financial constraints
Uruguay	Tarifa media residencial $/m3 Promedio días deudores Indice Recaudación
Zambia	1. Percentage of the household income
Zimbabwe	Approved budgets (#) Availability of stepped tariffs (%)

WHO Country Name	Service coverage main indicators B2.b.xii.2
Albania	Coverage with Water Supply for urban and rural areas; Coverage with Sewage for urban and rural areas; Coverage with Wastewater Treatment by WWTP.
Argentina	Cantidad de habitantes sservidos / totalidad de habitantes Cantidad de habitantes servidos / tptalidad de habitantes en el área
Bhutan	13 FYP 1. Proportion of population using safely managed drinking water services 2. Proportion of population using safely managed sanitation services
Bolivia (Plurinational State of)	1. Cobertura de acceso a fuentes mejoradas de agua. 2. Cobertura de saneamiento mejorado.
Bosnia and Herzegovina	% of the population supplied with safe/controlled drinking water; % of population connection to public water supply systems; % of population connected to sewage systems and wastewater treatment plants; % reduction in losses in the water supply system.
Botswana	Number villages with sewer connection, Percentage of population with access to basic sanitation service, propotion of population using safely managed drinking water services,
Brazil	1. Número de domicílios urbanos e rurais servidos por rede coletora ou fossa séptica para os excretas ou esgotos sanitários / Total de domicílios 2. Número de domicílios urbanos e rurais abastecidos com água por rede de distribuição com canalização interna ou na propriedade, ou por poço ou nascente com canalização interna / Total de domicílios

Burkina Faso	Taux daccès à leau potable Taux daccès à lassainissement
Burundi	Réalisation des inventaires des infrastructures WASH
Cabo Verde	Acessibilidade física ao serviço
Chad	POURCENTAGE DES OUVRAGES REALISES ET FONCTIONNELS
China	All rural residents
Colombia	Nuevas personas con acceso a soluciones adecuadas de agua potable Nuevas personas con acceso a soluciones adecuadas para el manejo de aguas residuales
Congo	*Proportion de la population utilisant les services deau gérés en toute sécurité. *Nombre de personnes additionnelles vivant des des communautés certifiées FDAL *Taux daccès au service dassainissement autonome *Taux daccès au service dassainissement collectif
Costa Rica	6.1.1 Proporción de la población que utiliza servicios de suministro de agua potable gestionados sin riesgos. Porcentaje de población cubierta con servicio de agua potable en forma segura. Porcentaje de tratamiento de aguas residuales en plantas de tratamiento de aguas residuales. Porcentaje acumulado de población cubierta con servicio de agua clorada abastecida por ASADAS. Porcentaje de población cubierta con servicio de agua potable en forma segura abastecida por AyA. Porcentaje de población cubierta con servicios de agua potable abastecida por Municipalidades. Porcentaje acumulado de población cubierta con servicios de agua potable abastecida por la ESPH. Porcentaje acumulado de población cubierta con servicios de agua potable abastecida por ASADAS. Porcentaje de avance de las etapas del proyecto Ampliación y mejoramiento del sistema de alcantarillado sanitario de la Ciudad de Limón. Porcentaje acumulado de avance en la etapa de ejecución del Proyecto Alcantarillado Sanitario GAM. Porcentaje de avance de obra del Programa de Saneamiento en zonas prioritarias. Porcentaje acumulado de avance del programa de agua potable para comunidades indígenas.
Cuba	Proporción de la población que dispone de servicios de agua potable gestionados de manera segura. Proporción de la población que utiliza servicios de saneamiento gestionados de forma segura.
Democratic Republic of the Congo	Pourcentage des rivières et canivaux curés régulièrement (PNEHA)
Ecuador	numero de usuarios vs numeros de usuarios con acceso a agua potable numero de usuarios vs numero de usuarios con acceso a alcantarillado sanitario
Ethiopia	Proportion of population/households with access to water service as per the national (GTP-II) service standards
Fiji	https://waterauthority.com.fj/wp-content/uploads/2022/02/WAF_Strategic_Plan_2020-2025_1644365931.pdf

Guinea	o Pourcentage de la Population Ayant Accès à lEau Potable. o Distance Moyenne à la Source dEau. o Pourcentage de la Population Ayant Accès à des Installations dAssainissement Améliorées o Proportion de Ménages Utilisant des Toilettes Améliorées o Pourcentage de la Population Ayant Accès au Lavage des Mains avec du Savon. o Couverture des Programmes de Sensibilisation à lHygiène o Disparités Régionales dans lAccès aux Services WASH. o Proportion de Populations Vulnérables Ayant Accès aux Services WASH : o Indice de Qualité de lEau o Proportion de Services WASH Conformes aux Normes o Taux de Fonctionnement des Infrastructures. o Fréquence des Interventions de Maintenance o Proportion de Population Accédant aux Services de Base. o Accès aux Services WASH pour les Établissements Publics o Publication et Accès à lInformation o Révision et Ajustements.
Haiti	taux daccès à des services
Hungary	municipalities and dwellings with public piped drinking water, municipalities and dwellings with public sewerage, proportion of dwellings connected to public piped drinking water and sewerage, public sewerage https://www.ksh.hu/stadat_files/kor/hu/kor0042.html https://www.ksh.hu/stadat_files/kor/hu/kor0041.html
Indonesia	15% Safely managed drinking water and sanitation in 2024 and 100% improved drinking water and sanitation in 2024;
Iran (Islamic Republic of)	1- Urban wastewater coverage 2- Rural water coverage
Iraq	Ensuring full coverage of safe drinking water provision for all.
Italy	- Public sewage coverage (% resident population) (Istat, Urban water census) - Percentage of resident population connected to urban wastewater treatment plants (Istat, Urban water census: years 2012, 2015, 2018) - Municipalities without public services and relative resident population (public water supply, Sewerage, urban waste water treatment) (Istat, Urban water census)
Jordan	Percentage of safely managed drinking water
Kuwait	Service coverage includes all areas of the country equally and without bias.
Lao Peoples Democratic Republic	Proportion of population served.
Lesotho	Percentage of the population with access to improved WASH facilities Access to improved Sanitation
Madagascar	pourcentage des populations utilisant des services dassainissement gérés en toute sécurité pourcentage décoles disposant dinstallations sanitaire de base pourcentage des établissements de santé disposant dinstallations sanitaires de base
Mali	le taux de ménages disposant de latrines améliorées
Mauritania	Indicateurs SNADEA et SCAPP
Mongolia	The Water Services Regulatory Commission grants permission to provide services.
Mozambique	coberura do abastecimento de agua urbano, cobertura do abastecimento de agua rural, cobertura do saneamento urbano e cobertura do saneamento rural

Namibia	Percentage of water resources monitoring network fully operational
Nicaragua	Cobertura de agua potable en área urbana (%). Cobertura de alcantarillado sanitario en el área urbana (%). Cobertura de agua potable en área rural (%). Cobertura de saneamiento en el área rural (%). Población rural atendida con nuevo servicio de agua potable. Población rural atendida con nuevo servicio de saneamiento.
Niger	Taux de couverture géographique à leau potable
Nigeria	Percentage of population using basic water supply services Percentage of population using limited water supply services Percentage of population using unimproved water supply services Percentage of population using surface water supply sources Percentage of population with access to improved drinking water sources within the premises Percentage of the population using safely managed sanitation services Percentage of the population using basic sanitation services Percentage of the population using limited sanitation services Percentage of the population practicing open defecation Percentage of the population suing basic hygiene services Percentage of the population suing limited hygiene services Percentage of household heads with knowledge of at least two critical hand washing time https://washims.com.ng/washnorm3
Norway	The population in densely populated areas should be connected to the public sewage system.
occupied Palestinian territory, including east Jerusalem	coverage
Oman	OMAN Vision 2040
Pakistan	Percentage of served population
Peru	1) Cobertura de acceso al servicio de agua - nivel nacional 2) Cobertura de acceso al servicio de alcantarillado o disposición sanitaria de excretas - nivel nacional 3) Cobertura de acceso al servicio tratamiento de aguas residuales - Urbano EPS
Philippines	Proportion of population with access to adequate safely managed sanitation services; Proportion of population with access to a sustainable and affordable safe water supply
Romania	Degree of parametres compliance
Serbia	Population connected to the public water supply, % The total length of the constructed water supply network, km Length of the main collector and collecting sewerage network, km The number of water supply systems that meet the required health criteria for drinking water Spatial distribution of users The number of households on the territory of JLS is covered by the service Number of legal entities and entrepreneurs covered by the service Connected population on own and joint connection and common fountains Residents covered by the service through public water supply stations
South Africa	The following indicators also consider spacial distribution per Province: 6.1.1 Proportion of population using safely managed drinking water services. 6.2.1 Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water.
Thailand	The proportion of the population use safely managed drinking water services.
Timor-Leste	All people practice improved hygiene behaviors all of the time, particularly use of a hygienic toilet, handwashing with soap, and ensure the safe disposal of child and infant excreta
Uganda	Percentage of the population accessing WASH services
Uruguay	Cobertura de Agua - total y urbana Cobertura de Saneamiento interior - total y urbana

Vanuatu	NDSP M&E Framework
Zambia	1. Water coverage 2. Sanitation and hygiene coverage
Zimbabwe	Property Level Coverage of Direct Water Supply Connections (%) Coverage of Toilets (%) Coverage of Households with Adequate Sanitation System Services (%) Coverage of SWM Services Through Door-to-Door Collection of Waste (%) Proportion of Rural Households with Adequate Solid Waste Disposal Facilities (%) Coverage of Receptacles (%) Availability of Estates and Development Planning Policies (%) Adequacy of Community Amenities (%) Coverage of Functional Settlements (%)

WHO Country Name	Equity main indicators B2.b.xiii.2
Bhutan	13 FYP 1. Proportion of population using safely managed drinking water services 2. Proportion of population using safely managed sanitation services
Brazil	Número de domicílios urbanos e rurais com renda até três salários mínimos mensais que possuem unidades hidrossanitárias de uso exclusivo / Total de domicílios com renda até 3 salários mínimos mensais
Burundi	Couverture nationale
Cabo Verde	Equidade de Gênero
Chad	POURCENTAGE DES OUVRAGES TENNAT COMPTE DE LINCLUSION
China	Leakage rate of public water supply network shall not be less than 10%.
Congo	*Nombre décoles disposant dinstallation sanitaires séparées pour les garçons et filles
Costa Rica	6.2.1 Proporción de la población que utiliza: a) servicios de saneamiento gestionados sin riesgos y b) instalaciones para el lavado de manos con agua y jabón.
Cuba	Proporción de la población que dispone de servicios de agua potable gestionados de manera segura. Proporción de la población que utiliza servicios de saneamiento gestionados de forma segura.
Democratic Republic of the Congo	Pourcentage de fonds de lECOTAXE alloué au secteur WASH (PNEHA)
Ethiopia	Proportion of rural and urban population (households) with access to water service as per the national (GTP-II water service) standards
Fiji	https://waterauthority.com.fj/wp-content/uploads/2022/02/WAF_Strategic_Plan_2020-2025_1644365931.pdf
Indonesia	Total coverage of access to improved water and sanitation
Iraq	Ensuring full coverage of safe drinking water provision for all.
Kuwait	Services are available to everyone without discrimination or bias.
Lao Peoples Democratic Republic	*Water supply sevice complaints;
Lesotho	Percentage of the population with access to improved WASH facilities in urban and rural, education level and economic satus

Madagascar	pourcentage des établissements scolaires publics possédant des latrines séparées % des établissements sanitaires publics possédant des latrines séparées
Mongolia	Property matters are local.
Namibia	Percentage of water user wit
Nicaragua	Participación de la Mujer en procesos de capacitación y confirmación de CAPS y CdC. Designación de por género de unidades sanitarias en los establecimientos de salud. Inclusión en los establecimientos de salud de requisitos para la disponibilidad de unidades sanitarias para personas con movilidad reducida. Garantizada la participación de mujeres y hombres en las estructuras de los CAPS para administración eficiente de los sistemas de agua y saneamiento.
Niger	Taux daccés basique; Taux daccés Optimum des populations à leau potable
Nigeria	percentage for functional facilities with provision for persons with disabilities percentages of PLWD with access to improved usable and accessible latrines within their households. https://washims.com.ng/washnorm3
occupied Palestinian territory, including east Jerusalem	Gender
Oman	RD 101\1996
Pakistan	Equatable tariff structure and unserved population
Peru	1) Proporción de la población del último quintil de gasto mensual por hogar con servicio de agua potable mediante red o pileta pública. 2) Proporción de población del último quintil de gasto mensual por hogar con acceso al servicio de alcantarillado o disposición de excretas.
South Africa	Equity imbedded within the Water and Sanitation Norms and Standards which will be enforced from 2025
Thailand	The proportion of the population living in households with access to basic services.
Timor-Leste	Use of behavior change approaches that target women, men, and children to improve awareness, healthy behavior, and improved sanitation outcomes
Uganda	Percentage of vulnerable populations access WASH services
Vanuatu	NDSP M&E Framework
Zimbabwe	Efficiency in Meeting Water Demand(%) Extent of Gender, People living with Disabilities, Orphaned and Vulnerable Children Mainstreaming (%) Approved budgets (#) Availability of stepped tariffs (%)

WHO Country Name	Health impacts main indicators B2.b.xiv.2
Bhutan	Health status index (13 FYP)
Bosnia and Herzegovina	All indicators defined within targets of Bosnia and Herzegovina in accordance with Article 6 of the Protocol Water and Health
Botswana	Number of diarrheal deaths, Number of malaria deaths, prevalence of bovine measles
Burkina Faso	la mortalité et morbidité liée au WASH (maladies diarrhéiques, le paludisme, la dingue, le cholera) la prévalence de la malnutrition aigue
Burundi	Réduction du taux de mortalités due aux maladies hydrique
Cabo Verde	Doenças transmitidas por via hídricas Taxa de mortalidade infantil

Chad	TAUX DE REDUCTION DES MALADIES DORIGINE HYDRIQUE
China	Reduce sickness expenses
Colombia	Pendiente incluir los relacionados con tasa de enfermedades relacionadas con el agua y saneamiento (EDA (enfermedades diarreicas agudas). Hepatitis..)
Congo	*Pourcentage des centres de santé disposant dinstallations de lavage des mains avec de leau et du savon
Costa Rica	6.3.1 Proporción de los flujos de aguas residuales domésticas e industriales tratados de manera adecuada. 6.3.2 Proporción de masas de agua de buena calidad.
Guinea	- Taux de Diarrhée - Taux dInfections Parasitaires • Mortalité Infantile Associée aux Maladies Liées à lEau. • Taux de Conformité de lEau aux Normes de Potabilité • Incidence des Contaminations par Pathogènes • Utilisation de Toilettes Améliorées • Pratiques de Lavage des Mains avec du Savon Taux dInfections Respiratoires • Efficacité des Programmes de Sensibilisation • Proportion de Populations Cibles Accédant à des Services WASH Améliorés : • Publication et Accès à lInformation • Révision et Ajustements
Indonesia	Reduced stunting prevalence from 30.8% in 2018 to 14% in 2024
Iran (Islamic Republic of)	Water related outbreaks
Iraq	Ensuring that treated water discharged into rivers meets standard specifications by requiring factories and hospitals to install their own treatment units and not dispose of their waste into sewer or stormwater systems until after treatment.
Italy	Through control and incentive to minimize parameters exceeding legal limits (danger for human health directly or through environmental effects)
Kuwait	Regulations are put in place to protect the health of users/consumers and workers.
Lao Peoples Democratic Republic	a suitable water safety plan is developed, implemented, then revewed and revised regularly.
Lesotho	Number of diarrheal cases/outbreaks Stunting prevalence
Madagascar	taux de morbidité ou mortalité lié aux mauvaises pratiques dhygiènes
Mongolia	National action plan for Environmental Health programme, 2020-2028 https://moh.gov.mn/uploads/files/a6d7bef3bb43146359e5ec141f4ae05d196515a6.pdf
Mozambique	Numero de casos de doencas hidricas registadas num ano (diarreia, desinteria, colera e malaria)
Namibia	Percentage reduction of morbidity and mortality due to waterborne
Nicaragua	Número de muertes por diarrea. Número de muertes respiratorias. Tasa de mortalidad infantil. Número de familias rurales con acceso a instalaciones higiénico sanitarias mejoradas
Nigeria	% of Health facility with access to Basic WASH Services (WASHNORM)
Norway	No one should get sick from the drinking water.
occupied Palestinian territory, including east Jerusalem	water quality
Oman	OMAN Vision 2040
Pakistan	Reduced prevalence of diarrhoea and stunting
Serbia	Incidence and prevalenece of communicable diseases drinking water quality

Thailand	The mortality rate caused by unsafe and unhygienic water and sanitation
Timor-Leste	Access to clean water and sanitation is critical to Timor-Lestes future as it will: Improve public health
Uganda	Percentage reduction of the National disease burden due to WASH related causes
Uruguay	Se lleva registro de enfermedades transmisibles y no transmisibles.
Zambia	1. WASH - disease outbreaks
Zimbabwe	Average Per Capita Water Supply (litres per capita per day) Efficiency in Meeting Water Demand(%) Average Hours of Continuous Access to Water per Day (hours per day) Quality of Water Supplied (%) Collection Efficiency of Sanitation System (%) Quality of Treatment of Sanitation System (%) Efficiency of Collection of Solid Waste (%)

WHO Country Name	Environmental impacts main indicators B2.b.xv.2
Argentina	Cantidad de efluentes volcados con tratamiento - Eficiencia energeética
Bolivia (Plurinational State of)	Capacidad de almacenamiento de agua (Contribución Nacionalmente Determinada del Estado Plurinacional de Bolivia- Meta 20)
Bosnia and Herzegovina	All indicators defined within targets of Bosnia and Herzegovina in accordance with Article 6 of the Protocol Water and Health
Botswana	Proportion of bodies of water with good ambient water quality, prevalence of water borne diseases
Brazil	1. Número de municípios com enxurradas, inundações ou alagamentos ocorridos na área urbana nos últimos cinco anos / Total de municípios 2. Número de domicílios não sujeitos a riscos de inundações na área urbana / Total de domicílios urbanos
Burkina Faso	Proportion de la population satisfaite de la qualité du cadre de vie dans les trois plus grandes villes du Burkina Faso
Burundi	Réduire le taux de défécation à lair libre
Cabo Verde	Saneamento seguro Qualidade das águas balnearias
Chad	TAUX DE REDUCTION DES CONTAMINATION DES SOURCES DEAU
China	Improve rural living environment
Congo	*Pourcentage de bassins versants vulnérables *Pourcentage de centres urbains disposant des systèmes dévacuation deau pluviale *Taux de vidange manuelle *Taux de valorisation des déchets
Costa Rica	6.6.1 Cambio en la extensión de los ecosistemas relacionados con el agua con el paso del tiempo. 6.3.2 Proporción de masas de agua de buena calidad.
Cuba	Cambios en la extensión de los ecosistemas relacionados con el agua con el paso del tiempo
Hungary	the quality of the discharged waste water, the quality of the water receiving the waste water
Iran (Islamic Republic of)	Population exposed to water pollution
Iraq	Ensuring that treated water discharged into rivers meets standard specifications by requiring factories and hospitals to install their own treatment units and not dispose of their waste into sewer or stormwater systems until after treatment.

Italy	- Environmental Impact Indicators: Water pollution levels, percentage of wastewater treated and disposed of safely. - Environmental Sustainability Indicators: Sustainable use of water resources, reduction of negative environmental impacts of WASH infrastructure. - Percentage of lakes with good quality of chemical state and with high or good quality of ecological state (ISPRA, 2016-2021, percentage values) - Percentage of groundwater water bodies with good quality of chemical status (SCAS) (ISPRA, 2016-2021, percentage values) - Percentage of transitional waters with high or good quality of ecological status and with good quality of chemical status (ISPRA, 2016-2021, percentage values) - Percentage of coastal marine waters with high or good quality of ecological status and with good quality of chemical status (ISPRA, 2016-2021, percentage values) - Percentage of water bodies that have achieved the objective of ecological quality (high or good) on the total water bodies of surface waters (rivers and lakes) (ISPRA, 2016-2021, percentage values)
Kuwait	Environmental impacts of all services provided by the relevant ministries are monitored.
Lao Peoples Democratic Republic	elimination of open defecation and achieving total sanitation in the community.
Lesotho	number of Strategic environmental assessment (SEA) completed Number of Environmental Impact Assessment (EIAs) completed
Mongolia	water resource management, Environmental performance https://legalinfo.mn/mn/detail?lawId=211059&showType=1
Namibia	Number wastewater disposal
Nicaragua	Familias rurales con condiciones higiénico sanitarias mejoradas
Nigeria	NA
Norway	All water bodies used for drinking water extraction should be protected from pollution. Municipalities should have comprehensive plans and measures that consider water, sewage, and land use in an integrated manner. The treatment capacity for sewage should keep pace with population growth. No sewage treatment plants should discharge untreated sewage. Discharges from storm water overflows should be reduced. Water bodies should have good chemical and ecological status. Municipal sewage should have chemical and/or biological treatment. Larger urban areas should have sewage treatment plants that at least meet the EUs requirements for secondary treatment.
Oman	OMAN Vision 2040
Pakistan	Carbon emissions
Serbia	Number of water bodies of surface water in the least good ecological status Number of water bodies of surface water in good chemical status Number of groundwater bodies in poor quantitative status Number of groundwater bodies in good chemical status
South Africa	6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes. 6.6.1 Change in the extent of water-related ecosystems over time.
Thailand	The proportion of water sources that have good quality (e.g., oceans, seas, lakes, rivers, streams, canals, or ponds)
Timor-Leste	Preventative measure (new regulation reduction of borehole)
Uganda	Percentage reduction in adverse environmental impacts due to improved WASH resources management
Uruguay	Decreto 253/79 para disposición final de efluente de plantas de tratamiento Gestión de barométricas
Zambia	1. Total dissolved salts

Zimbabwe	Extent of Scientific Disposal of Waste at Landfill or alternative Sites (%) Extent of Land Reclaimed (%) Compliance to EIA Requirements (%)

WHO Country Name	Economic impacts main indicators B2.b.xvi.2
Albania	Percentage of coverage of Water Supply-Sewerage costs with revenues
Bosnia and Herzegovina	% Reduction loses in the water supply system
Burundi	Amélioration des conditions de vie des populations
Cabo Verde	Rentabilidade de ativos Coberturas dos gastos totais
Chad	TAUX DE REDUCTION DES DEPENSES EN SANTE
China	Promote farmers income
Congo	*Taux de recouvrement de la facture deau des ménages
Hungary	Cost recovery Affordability (average service cost/average revenue) Average energy consumption
Italy	The tariff methodology developed by ARERA, which also approve every operator tariff proposal. To be noted that tariff methodology is strictly linked with the regulation of technical quality, which also foresees an incentive mechanism (rewards and penalties)
Lao Peoples Democratic Republic	Economic Internal Rate of Return (EIRR)
Lesotho	Percentage GDP Employment rate
Namibia	Number of ablution facilities
Nicaragua	Reducido el gasto familiar en compra de medicina y consumo de agua. Eficiencia de la Cobranza (%) Meses en Mora
Nigeria	% of WASH contribution to GDP (WASH Account)
Oman	OMAN Vision 2040
Pakistan	Reduced out of pocket expenditures on health
Serbia	Level of water invoicing, % Share of potential utility costs in average revenues [%]
Thailand	The percentage of health expenditure is relative to the Gross Domestic Product (GDP).
Timor-Leste	WASH quality Improvement
Uganda	Percentage increase in economic returns on investment in WASH
Zambia	1. The economic impacts span multiple sectors, from reduced healthcare costs and improved labor productivity to enhanced educational outcomes and increased economic returns on investment.
Zimbabwe	Consumer price index Poverty income consumption and expenditure Poverty datum line

ANNEX E. Priority research questions to support WASH system strengthening

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Source. Presentation from UNC Water and Health Conference, "Priority research questions in WASH system strengthening: results from a global Delphi exercise," 15 October 2024, by Lauren D'Mello-Guyett, Beda Lewira, Jane Falconer, Jamie Bartram, John Butterworth, Robert Dreibelbis, Barbara Evans, Angela Huston, Paul Hutchings, and WASH Systems Strengthening Research and Learning Working Group; IRC, London school of Hygiene and Tropica Medicine, University of Leeds and FCDO/ UK International Development. *Updated version: received 28 February 2025, unpublished.*

Research Questions	Building Blocks and Systems Context	Finance	Institutional Arrangements and Coordination	Learning and Adaptation	Monitoring	Planning	Regulating and accountability	Service Delivery and Infrastructure	Water Resources Management	Health, Environmental and Education System	Political Economy	Consensus Agreement	Rank
How can climate change resilience and action be effectively integrated into national WASH programmes?												91%	1
What is the effect of approaches designed to achieve 'gender-responsive' WASH services?												89%	2
How can a systems approach be used to integrate gender, equity, and social inclusion in WASH Systems Strengthening programmes?												89%	3
What are the different principles and financing systems that can be employed to ensure sustainable and equitable financing of water management?												88%	4
What are the best practices and strategies for building resilience in water and sanitation systems to protect against unforeseeable events, such as pandemics or the effects of climate change?												87%	5
How do we define and monitor climate risk indicators for WASH services, and how do we integrate these into planning for WASH System Strengthening?												87%	6

How can financial and capacity gaps be closed to deliver on policies for WASH in health care settings?											87%	7
How effective are construction standards and accountability frameworks in enforcing quality standards for WASH contractors?											87%	8
How is the climate resilience of WASH services defined in different contexts/systems, and what are the key influencing factors?											86%	9
How can you strengthen government-led WASH monitoring and evaluation systems to achieve strong, transparent, and data-driven decision-making?											86%	10
What are innovative ways to finance and manage capital maintenance and replacement costs in rural water supply (and wider WASH), including pooled funding arrangements and insurance schemes?											85%	11
What specific methods or indicators can effectively and usefully measure and report on the strength and efficacy of WASH service delivery models?											85%	12
What are the key drivers and/or enabling factors in engaging high-level political actors in WASH Systems Strengthening?											84%	13
How can the capacity and financial resources of local government be strengthened to better monitor, plan, and budget for WASH services?											83%	14
How can monitoring and evaluation systems for water supply and sanitation be improved to capture the quality, sustainability, and impact of services, as well as the inputs and outputs?											83%	15
What ways are there to mobilise WASH resources and programmes specifically for vulnerable populations and how do we monitor progress against targets within these groups?											82%	16

What are effective management models for the operations and maintenance of WASH services in schools and HCFs?											82%	17
What are effective approaches for integrating WASH service improvements with wider rural and urban development programmes?											80%	18
How can human rights principles be better incorporated in WASH Systems Strengthening so that the poor and most excluded are not left behind?											80%	19
Which are the best methods to measure WASH systems change?											80%	20
How do we move WASH service delivery from basic to safely managed services?											79%	21
How can non-governmental actors in the WASH sector support systems strengthening approaches in practice?											79%	22
What are effective mechanisms to improve (and measure) inclusion and empowerment outcomes in WASH Systems Strengthening programmes?											79%	23
How does the political landscape influence the provision of water and sanitation services?											79%	24
What are the capacity development requirements for WASH System Strengthening?											79%	25