SHF
The Sanitation & Hygiene Fund

# Review of Frameworks for Assessing the Sanitation Economy, Market, and Enabling Environment in Developing Economies

This report may be cited as follows: The Sanitation & Hygiene Fund. 2025. Review of Frameworks for Assessing and Improving Sanitation Investment Readiness in Developing Economies through an Enhanced Understanding of the Sanitation Economy, Market, and Enabling Environment.

**FOR MORE INFORMATION**

SHF Website **www.shfund.org**

SHF
The Sanitation & Hygiene Fund

# Review of Frameworks for Assessing the Sanitation Economy, Market, and Enabling Environment in Developing Economies

# About This Report

The main purpose of this report is to identify and compare relevant frameworks and tools to inform how the UN's Sanitation and Hygiene Fund (SHF) might analyze and support sanitation economies in developing countries, and to serve as a sector resource for use by a range of stakeholders. The report has five objectives:

1. Provide an overview of sanitation and non-sanitation frameworks that can be used to better understand and measure the maturity of the sanitation economy.
2. Review the structure of the frameworks, and explore commonalities and differences.
3. Review the data collected by these frameworks: the indicators, frequency of collection, number of countries covered, disaggregation provided, and robustness of data.
4. Review the ways in which data have been presented, disseminated, and used, and their impact on the ground.
5. Conclude with key lessons for those trying to better understand the maturity of sanitation economies in developing countries.


6.65
4.68
7.86
4.16
6.35
5.75

# About the Sanitation and Hygiene Fund

The UN's Sanitation and Hygiene Fund (SHF) is dedicated to achieving universal access to sanitation, hygiene, and menstrual health through market-based approaches. SHF works with Low- and Middle-Income Countries (LMICs) to build robust sanitation economies and menstrual hygiene marketplaces.

For more information, please visit:

**www.shfund.org**

# Executive Summary

The market for sanitation goods and services in low- and middle-income countries (LMICs) is very sizable, valued at over US$100 billion per year. However, current investments in sanitation are massively insufficient in most countries to meet national sanitation targets. Given public funds are unlikely to increase significantly, if at all, in the coming years, attention has turned to the potential of the private sector to respond to the business proposition of delivering sanitation goods and services, within a public regulatory framework. The market potential is framed by the term 'Sanitation Economy' which encompasses different parts of the sanitation value chain – from the toilet and containing excreta, to emptying, transport, treatment, and disposal or reuse. Safe management of excreta, resource capture and reuse, and reduction in environmental pollution and greenhouse gas emissions are cross-cutting aspects of the Sanitation Economy across the sanitation value chain.

With a focus on strengthening the sanitation market, sanitation stakeholders and potential investors need to know in which countries or sub-national contexts sanitation is investible, how sanitation markets can be strengthened to be more investment-ready, and the complementary roles of public versus private investment in stimulating the Sanitation Economy. To answer such questions requires a comprehensive understanding of the Sanitation Economy, and its 'maturity' level. Maturity essentially means the extent to which the Sanitation Economy has been developed and is able to deliver quality sanitation services to the entire population sustainably and at cost that is affordable to the customer and/or the public sector. Therefore, an understanding of what frameworks and tools exist to assess the state of the Sanitation Economy in low- and middle-income countries (LMICs) is necessary, and whether an existing tool can adequately provide a Sanitation Economy assessment, or whether a new tool is necessary.

This review identified thirty-four frameworks that have been or are currently being used in WASH to understand the status of the sanitation enabling environment or market. Many frameworks also provide methodologies to determine or plan actions to strengthen the enabling environment or market. Eight frameworks have been discontinued, five frameworks are still under development or finalisation, and several frameworks are mainly for internal use. While all these frameworks are specific to WASH, most of them draw on global or regional data sets collected or compiled by international organizations that provide general (non-WASH) measures of the strength of business, financial and governance systems. This emphasizes the fact that WASH is a system within a larger system, and it relies on many factors outside the WASH 'sector' to achieve progress.

Of the thirty-four frameworks that cover WASH, seventeen could be considered to be comprehensive frameworks that attempt to examine the full breadth of issues related to sector governance and an enabling environment. Nine frameworks focus on specific themes such as financing and investment, planning, regulation, integrity, and poverty assessment. A further eight frameworks focus the user on understanding the sanitation market, which includes some aspects of the broader enabling environment. All tools consist of a clear structure but use different terms to denote the structure (e.g., building blocks, pillars, dimension, functions, objectives, criteria, principles and outcomes, accelerators, components and assessment areas). These are collectively referred to here as 'Pillars'. Previous frameworks have selected between three and thirteen pillars, with an average of 6.5 pillars. While there is some variation between the frameworks in the comprehensiveness of the pillars, they most commonly include policy, institutions, regulation, finance, monitoring, capacity and political leadership. Each pillar contains many sub-issues.

Several hundred indicators have been defined to measure the enabling environment or market characteristics across the thirty-four WASH frameworks. In general, frameworks have defined similar – but often not identical – indicators across these pillars, except when they extract data from the same source. Most frameworks have been applied in just a few countries, although those applied by international organisations such as WHO, UNICEF, OECD and World Bank have had wider use. The UN-Water GLAAS collected data from 124 LMICs in its

most recent application (2021/22). Except for the city level frameworks (City-Wide Inclusive Sanitation, Equiserve and WSUP's sector functionality framework) and market analysis tools, few enabling environment frameworks have been applied at sub-national level, the UNICEF WASH Bottleneck Analysis Tool and the IRC Building Block analysis being the main exceptions.

Most frameworks have been applied in a one-off exercise in few countries, and even those that have been applied more than once in the same setting are not a regular monitoring exercise. Only one tool – the GLAAS – has a track record of being applied in countries every 2-3 years, thus enabling assessment of progress over time. Some new frameworks – the AIP-PIDA's Water Investment Scorecard and the OECD Scorecard to assess the enabling environment for investment in water security – are in the process of being applied widely.

Few tools have their data reviewed and validated by sector stakeholders and endorsed by government. The UN-Water GLAAS survey, the UNICEF WASH Bottleneck Analysis Tool, the Equiserve tool, the AIP-PIDA Water Investment Scorecard, and the SWA Building Blocks and Collaborative Behaviours are several that do.

Twenty frameworks have produced an accessible report from country application, while several frameworks have not yet because they are still in the pilot phase. Report types include agency reports (12 frameworks), academic articles (2 frameworks) and an online dashboard (3 frameworks). Frameworks present data in a variety of different ways. The majority of frameworks use standard tables and graphs, accompanied by text. Several frameworks use data visualisations such as traffic light scoring or geographical maps with colour-coding. The main routes for dissemination that are easier to identify are websites dedicated to an initiative, weblinks to a specific publication, international conferences and workshops, and national events. The AIP-PIDA scorecard reports and major findings will be reported to African Union Heads of States. Fifteen frameworks have their own webpage detailing the framework and providing related resources, while an additional six frameworks have a weblink to a report but no landing page describing the framework. Some frameworks are intended to be picked up and used but do not necessarily intend to provide results (e.g., UN-Water SDG6 Accelerator Framework, UNICEF/SIWI Building Blocks, and some CWIS initiatives).

Some frameworks have been implemented in the context of ongoing programs and have led to some uptake by local decision makers. However, evidence is lacking on the extent of uptake and the impact. For example, the WASH Poverty Diagnostics was implemented in 18 countries from 2015-2018 and informed national dialogues on how to scale up WASH services and make them more available to poor households, and it informed the World Bank's engagement with countries. Similarly, the UNICEF WASH BAT has been implemented through 58 WASH BAT workshops in 32 countries from 2016-2020, and the costed action usually receives government endorsement and is later incorporated into government and donor work plans. Also, in implementing the sector functionality framework in cities in six countries, the program of Water and Sanitation for the Urban Poor (WSUP) contributed to evidence-based planning and coordination amongst partners.

No frameworks have had a comprehensive external review conducted which is publicly available. UNICEF published a review of 5 years of implementing version 2 of the WASH BAT from 2016 to 2020 which was conducted by an implementing partner, the Stockholm International Water Institute. Also, the World Health Organization conducted an internal review and provided a range of country examples of how the UN-Water GLAAS has contributed to sector strengthening efforts in countries responding to the survey.

The review concludes that there is no single tool that comprehensively covers the sanitation enabling environment as well as market characteristics in the pursuit of understanding sanitation economy maturity, and that has been applied in a large number of countries (or might be in the near future). Few existing tools can be flexibly applied to any level, from national down to city level. Few tools have successfully engaged with the private sector or investors, or have led to decisions on joint actions between public funders and private financiers.

A number of lessons can be gathered from the development and application of WASH frameworks reviewed in this report which can be useful for existing frameworks as well as new frameworks. Frameworks have had different objectives, and the level of ambition has been varied – and therefore enjoyed different levels of success. Several factors explain this. As is demonstrated by many examples, frameworks tend to be developed so that one stakeholder can influence another stakeholder, and for that, the target stakeholder has to adopt the framework or else be influenced by its findings. Second, for continued application over a longer period of time, the framework developers need to maintain institutional support and continue to raise and commit budgets to the framework's continued use. Some key recommendations are made here, drawing on lessons from the frameworks reviewed:

- Prior to development, a new framework should be consulted with relevant stakeholders on what is needed and identify what knowledge gaps the framework's application can usefully fill.
- Make the framework, and any corresponding tool, user friendly in its structure and the way results are presented, with the 'happy medium' of not too few but not too many indicators.
- Make results freely available, and be transparent about the methodologies and data sources, to engage a range of stakeholders. Standardisation of indicators and methodologies enable comparability of results across settings.
- Costs of data collection should be minimized to the extent possible, and where feasible, draw on other sanitation and non-sanitation frameworks that collect data to reduce the costs.
- Results should be updated at least every 2 years for the framework (and results) to remain relevant, with the hope that implementation costs of repeated applications reduce over time.
- Engage governments from early on so that the results are officially recognized, and it can align with government processes and gain support from donors. The government should be free to choose what role it wants to play – as owner, leader, contributor, or funder.

In conclusion, given the large number of tools that cover both the sanitation enabling environment and sanitation market assessments, it is important that any new tool(s) must have a strong added value, most importantly providing new information that adds to knowledge already provided through existing frameworks.

# Contents


Ai
64%
79%
52%
60%
Prompt:

# Acknowledgements

This paper was prepared by Guy Hutton (SHF Sanitation Economy Maturity Measurement Advisor) with inputs from Anton Jantunen (SHF Country Fund Portfolio Specialist), Dietske Marie Anne Simons (SHF Head of Impact) and Sue Coates (SHF Deputy Executive Director).

The following organisations are thanked for their valuable feedback relating to their own frameworks, and contribution to the information contained in Annex 1: Africa Water Investment Programme - Programme for Infrastructure Development in Africa (AIP-PIDA) and the Global Water Partnership (GWP) Southern Africa Secretariat; Athena Infonomics; Eastern and Southern Africa Water and Sanitation (ESAWAS) Regulators Association; International Development Enterprises (iDE); International Water Management Institute (IWMI); IRC, The Netherlands; Organisation for Economic Cooperation and Development (OECD); Population Services International (PSI); Sanitation and Water for All (SWA) partnership; Sanivation; Swiss Federal Institute of Aquatic Science and Technology (Eawag); UNICEF; Global Waters and WASHPaLS #2; WaterAid; Water and Sanitation for the Urban Poor (WSUP); WSUP Advisory; Water Integrity Network (WIN); World Bank Water Global Practice; and the World Health Organization (WHO).

The following organisations are thanked for taking on the role of external reviewer of this report: Athena Infonomics; IRC, The Netherlands; Population Services International (PSI); and Water and Sanitation for the Urban Poor (WSUP).

This publication is part of a development process for a new tool to assess sanitation economy maturity, and has benefitted from the generous support of many partner organisations, at different stages of consultation: African Development Bank (AfDB) - African Urban Sanitation Investment Initiative (AUSII); Agence Francaise de Developpement (AFD); Aqua for All; Athena

Infonomics; Bill and Melinda Gates Foundation; Bridgefield Consultancy; Climate Fund Managers; Container Based Sanitation Alliance (CBSA); DT Global; Dalberg; The Netherlands Ministry of Foreign Affairs (DGIS); ESAWAS Regulators Association; Fecal Sludge Management Alliance (FSMA); FINISH Mondial; Ministry for Foreign Affairs of Finland; Grand Challenges Canada; Green Climate Fund; International Development Enterprises (iDE); International Finance Corporation (IFC); International Water Association (IWA); International Water Management Institute (IWMI); IRC, The Netherlands; Lixil (SATO); Organisation for Economic Cooperation and Development (OECD); One Foundation (One Water); Osprey Foundation; Population Services International (PSI); Reckitt Global Hygiene Institute; Sanivation; Sattva (India); Swiss Agency for Development and Cooperation (SDC); State Secretariat for Economic Affairs (SECO); The Swedish International Development Cooperation Agency (SIDA); Swiss Federal Institute of Aquatic Science and Technology (Eawag); Toilet Board Coalition (TBC); UNICEF; USAID, Global Waters and WASHPaLS #2; US Development Finance Corporation (DFC); WASTE / Take-a-Stake Fund; Water.org; WaterAid; Water and Sanitation for the Urban Poor (WSUP) and WSUP Advisory; Water for People; Water Integrity Network; Water Research Commission, South Africa; Water Resources Group 2030; World Bank Water Global Practice; World Health Organization (WHO) and World Toilet Organization (WTO).

# Abbreviations

| | |
|---|---|
| **AIP-PIDA** | Continental Africa Water Investment Programme - Programme for Infrastructure Development in Africa |
| **AMCOW** | African Ministers' Council on Water |
| **BB** | Building Block |
| **BMGF** | The Bill & Melinda Gates Foundation |
| **CB** | Collaborative Behaviour (Sanitation and Water for All) |
| **CoST** | Infrastructure Transparency Initiative (Inter-American Development Bank) |
| **CPIA** | Country Policy and Institutional Assessment (African Development Bank) |
| **CSDA** | City Service Delivery Assessment |
| **CSO** | Country Status Overview (World Bank) |
| **CWIS** | Citywide Inclusive Sanitation |
| **Eawag** | Swiss Federal Institute of Aquatic Science and Technology |
| **ESAWAS** | Eastern and Southern Africa Water and Sanitation Regulators Association |
| **FIIP** | Framework for Integrity in Infrastructure Planning |
| **GIZ** | The Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation) |
| **GLAAS** | UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (WHO) |
| **IDA** | International Development Assistance (World Bank) |
| **IDB** | Inter-American Development Bank |
| **iDE** | International Development Enterprises |
| **IIAG** | Ibrahim Index of African Governance |
| **IWMI** | International Water Management Institute |
| **IWA** | International Water Association |
| **LMIC** | Low- and Middle-Income Country |
| **MBS** | Market-Based Sanitation |
| **MSRI** | Market System Resilience Index |

| | |
|---|---|
| **O&M** | Operations and Management |
| **ODA** | Overseas Development Assistance |
| **OECD** | Organisation for Economic Cooperation and Development |
| **PSI** | Population Services International |
| **SDA** | Service Delivery Assessment (World Bank). |
| **SDG** | Sustainable Development Goal |
| **SHF** | Sanitation and Hygiene Fund |
| **SIWI** | Stockholm International Water Institute |
| **SWA** | Sanitation and Water for All |
| **WASH** | Water, Sanitation and Hygiene |
| **WASH BAT** | WASH Bottleneck Analysis Tool (UNICEF) |
| **WASHPaLS #2** | Water, Sanitation, and Hygiene Partnerships and Learning for Sustainability #2 Project (USAID) |
| **WGI** | Worldwide Governance Indicators (World Bank) |
| **WHO** | World Health Organization |
| **WIN** | Water Integrity Network |
| **WSP** | Water and Sanitation Program (of the World Bank) |
| **WSUP** | Water and Sanitation for the Urban Poor |

# 1. Introduction

The market for sanitation goods and services in low- and middle-income countries (LMICs) is very sizable: large numbers of households need and demand sanitation services, and many are ready to pay for better sanitation services. Globally, 1.5 billion people do not use a basic sanitation facility at home, half of whom live in sub-Saharan Africa. An even larger number – 3.4 billion people – do not use a safely managed sanitation facility at home, over a billion of whom live in Central and South Asia (WHO and UNICEF, 2023).

Given the slow progress towards meeting Sustainable Development Goal (SDG) target 6.2 and the large numbers of people still without safely managed sanitation and basic hygiene services at home, the annual capital costs of achieving SDG target 6.2 are estimated to be at least US$50 billion per year to close the service gap in low- and middle-income countries (LMICs)(Hutton and Varughese, 2020). A similar annual value needs to be spent on operations and maintenance (O&M) of new services. In addition, the costs associated with operating, replacing and upgrading of existing sanitation systems need to be paid for, representing an additional market of potentially tens of billions of dollars per year in LMICs.

Under the vision of the Sustainable Development Goals, the 'Sanitation Economy' therefore encompasses different parts of the sanitation value chain – from the toilet and containing excreta, to emptying, transport, and treatment, followed by either disposal or reuse (Sanitation and Hygiene Fund, 2023). Safe management of excreta at all stages of the value chain is paramount to protecting the health of the general population as well as sanitation workers. In line with the SDGs, many sanitation organisations now emphasize the importance of connecting the biocycle, which involves combining multiple forms of biological waste, recovering nutrients and water, and creating value-adding products (Toilet Board Coalition, 2017).

However, current investments in sanitation are massively insufficient in most countries to meet national targets. The World Health Organization (2022) reported that less than one in six countries had sufficient funding from all sources to reach national sanitation targets, out of 100 countries that reported on this indicator. Some major causes of the low rates of investment include: (a) public funds from government and donor sources are severely constrained with respect to the investment need; (b) tariffs do not cover the costs of providing the service; and (c) private investments in sanitation appear risky.

Given public funds are unlikely to increase significantly, if at all, in the coming years, attention turns to the potential of the private sector to respond to the business proposition of delivering sanitation goods and services, within a public regulatory framework (e.g., Auerbach et al, 2020; BMGF, 2017). Therefore, to convincingly engage the private sector, actual or perceived risks need to be addressed. These include:

- Sanitation services require large upfront capital expenditures with uncertain revenue streams to repay loans or reward equity investments.
- The lack of affordable finance (i.e., high interest rates) in most LMICs.
- The lack of creditworthiness of sanitation enterprises and a lack of guarantees poor households can provide to take a sanitation loan.
- Legal limitations on the use of private capital in some countries.

These and other factors mean that the Sanitation Economy needs to be facilitated in various ways to achieve greater investments from both the private and public sector. One way to facilitate the Sanitation Economy is to have better information and make better use of existing information to not only enable better investment decisions, but to help strengthen the enabling environment for these investments to be made. Having more solid evidence on the status of the Sanitation Economy will allow stakeholders to answer questions such as:

- In which countries or sub-national contexts is sanitation investible?
- How can sanitation markets be strengthened to be more investment-ready?
- What different roles do public versus private investment have in the Sanitation Economy?

To answer these and other questions requires a comprehensive understanding of the Sanitation Economy, and its 'maturity' level. Maturity essentially means the extent to which the Sanitation Economy has been developed and is able to deliver quality sanitation services to the entire population sustainably and at an affordable cost. However, while there is knowledge available on the Sanitation Economy – as will be explained in this report – it is incomplete and piecemeal, meaning that investments are not adequately informed by correct knowledge on the market opportunities and risks, or what are the most impactful sanitation and hygiene investments.

The main purpose of this report is to identify and compare relevant frameworks and tools to inform the Sanitation and Hygiene Fund's strategy on measuring and supporting the Sanitation Economy. It is also expected the report will serve as a sector resource for use by a range of stakeholders. The report has five objectives, which provide the report structure:

1. Provide an overview of sanitation and non-sanitation frameworks that can be used to better understand and measure the maturity of the Sanitation Economy (Chapter 2).
2. Review the structure of the frameworks, and explore commonalities and differences (Chapter 3).
3. Review the data collected by these frameworks: the indicators, frequency of collection, number of countries covered, disaggregation provided, and robustness of data (Chapter 4).
4. Review the ways in which data have been presented, disseminated and used, and with what impact on the ground (Chapter 5).
5. Conclude with key lessons for those trying to better understand the maturity of sanitation economies in developing countries.

# 2. Overview of tools and frameworks reviewed

The tools and frameworks reviewed in this document cover WASH-specific tools (Section 2.1 and Table 1), other market assessment tools (Section 2.2 and Table 2), and other business, financial and governance assessment tools (Section 2.3 and Table 3).

## 2.1 Materials and methods

The paper answers four research questions:

1. What frameworks have been used to better understand and measure the maturity and investment readiness of the sanitation economy?
2. How are the frameworks structured and how many indicators have been selected to assess the sanitation economy, and what are the commonalities and differences between them?
3. What data have been collected by these frameworks: the countries or sub-national contexts they have been applied in, the frequency of data collection, the robustness of data, and the acceptance by sanitation authorities?
4. How has evidence from the frameworks been presented, published, disseminated and used, and with what impact on the ground?

The review concludes with key lessons for how these or new frameworks can be better defined and more impactful with respect to understanding and strengthening the sanitation economy.

Frameworks and tools are included that assess the enabling environment, investment readiness, market maturity and/or extent of market development. Methodologies that focus on sizing the sanitation market or assessing water or wastewater utility performance are excluded, as are frameworks that focus on measuring sanitation or environmental outcomes (e.g., sanitation access, coverage, use, functionality, water quality, etc.).

Frameworks were identified through pre-existing knowledge of their use in the sanitation sector, through interviews with representatives of 50 international WASH sector organisations, and through internet search. The scope is any tool that focuses exclusively on sanitation or includes sanitation, and hence includes broader tools that included WASH and water resources.

Once the frameworks were identified, follow-up was made with organisational focal points and through accessing documents relating to each of the frameworks. Information was extracted on the framework structure, indicators, data generated, data collection methodologies, presentation of results, use of results in defining responses or influencing decisions, and reference materials.

## 2.2. Frameworks to assess the WASH (or sanitation) 'economy'

Thirty-four frameworks were identified that have been or are currently being used in WASH (see Table 1). Methodologies that focus exclusively on sizing the sanitation market are excluded (e.g., USAID, 2021b).

**Table 1.** Summary information on tools that assess the sanitation enabling environment

| Tool or framework name (alphabetical order) | Lead agency | Sector | Availability | Status | Focus |
|---|---|---|---|---|---|
| Accountability, Mandate and Resources | Sanivation | Sanitation | Not public[1] | In use | M |
| Barriers to Scaling Up Sanitation Enterprises | Oxford, Eawag | Sanitation | Public | Pilot phase | M |
| **Building Block frameworks** | SWA | WASH | Public | Limited use | C |
| | IRC | WASH | Public[1] | In use | C |
| | WaterAid | WASH | Public[1] | In use | C |
| | UNICEF & SIWI | WASH | Public | In use | C |
| Citywide Inclusive Sanitation (CWIS) Initiative | World Bank | Sanitation | Public | In use | C |
| | BMGF, Athena | Sanitation | Public | In use | C |
| | WSUP | Sanitation | Public | In use | C |
| | CSDA | Sanitation | Public | Limited use | C |

| | | | | | |
|---|---|---|---|---|---|
| Collaborative behaviours | SWA | WASH | Public | In use | C |
| Equiserve | Athena Info. | Sanitation | Public | In use | T |
| Integrity in Infrastructure Planning (FIIP) | WIN, CoST, IDB | WASH | Public | Pilot phase | T |
| UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) | WHO, UN-Water, UNICEF | WASH | Public | In use | C |
| Investment Cases | SHF | Sanitation | Public[1] | Discontinued | M |
| Investment Climate for Waste Reuse | IWMI | Sanitation | Public[1] | Limited use | T |
| Market-Based Sanitation Indicators | WASHPaLS #2 | Sanitation | Public | Pilot phase | M |
| Market-Based Sanitation | UNICEF | Sanitation | Public | In use | M |
| Market-Based Sanitation Favourability | iDE | Sanitation | Not public[1] | Pilot phase | M |
| Market Driven Approach for FST Products | Eawag | Sanitation | Public[1] | Limited use | M |
| Market System Resilience Index | iDE | Sanitation | Not public[1] | Limited use | M |
| Policies, Institutions and Regulations | World Bank | WSS | Public[1] | In use | C |
| Principles on Water Governance | OECD | WR, Water | Public | In use | C |
| Regulation Strategy and Framework For Inclusive Urban Sanitation | ESAWAS | Sanitation | Public | In use | T |
| Scaling Up Rural Sanitation | World Bank | Sanitation | Public[1] | Discontinued | C |
| Scorecard | OECD | WR, WASH | Public | Pilot phase | T |
| SDG 6 Global Acceleration Framework | UN-Water | WR, WASH | Public | In use | C |
| Sector Functionality Framework | WSUP | WASH | Public[1] | Limited use | C |
| Service Delivery Assessment | World Bank | WASH | Public | Discontinued | C |
| Stargazer framework | PSI | WASH | Not public[1] | Pilot phase | M |
| WASH Bottleneck Analysis Tool | UNICEF | WASH | Public | In use | C |
| WASH Poverty Diagnostics | World Bank | WASH | Public | Discontinued | T |
| Water Investment Scorecard | AIP-PIDA | WR, WASH | Public | In use | T |
| Water Integrity Risk Index | WIN | WASH | Public | Limited use | T |

**Notes:** *For agency names, see Abbreviations. WR – water resources. WASH – water supply, sanitation and hygiene. WSS – water supply and sanitation. M – market strengthening focus. C – comprehensive enabling environment. T - targeted enabling environment. FST – faecal sludge treatment.* [1] *Mainly for own use.*

Sixteen – almost half – of the frameworks are focused exclusively on sanitation, fourteen focus on water, sanitation and hygiene (WASH), and four include both water resources management and WASH. The World Bank is the agency with the most frameworks – at five frameworks – followed by UNICEF with three, and the OECD, SWA, WIN, WSUP and Athena Infonomics with two each.

Seventeen out of thirty-four frameworks are classified as being 'In use'. There is clear evidence for four frameworks being discontinued, while seven frameworks are categorized as being in 'Limited use' due to lack of new results being produced in recent years. Also, for some frameworks categorized as being 'In use', it is unclear how some of them are currently being used. Six frameworks are still under development or finalisation ('Pilot test' in Table 1). Several frameworks are more for internal planning purposes than for external use (see 4th column in Table 1), or they have not yet been publicly released due to being recently created.

The purpose of Chapters 2 to 5 is to identify the commonalities and divergences between the tools and frameworks listed in Table 1. A chronology of key global and regional initiatives is presented in this chapter to show how the frameworks have evolved, and identify which ones are still in use and have potential to generate data that can be used in better understanding the Sanitation Economy (also see Chapter 4).

One of the first identifiable frameworks was developed in the mid-2000s by the World Bank's Water and Sanitation Program (WSP) in the *Scaling Up Rural Sanitation (SURS)* programme, where eight sector building blocks were identified as being necessary to promote sanitation acceleration at national and sub-national levels (World Bank, 2012). The tool has been discontinued. At first the framework was used to help identify the weakest areas of the enabling environment that needed strengthening, with ongoing monitoring over several years to assess progress and answer whether strengthening these building blocks has led to the envisaged progress in sanitation coverage. Later the framework was also used to explain to donors how WSP's support to the enabling environment had helped increase coverage in target countries, and to count attributed beneficiaries to the program.

In the same period, WSP published its first report in 2006 which collected information on the WASH enabling environment in Africa (AMCOW et al, 2006) which initially was called the Country Status Overview (CSO) but as it rolled out to other regions was called the ***Service Delivery Assessment (SDA)***. It was co-published by several agencies, and in 2012 was applied in 32 African countries in the publication (AMCOW et al, 2012). The SDA tool was subsequently taken up in seven Asian countries (World Bank, 2015a) and seven Latin American countries (World Bank, 2015b).

In 2008, the World Health Organization piloted the ***UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS)***. The first report noted work that the WHO Regional Office for Africa had published in 2000 titled "Water supply and sanitation sector assessment" which assessed the status of coverage, costs and investments in the sectors, as well as policy,

planning, institutional responsibilities, and the capacity for future development (WHO, 2000). Over applications of UN-Water GLAAS every 2-3 years since 2010, the survey has evolved into a significantly more detailed instrument for monitoring the progress in the WASH enabling environment and has expanded to monitor over 100 low- and middle-income countries, and also including a few high-income countries. Findings are also reported from a survey of over 20 external support agencies. The latest UN-Water GLAAS report was published in 2022 (WHO and UN-Water, 2022).

In 2012, UNICEF started rolling out the first version of the ***WASH Bottleneck Analysis Tool (WASH BAT)*** as a way for government and development partners to jointly identify the constraints on WASH progress and propose a costed, prioritized and sequenced plan of action. Since 2016, an online version of the tool has been applied in over 30 countries (including sub-national applications in many countries) (UNICEF, 2020a). The revised framework and criteria align with UNICEF's WASH sector functions (SIWI and UNICEF, 2016). Since 2020, additional assessment criteria provide options to customize the WASH BAT exercise for humanitarian or climate-affected contexts.

In 2015, the World Bank initiated the ***WASH Poverty Diagnostics***, which focused on the links between WASH, poverty and health, and it identified the binding constraints to improving WASH service delivery for poor people. The 18 country reports assess the costs and financing to reach WASH targets, as well as policies and their effectiveness, and it draws on UN-Water GLAAS data. The study adopts three diagnostic lenses to identify constraints and reform options: oversight and accountability, intergovernmental arrangements, and capacity (World Bank, 2017).

In 2015, the Organisation for Economic Cooperation and Development (OECD) released its ***Principles on Water Governance***, which provide the 12 "must-dos" for governments to design and implement effective, efficient, and inclusive water policies. To date, they have been endorsed by 37 OECD member countries, 7 non-member countries and 140 stakeholder groups (OECD, 2015, 2018). Several countries have applied the principles, and two regional benchmarking reports have been conducted (OECD, 2021a, 2021b).

In 2016, the Sanitation and Water for All (SWA) partnership formulated five WASH sector 'building blocks' which were prepared by one of SWA's multi-partner working groups to help identify '*what*' needs to be strengthened, and endorsed by the SWA Steering Committee. The ***SWA Building Blocks*** have proven to be useful in bringing a common understanding amongst stakeholders and a basis for analysis, and have been scored by countries using a traffic light system as part of the preparation process for the SWA high-level meetings. Since 2016, several international agencies have adapted the building blocks to meet their own specific needs, including UNICEF & Stockholm International Water Institute (SIWI), IRC, and WaterAid (see Table 1). The Building Block approach has been promoted through platforms such as

Agenda for Change[1], of which IRC and WaterAid are members. Welhungerhilfe make small modifications to the IRC framework, taking out policy and legislation pillar and adding a pillar on demand, behaviour and political will, to better reflect sanitation and hygiene (Gensch and Tillet, 2019). Also, the ***SWA Collaborative Behaviours*** – which measure some '*hows*' of WASH sector development– have been scored for the majority of SWA member countries in 2016 and 2020 (SWA, 2016, 2020).

In 2016, a group of development partners identified ways to accelerate progress in providing sanitation services for the urban poor, resulting in the ***City-Wide Inclusive Sanitation (CWIS)*** concept and "Call to Action" signed by over 70 organizations and individuals (BMGF et al, 2016). Since then, CWIS has become an umbrella term which has been taken on by many organisations in the sector, and has developed in many directions. Prior to CWIS, others such as the International Water Association (IWA), Swiss Federal Institute of Aquatic Science and Technology (Eawag) and the German Agency for International Cooperation (GIZ) had worked on city-wide planning approaches described in Kraemer et al (2010) and Parkinson et al (2014). These approaches are planning methodologies and do not themselves contain indicators for tracking over time, hence are not reviewed in this report. Utility performance frameworks exist, such as those of the World Bank's Utility of the Future Program[2] and CEPT University (India) Performance Assessment System[3] - but they are beyond the scope of this present review.

In 2016, the World Bank initiated new work on WASH sector governance (Mumssen et al, 2016) which led to a more developed version of the framework in a publication **"Policy, Institutions and Regulations"** (World Bank, 2022). This publication provides an assessment framework under several major blocks, but the framework does not include indicators.

In more recent years, new frameworks have focused more on the monitoring of financing and the sanitation market, including OECD's ***Scorecard to assess the enabling environment for investment in water security*** (termed here Scorecard), Sanitation and Hygiene Fund's ***Investment Cases***[4], the International Water Management Institute's ***Investment Climate Tool***, Eawag's ***Market Driven Approach for the selection of Fecal Sludge Treatment Products***, International Development Enterprises' ***Market System Resilience Index***, and UNICEF's ***Monitoring of Market-Based Approaches***. Other newer initiatives have focused on specific areas of the WASH enabling environment including ***regulation*** (Eastern and Southern Africa Water and Sanitation Regulators Association - ESAWAS), ***water integrity*** (Water Integrity Network - WIN), and ***integrity in infrastructure planning*** (WIN, CoST, IDB). One tool developed by Athena Infonomics and under implementation by several international agencies is ***Equiserve***, which is a sanitation market performance assessment and strengthening tool applied at city level.

---

1 https://washagendaforchange.org/strong-wash-systems/

2 Utility of the Future Program website

3 Performance Assessment System website

4 Note that SHF's investment case framework – applied in five countries – was developed as a temporary framework while a more comprehensive framework was developed.

## 2.2 Non-WASH market assessment frameworks

Different representations of market maturity for consumer products have evolved since the 1950s and which provide some foundational elements for understanding the Sanitation Economy. Table 2 details key information on several generic market assessment frameworks as well as selected frameworks for different industries. Further information is provided in Annex 2.

Among the better-known frameworks that categorizes market maturity is the four stages of the product lifecycle (market development, market growth, market maturity and market decline) by Blank (2005). Maturity of a market could also be assessed from the Technology Adoption Lifecycle Curve (TALC)(1991) based on the proportion of the target market that has adopted a technology (or product)(Rogers, 1962), or from the BCG Growth-Share Matrix (BCG, 1970) based on the growth and share of a specific product.

In terms of extracting useful elements on market maturity for the Sanitation Economy, some aspects of these frameworks are useful while others are not. First, the most widely used market development frameworks involve a massive simplification of reality. However, an understanding of the Sanitation Economy requires a greater level of detail than just 2 to 5 categories, given the many complexities of the Sanitation Economy. Second, the focus of the Sanitation Economy is not on a single product, but on a range of goods and services which deliver safely managed sanitation and which – preferably – is of a circular nature. There will therefore be different sanitation products which are at different states of the product lifecycle, and where different areas of a country will perform differently.

**Table 2.** Overview of general market assessment frameworks

| Framework name | Objective | Framework detail |
|---|---|---|
| Ansoff Matrix: Market (or product) development strategies (Ansoff, 1957) | Market (or product) development strategies | Four development strategies:<br>• Market penetration – increasing sales of existing products into an existing market<br>• Market development – selling existing products into new markets<br>• Product development – introducing new products to an existing market<br>• Diversification – entering a new market with altogether new products |
| BCG Growth-Share Matrix (BCG, 1970) | Help companies decide how to prioritize their different businesses by their level of profitability | Four quadrants:<br>• Low growth, high share: "cash cows"<br>• High growth, high share: "stars"<br>• High growth, low share: "question marks"<br>• Low share, low growth: "pets" |
| Porter's Five Forces (Porter, 1979, 1980) | Identify an industry's structure, determine corporate strategy and understand an industry's weaknesses and strengths | Five forces that shape an industry:<br>• Competition in the industry<br>• Potential of new entrants into the industry<br>• Power of suppliers<br>• Power of customers<br>• Threat of substitute products |
| Technology Adoption Lifecycle Curve (TALC) (1991) (see Rogers, 1962) | Assist technology marketers in understanding the marketplace in which they operate | Five classes of consumer adopts technologies:<br>Innovators<br>• Early adopters<br>• Early majority<br>• Late majority<br>• Laggards |
| Gartner Hype Cycle (Gartner, 2003) | Representation of the maturity and adoption of products and their evolution over time | Five key phases of a technology's life cycle.<br>Innovation trigger<br>• Peak of inflated expectations<br>• Trough of disillusionment<br>• Slope of enlightenment<br>• Plateau of productivity |
| Product Lifecycle (PLC) (Blank, 2005) | Understand stage of market maturity as a basis for business decision making | Four stages of market maturity:<br>• Market development<br>• Market growth (or "takeoff")<br>• Market maturity<br>• Market decline |
| Market or product development strategy (Blank, 2005) | Market (or product) development strategies | Two strategies:<br>• Re-segmentation of existing market as low-cost player<br>• Re-segmentation of the existing market by employing a niche strategy |

In conclusion, generic market assessment frameworks are more appropriate for businesses categorising their products or services and devising market development strategies, rather than for an independent assessment of the status of the Sanitation Economy – which involves multiple objectives beyond just profitability, and encompasses many different types of product and service. However, some elements of the above frameworks will be considered for an improved understanding of the Sanitation Economy.

## 2.3 Initiatives measuring strength of business, financial and governance systems

Several tools reviewed in Table 1 draw on data that are generated for other frameworks and data collection mechanisms, given the sanitation enabling environment depends on broader economic and financial systems. The overall areas covered by non-sanitation frameworks are listed in Table 3 and include financial (aid flows), business environment, economy, competitiveness, governance, policies, population, education, and others. Some initiatives aggregate and report data, such as the World Bank's Open Data, while other initiatives also generate an index, such as World Bank's Worldwide Governance Indicators (WGI). There is some borrowing of data sources between these different initiatives. For example, the WGI aggregates data from more than 30 think tanks, international organizations, nongovernmental organizations, and private firms across the world. The major sources of information for these initiatives are listed in Table 3, although it is not exhaustive. Most initiatives are global while some are regional, such as the Country Policy and Institutional Assessment (CPIA) and Ibrahim Index of African Governance (IIAG) which are African initiatives.

**Table 3.** Selected initiatives measuring business, financial and governance systems

| Overall area | Important indicators | Lead institution | Initiative name | Countries | Frequency |
|---|---|---|---|---|---|
| **Aid flows** | ODA to each sector, by donor agency | OECD | Creditor Reporting System | All | Annual |
| **Business environment** | Business Ready (B-READY) produces two sets of scores (1) three pillar scores (regulatory framework, public services and operational efficiency) and (2) ten topic scores (business entry, business location, utility services, labour, financial services, international trade, taxation, dispute resolution, market competition, business insolvency) | World Bank | Business Ready | 50 economies (scaling up to 100 in 2025 and 180 in 2026) | Annual (start 2024) |
| **Competitiveness** | • Enabling environment<br>• Human capital<br>• Markets<br>• Innovation ecosystem<br>• Economic transformation<br>• Disruption and resilience | World Economic Forum | Global Competitiveness Index | All | Annual (latest 2020) |
| **Corruption** | Percent of population sampled paying a bribe, by service area | Transparency International | Global Corruption Barometer | All regions | Periodic |
| **Currency values** | Change in exchange rate over time | OANDA FX Data Services | Currency Exchange Rates Converter | All | Quarterly |
| **Debt sustainability** | • Risk of external debt distress<br>• Risk of overall debt distress | World Bank | Debt Sustainability Analysis (DSA) | IDA countries | Annual (mainly) |

| Overall area | Important indicators | Lead institution | Initiative name | Countries | Frequency |
|---|---|---|---|---|---|
| **Development** | • Poverty & inequality<br>• People<br>• Environment<br>• Economy<br>• States and markets<br>• Global links | World Bank | Global Development Indicators (via Open Data) | All | Annual |
| **Doing Business** | • Starting a business<br>• Getting permits & services<br>• Paying taxes<br>• Enforcing contracts<br>• Resolving insolvency | World Bank | Ease of Doing Business | All | Annual (until 2020 - discontinued) |
| **Economic indicators** | • GDP and GDP growth<br>• Poverty rate<br>• Inflation | World Bank | World Bank Open Data | All | Annual (mainly) |
| **Educational attainment** | • Primary completion rate<br>• Doctoral or equivalent<br>• Lower secondary | UNESCO | UNESCO Institute for Statistics<br>World Bank Open Data | All | Annual |
| **Governance** | • Voice and accountability<br>• Political stability and absence of violence/terrorism<br>• Government effectiveness<br>• Regulatory quality<br>• Rule of law<br>• Control of corruption | World Bank | Worldwide Governance Indicators | All | Annual |
| | • Security & rule of law<br>• Participation, rights & inclusion<br>• Foundations for Economic Opportunity<br>• Human development | Mo Ibrahim Foundation | Ibrahim Index of African Governance (IIAG) | All (Africa) | Annual (2021 latest) |

| Overall area | Important indicators | Lead institution | Initiative name | Countries | Frequency |
|---|---|---|---|---|---|
| **Policies and institutions (governance)** | • Economic management<br>• Structural policies<br>• Social inclusion/ equity<br>• Governance<br>• Infrastructure and regional integration | World Bank | Country Policy and Institutional Assessment | IDA countries | Annual |
| | | African Development Bank | Country Policy and Institutional Assessment | All (Africa) | Annual (2020 latest) |
| **Population indicators** | • Population size<br>• Population structure<br>• Population growth<br>• Urbanization | UN Department of Economic and Social Affairs, Population Division | World Population Prospects | All | Annual |
| **Rule of law** | • Constraints on government powers<br>• Absence of corruption<br>• Open government<br>• Fundamental rights<br>• Order and security<br>• Regulatory enforcement<br>• Civil justice<br>• Criminal justice | World Justice Project | Rule of Law Index | All | Annual |
| **Sovereign risk** | • Sovereign risk | S&P Global Ratings | Sovereign Risk Ratings | Majority | Annual |
| **Sovereign Risk and Debt Sustainability** | • Sovereign risk<br>• Debt sustainability | IMF | Sovereign Risk and Debt Sustainability | Market access countries | No data yet |
| **Terrorism** | • Risk of terrorism | Trading Economics | Terrorism Index | All | Annual |

An important new initiative is the Business Ready (B-READY) initiative of the World Bank, which has replaced the Doing Business initiative which last reported in 2020. B-READY is in a three-year rollout phase, spanning 2024 to 2026. During this period, the project will grow in geographic coverage and refine its process and methodology. The first report in 2024 covers 50 economies that span all income levels and geographic regions around the world. The second report, expected to be released in September 2025, will cover more than 100 economies. The third report, expected to be released in September 2026, will assess about 180 economies, bringing the rollout phase to conclusion and providing a full global benchmark for future business readiness assessments. B-READY will make available valuable new data for an enhanced understanding of the overall business environment in a country, and hence the Sanitation Economy.


6.35
4.16
7.86
4.68

# 3. Structure of frameworks covering sanitation

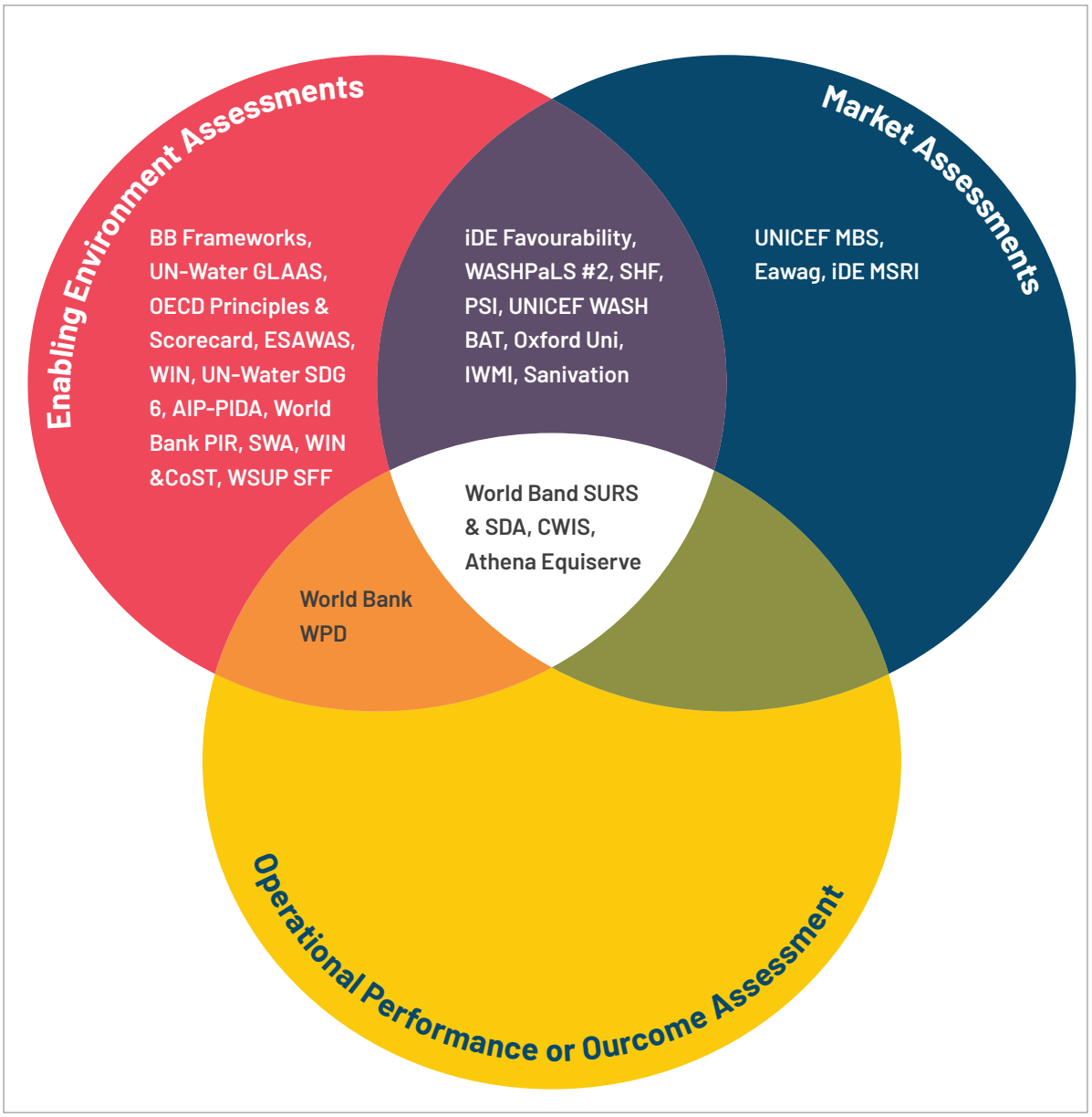
This Chapter analyzes the structures of the WASH frameworks introduced in Section 2.1, distinguishing between frameworks which (a) adopt a comprehensive approach to analysing the enabling environment (Chapter 3.1), (b) adopt a targeted approach to analysing a specific aspect of the enabling environment (Chapter 3.2), and (c) analyze market strengthening approaches (Chapter 3.3). An overview of the category of each framework is provided in Table 1. Figure 1 distinguishes frameworks which have a combination of enabling environment assessments, market assessments, and outcome assessments.





©Shutterstock

**Figure 1.** Categorisation of frameworks according to scope of assessment




*Frameworks are labelled using the agency's name – see column 2 of Tables 1, 7, 8 or 10, or see Abbreviations. BB - building block.*

## 3.1 Comprehensive enabling environment frameworks

Of the 34 frameworks that cover WASH, 17 could be considered to be comprehensive frameworks that attempt to examine the full breadth of issues related to sector governance and an enabling environment. The frameworks that utilize sector building blocks are presented in Table 4. There are clear similarities and overlaps between the 17 frameworks (upper part, Table 4), while some frameworks cover unique aspects (lower part, Table 4).

The Sanitation and Water for All (SWA) enabling environment framework was published in 2016, with five 'building blocks'. It was later adapted and extended by other partners, with later frameworks covering 9, 11 and 13 blocks from IRC, WaterAid and UNICEF & SIWI, respectively. The 13 UNICEF & SIWI sector functions were used to structure UNICEF's WASH Bottleneck Analysis Tool. In many cases, the larger SWA blocks were broken into sub-blocks by other frameworks, such as for institutional arrangements and for planning, monitoring and review. A useful distinction was later made by SWA whereby the building blocks were described as the 'what' of development and the four collaborative behaviours are the 'how' of development (See Annex 1 and column 1 of Table 4). The IRC framework is unique in that it contains an 'Infrastructure' building block – which although the building blocks are focusing more on systems, indicates it is important to assess the quantity and quality of existing infrastructure (and infrastructure lifecycle management) in a country, which will have a major implications for market readiness.

Other important frameworks are shown in the 'Other' column in Table 4, and contribute some aspects not included by the building block frameworks covered above. The UN-Water GLAAS is the most comprehensive and longest implemented global tool for measuring the WASH enabling environment. The country survey has four main sections which are indicated in Table 4, with specific focus areas in the different biennial reports. For example, the 2021/22 report includes chapters on WASH and health, climate resilience, national targets, leaving no-one behind, local participation, gender, regulation, risk management, and surveillance.

UN-Water's Global SDG 6 Acceleration Framework responds to SDG 17 to "Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development". Some organisations have adopted the SDG 6 Acceleration Framework pillars directly, while others have incorporated it into their frameworks. For example, UNICEF's Sanitation Game Plan to Reach Safely Managed Sanitation 2022–2030 adopts the five pillars of UN-Water's framework (UNICEF, 2022).

The World Bank's Service Delivery Assessment (SDA) – implemented in 46 developing countries across 3 continents – describes the 'service delivery pathway' for sustainable WASH access, from 'enabling' to 'developing' to 'sustaining', each with three building blocks – giving a total of 12 building blocks. The first four building blocks are along the lines of the building blocks of other agencies, while later building blocks focus on the supply chain, outputs and outcomes (uptake and use) – thus making it more comprehensive than the former building

block frameworks.

The CWIS City Service Delivery Assessment adopts the same service delivery pathway concept as the World Bank, with some adjustments to the sustaining pillar, which includes regulation, cost recovery and institutions. Other city planning approaches which preceded CWIS – such as the 'Sanitation 21' publication by IWA – identify several aspects of the enabling environment which are consistent with other frameworks. These include government support, legal frameworks, institutional arrangements, skills and capacity, financial arrangements and socio-cultural acceptance (Parkinson et al, 2014; Lüthi et al, 2011)[5].

OECD's 12 Principles on Water Governance cover a range of subjects, concurring with many of the building blocks, while in addition emphasising cross-sectoral coordination and policy coherence. WSUP's sector functionality framework identifies 7 sector functions, with 3 sub-functions each giving a total of 21 sub-functions. Only the 7 functions are shown in Table 4.

Aside from confirming and further detailing the major building blocks elaborated by the influential SWA framework, other frameworks have contributed importantly to the identification of additional aspects of the enabling environment. These include political/government leadership, infrastructure, the environment, water resources, service delivery, behaviour change, gender, participation/social inclusion, social norms, decentralisation, innovation and the availability of products and services via markets.

**Table 4.** Building blocks of comprehensive enabling environment frameworks

| SWA | IRC | WaterAid[1] | UNICEF/SIWI | Others |
|---|---|---|---|---|
| **Sector policy and strategy**[BB] | Policy and legislation | Policy and strategy | Sector policy & strategy | Policy/mandates[&]; Policy[^], Policy coherence[$]; Policy and strategy~; Policy[+] |
| **Institutional arrangements**[BB] | Institutions | Institutional arrangements | Institutional arrangements | Responsibility[#+]; governance[@*$]; Institutional arrangements~; Institutions[+] |
| | Regulation and accountability | Accountability and regulation | Accountability & regulation | Accountability[#]; integrity and transparency[$]; regulation[+] |
| | Infrastructure development & maintenance | | Service delivery arrangements | Program methodology~ |

5 'Sanitation 21' is not reviewed as a separate tool or framework in the present publication because it identifies necessary steps in the planning process (i.e., collect and review information about existing services, identify constraints to service provision, and undertake a sanitation market assessment, and Identify priority areas for improvement) but does not present a new framework to help understand the context (Parkinson et al, 2014).

| SWA | IRC | WaterAid[1] | UNICEF/SIWI | Others |
|---|---|---|---|---|
| **Strengthen and use country systems[CB]** | | Coordination and integration | Coordination | |
| **Sector financing[BB]; financing strategies[CB]** | Finance | Financing | Financing | Finance[@*$]; financial flows[&]; investment planning[&]; budget[^] |
| | | | Budget & expenditure | Expenditure[^]; financing and incentives~; financing[+] |
| **Planning, monitoring and review[BB]; one information and mutual accountability platform[CB]** | Planning | Planning | Planning | Planning[&^]; resource planning and management[#] |
| | Monitoring | Monitoring | Monitoring | Monitoring[@$]; Data and information[*+] |
| | Learning and adaptation | | Evaluation and learning | Monitoring and evaluation~; innovation[*] |
| **Capacity development[BB]** | | Capacity | Capacity development | Human resources[@]; capacity[&*$]; implementation capacity~ |
| **Government leadership[CB]** | | Government leadership | Political leadership | Commitment&; inter-governmental context+ |
| | Water resource management | Environment and water resources | | Sustainability&; climate resilience+ |
| | | Service delivery | Service providers | Output[^] |
| | | Behaviour change | | Attitudes/behaviours&; uptake and use[^] |
| | | Gender and social inclusion | Social norms | Equity[^] |
| | | Active, empowered people and communities | | Stakeholder engagement$ |
| | | | Decentralisation | |
| | | | | Markets[^]; availability of products and services~ |
| | | | | Cost-effective implementation~ |

**Note** *to table: reference framework list provided in Table 1.* [BB] *SWA building block.* [CB] *SWA collaborative behaviour.* [1] *WaterAid's building blocks have been split up to be comparable with other frameworks, noting that the following are the published building blocks: 'Policy, strategy and planning', 'Institutional arrangements and capacity', 'Service delivery and behaviour change'.* [#] *CWIS Service Functions (4 frameworks);* [@] *UN-Water GLAAS;* [&] *WSUP Sector Functionality Framework;* [*] *UN-Water SDG Accelerator Framework,* [^] *World Bank Service Delivery Assessment,* [+]

*World Bank Policy, Institutions and Regulations; ~ World Bank Scaling Up Rural Sanitation, $ OECD Principles on Water Governance. Note UNICEF/SIWI covers 2 frameworks: the Governance Framework (SIWI and UNICEF, 2016) defines the functions, which were adopted by the WASH BAT.*

## 3.2 Targeted enabling environment frameworks

Eight frameworks are categorized into frameworks that focus on financing and investment (3), planning (1), regulation (1), integrity (2) and poverty assessment (1).

**Financing and investment tools.** Table 5 shows there is some overlap but also differences between the three frameworks focused on financing and investment. These aspects deepen the building blocks identified in the broader building block frameworks.

**Table 5.** Enabling environment frameworks focused on finance and investment

| OECD Scorecard | AIP-PIDA | IWMI |
|---|---|---|
| **Overall policy framework for investment** | Enabling environment for water investments<br><br>Enhancing investment performance and sustainability | Business climate<br>Governance<br>Entrepreneur ecosystems<br>Regulatory framework |
| **Water policy framework for investment** | | |
| **Bankability and sustainability of projects** | Mobilising water investments and financing | Access to finance |
| **Contribution that other economic sectors make to water security** | | |

**Note:** *reference framework list provided in Table 1.*

**Planning tool.** The Equiserve Tool is a planning framework which identifies current sanitation service coverage and assesses the costs and means of achieving coverage targets. The tool has a poverty angle, analysing poor and non-poor households differently and the affordability of WASH services. The opportunity and constraints faced by service providers in expanding services across the city and to the poor specifically are assessed, and a financial analysis conducted.

**Regulation.** The ESAWAS framework has a regulation lens, examining sanitation definitions, policies, technologies available, the legal framework and regulatory instruments. It examines the roles and responsibilities of key institutions and of different players along the sanitation chain. In this sense, it dives into more detail in the 'Institutional set-up' covered in the broader building block frameworks.

**Integrity.** The Water Integrity Risk Index from WIN includes three types of risk: investment integrity risk, operations integrity risk and client-utility interaction integrity risk. Each of these includes public procurement risk indicators. The Framework for Integrity in Infrastructure Planning (FIIP) was developed by WIN and the Infrastructure Transparency Initiative (CoST), with support from the Inter-American Development Bank. It identifies and scores seven risks related to integrity across the project planning cycle, covering decision-making, conflicts of interest, and misuse of public funds. The FIIP has been piloted in one Latin American country and is expected to undergo further piloting before finalisation.

**Poverty assessment.** The World Bank's WASH Poverty Diagnostics examines the poverty status of those without WASH services, the WASH-health linkages, and what barriers poor people face to accessing WASH. It conducts a financial gap analysis and analyzes sector oversight and accountability, intergovernmental arrangements, and capacity.

## 3.3 Market analysis and market strengthening frameworks

Nine frameworks enable an understanding of the sanitation market, and this includes some aspects of the broader enabling environment. Table 6 maps the key pillars of the market assessments, indicating quite some variability between them, making a clear categorisation difficult (see Table 6 footnote). Some frameworks with fewer pillars – such as the three pillars of UNICEF's Market-Based Sanitation approach – cover more topics per pillar than other frameworks that contain more pillars. Most areas are common to several frameworks, although they may use different terminology, covering consumer demand, market structure, competition, governance and enabling factors, supply chain, and capital. Some frameworks build on other frameworks. For example, iDE developed their MBS Favourability Score based on UNICEF's MBS approach.

## 3.4 Conclusion

Across the 34 frameworks, a large number of aspects are considered – whether they are termed building blocks, pillars, dimensions, factor, functions, and so on – many of which are common to most frameworks, common to some, or unique to one. There has been an evolution in frameworks from the early 2000s to new frameworks still under development or pilot test, with frameworks finding different trade-offs between parsimony (simplicity) and comprehensiveness. Initial frameworks tended to be more comprehensive, with later frameworks addressing single aspects such as financing and integrity, as well as an increasing number of frameworks focused on market strengthening.

**Table 6.** Market analysis and market strengthening frameworks[1]

| PSI | Sanivation | UNICEF | iDE MSRI |
|---|---|---|---|
| Demand and prioritisation of sanitation | Market Size | Household demand | |
| Competition; products and services; functioning supply chain | | Business and supply chain | Structure of the market |
| Good governance; coordination and collaboration; data systems in use | Enabling Environment; partners; mandates; accountability | Business environment | Support of the market; connectivity (integration, inclusion) |
| Financing loan capital | Resources | | Financial viability |
| Workforce and training | | | |
| Climate resilient infrastructure | | | Environment |

[1] **Note** *on how the pillars of the respective frameworks are arranged: the rows reflect an attempt to categorize the pillars by (in order):*
*market demand, market supply, enabling environment, financing, capacity, and broader infrastructure and environmental issues.*

| iDE MBS | Oxford, Eawag | EAWAG | WASHPaLS #2 | SHF |
|---|---|---|---|---|
| Household-level indicators; town-level indicators | Social barriers | Target market analysis; market sizing | | Demand |
| Supply chain and financing; technology solutions | | Market stakeholder analysis | Presence of market actors, resources and mechanism; private sales; associated supply chains | Supply |
| Province and district broader context; local government enabling environment | Regulatory barriers; political barriers | | Enabling factors; governance; market Rules; public goods | Enabling environment |
| | Financial barriers | Market attractiveness | Capital, viability of enterprises | |
| | | | | |
| | Infrastructural barriers | | | |


9.42
3.56
7.43

# 4. Data collected by frameworks

In Chapter 2, thirty-four frameworks were introduced that have collected, still collect, or will collect data on the WASH enabling environment or market features, as well as several non-WASH data collection and compilation initiatives that report globally on a range of relevant indicators. Chapter 3 explored the structure of the WASH frameworks. This chapter assesses the potential to draw on data collected under all these initiatives, reviewing the nature of the indicators, the number of countries included, the data frequency and lag period, the data collection methodologies, verification approaches, and the ways in which results are expressed. Based on this analysis, the likely data sources and data gaps for an enhanced understanding of the Sanitation Economy can be identified.

## 4.1 Indicators

Over one thousand indicators have been used across the WASH frameworks (see Table 7 and Annex 1). Some frameworks do not have indicators, and instead conduct in-depth research on specific topics (e.g., Oxford University's and Eawag's Barriers to Scaling Up) or are general assessments on the strength of each building block (e.g., SWA). UN-Water's SDG 6 Global Acceleration Framework has been created to be adopted by other frameworks for planning and monitoring purposes, and does not propose indicators.

Frameworks with the largest number of indicators or questions – each with over 100 – are the UN-Water GLAAS, the UNICEF WASH Bottleneck Analysis Tool, OECD's Principles on

Water Governance, the World Bank's Sample Indicators for Urban Sanitation Projects, and the World Bank's Service Delivery Assessment (SDA). These are followed by frameworks with 50-100 indicators which include AIP-PIDA's Water Investment Scorecard, OECD's Scorecard, WaterAid's Building Blocks, the City Service Delivery Assessment (CSDA) and the World Bank's Scaling Up Rural Sanitation. Some frameworks – such as SDA, CSDA, and WASH BAT – have been applied separately across several sub-sectors (e.g. rural and urban sanitation) and thus generate additional data.

Relevant indicators for the Sanitation Economy are listed under each framework in Annex 1. Where frameworks cover the same building blocks, many indicators are similar, if not the same. Indicators on service coverage and market size tend to be more similar across frameworks, and frameworks that draw on questions from the UN-Water GLAAS data adopt the same indicators. However, in a large number of cases the indicators are framed for the purposes of the specific framework they are designed for, leading to at least five hundred unique indicators. Given this level of detail, they are not reviewed and compared in this report.

## 4.2 Countries and level

Table 7 presents the number of countries and level at which frameworks have been applied. The framework with the most widespread application is the UN-Water GLAAS, which collected data from 124 LMICs in its last application (2021/22), although a new cycle will be reported in 2025. Other frameworks with widespread application are the SWA Collaborative Behaviours, SWA Building Blocks, the WASH Bottleneck Analysis Tool and the World Bank Service Delivery Assessment. Although the OECD's Principles on Water Governance have been used for detailed national and local policy reviews in only five countries, benchmarking studies were conducted in 48 countries of the Asia-Pacific region (OECD, 2021a) and in 36 African cities covering 20 countries (OECD, 2021b). WaterAid has recently invested in building block assessments in 12 countries to inform its programming.

Sub-national assessments have also been implemented by several enabling environment tools. The IRC Building Block analysis has been implemented at both national and district levels covering nine countries, while the WASH Bottleneck Analysis Tool has been applied at multiple levels across at least 50 countries, from national down to city level, depending on government demand. Although the UN-Water GLAAS survey is completed at national level, it does collect information on some indicators relating to policy implementation at sub-national level. While the CWIS Initiative is being implemented in an increasing number of cities and countries, information is not readily available on the extent of application.

**Table 7.** Number of indicators per framework and number and level of countries applied

| Tool or framework name | Lead agency | Indicators | Form | Countries | Level |
|---|---|---|---|---|---|
| **Accountability, Mandate and Resources** | Sanivation | 20 | Indicators | 9 | National |
| **Barriers to Scaling Up Sanitation Enterprises** | Oxford, Eawag | 0 | Assessment | 20 | Enterprises1 |
| **Building blocks** | SWA | 0 | Assessment | >30 | National |
| | IRC | 43 | Assessment | 9 | National & District |
| | WaterAid | 88 | Questions | 12 | Nat. & Sub-national |
| | UNICEF & SIWI | See WASH BAT | | | |
| **Citywide Inclusive Sanitation (CWIS) Initiative** | World Bank | >80 | Indicators | ND | Project |
| | BMGF, Athena | 20 | Indicators | ND | Cities |
| | WSUP | >100 | Questions | ND | Cities |
| | CSDA | 48 | Indicators | ND | Cities |
| **Collaborative behaviours** | SWA | 18 | Indicators | 68 | National |
| **Equiserve** | Athena Info. | >15 | Indicators | 12 | Cities |
| **Integrity in Infrastructure Planning (FIIP)** | WIN, CoST, IDB | 22 | Indicators | 10 | Project2 |
| **UN-Water GLAAS** | WHO, UN-Water, UNICEF | >100 | Indicators | 124 | National |
| **Investment cases** | SHF | 16 | Indicators | 4 | National |
| **Investment Climate for Waste Reuse** | IWMI | 5 | Assessment | 15 | National |
| **Market-Based Sanitation Indicators** | WASHPaLS #2 | 13 | Indicators | ND | Sub-national |
| **Market-Based Sanitation** | UNICEF | 35 | Indicators | ND | Sub-national |
| **Market-Based Sanitation Favourability** | iDE | 27 | Indicators | 3 | Towns |
| **Market Driven Approach** | Eawag | 4 | Indicators | 5 | Cities |
| **Market System Resilience Index** | iDE | 39 | Indicators | 9 | National |
| **Policies, Institutions and Regulations** | World Bank | 0 | Assessment | 10 | National |

| Tool or framework name | Lead agency | Indicators | Form | Countries | Level |
|---|---|---|---|---|---|
| **Principles on Water Governance** | OECD | 36 | Indicators | ND | National |
| **Regulation Strategy and Framework For Inclusive Urban Sanitation** | ESAWAS | 32 | Indicators | 8 | National |
| **Scaling Up Rural Sanitation** | World Bank | 45 | Indicators | 13 | National |
| **Scorecard** | OECD | 29 | Questions | 7 | National |
| **SDG 6 Global Acceleration Framework** | UN-Water | 0 | Framework | 0 | - |
| **Sector Functionality Framework** | WSUP | 21 | Indicators | 6 | National |
| **Service Delivery Assessment** | World Bank | 116 | Indicators | 46 | National |
| **Stargazer framework** | PSI | 25 | Indicators | 10 | National |
| **WASH Bottleneck Analysis Tool** | UNICEF | 100 | Criteria | >50 | Nat. & Sub-national |
| **WASH Poverty Diagnostics** | World Bank | 0 | Assessment | 18 | National |
| **Water Investment Scorecard** | AIP-PIDA | 47 | Indicators | 12 | National |
| **Water Integrity Risk Index** | WIN | 7 | Indicators | 12 | Communities |

**Key:** *[1] – 36 enterprises in 20 LMICs; [2] – 10 large infrastructure projects in one Latin American country. ND - no data.*

Some frameworks are in early days of application and a greater number of countries are expected to be covered in the years ahead, such as the OECD's Scorecard, iDE's Market-Based Sanitation Favourability Score and AIP-PIDA's Water Investment Scorecard. Some frameworks have ceased to collect data, including the SWA initiatives and several World Bank tools.

## 4.3 Data frequency and lag period

For an understanding of the Sanitation Economy in a particular country, a framework needs to have been recently applied in that country. Given many frameworks were developed and applied more than ten years ago, there need to be repeated applications of those frameworks for there to exist more recent assessments. For newer frameworks, many have not yet been applied widely, hence there are few countries where assessments of the Sanitation Economy have been conducted.

Lag periods are common for many of the initiatives. A (long) lag period can be due to at least 3 factors:

1. The original data are reported with a lag (e.g. government financial reports);
2. There is a lag between the data being available and the data being sourced by the initiative collecting data;
3. A lag due to the time it takes the Initiative to publish the data or the report (time waiting for all data to be compiled, and time to review and approve the data and draft report). For academic papers, this process can also take at least 6 months, unless there is advanced publication prior to peer review.

Table 8 presents an overview of the frequency, lag period and latest year of data for WASH frameworks. As many as 20 of the frameworks appear to have been implemented as a 'one off' exercise, with no wider application in more countries or repeat exercises in case study countries.

Only one tool – the UN-Water GLAAS – has a global scope that covers most LMICs, and is applied every 2-3 years in each country, thus enabling assessment of progress over time. The GLAAS has a lag period of about 1-3 years, depending on the indicator. Other tools with extension coverage across several regions are the SWA building blocks and collaborative behaviours, and the UNICEF WASH Bottleneck Analysis Tool, which are implemented periodically according to the preparation for SWA high-level meetings or demand from countries. However, SWA does not currently have plans to continue collecting data on building blocks or collaborative behaviours. Also, IRC reports time series data on the changing building scores over the period 2017-2023 in a dashboard[6] and it also reports scores for several countries in Annex 2 of its Annual Reports[7]. Furthermore, WaterAid plans to repeat the WASH system building block assessments in 2027-28 to understand how the system has changed during the 5-year WaterAid Country Programme strategy period.

Other tools with some potential for more regular data collection are: the AIP-PIDA Water Investment Scorecard, which has been applied in 10 countries with some plans for scale-up in Africa planned; the UNICEF Monitoring Market-Based Approaches; and the OECD Scorecard, which is due for global roll out. City-level frameworks with potential for wider scale out are the Equiserve tool and CWIS initiatives, though they are only relevant for understanding the Sanitation Economy if implemented in the same locations.

Several frameworks have no or limited track record of regularly collecting data and making it publicly available. These include the Building Blocks of WaterAid and UN-Water's SDG Acceleration Framework. Some frameworks had widespread application but are no longer collecting information, such as World Bank's Scaling Up Rural Sanitation, Service Delivery Assessments and WASH Poverty Diagnostics. Some frameworks are still under development, such as the Market-Based Sanitation Favourability score and the Stargazer framework, with no known plans for scale of implementation.

---

6 https://www.ircwash.org/data-behind-our-work

7 https://www.ircwash.org/annual-reports

**Table 8.** WASH frameworks frequency, lag period and latest year of data

| Tool or framework name | Lead agency | Frequency | Lag period | Latest |
|---|---|---|---|---|
| Accountability, Mandate and Resources | Sanivation | One-off | Immediate | 2023 |
| Barriers to Scaling Up Sanitation Enterprises | Oxford, Eawag | One-off | Immediate | 2023 |
| **Building blocks** | SWA | Every 2-3 years | Immediate | 2022 |
| | IRC | Regular | Immediate | 2024 |
| | WaterAid | Every 3-5 years | Immediate | 2024 |
| | UNICEF & SIWI | - | - | - |
| Citywide Inclusive Sanitation (CWIS) Initiative | World Bank | One-off | <1 year | - |
| | BMGF, Athena | One-off | <1 year | - |
| | WSUP | One-off | <1 year | - |
| | CSDA | One-off | <1 year | - |
| Collaborative behaviours | SWA | Every 4 years | 1-3 years | 2020 |
| Equiserve | Athena Info. | One-off | Immediate | 2022-24 |
| Integrity in Infrastructure Planning (FIIP) | WIN, CoST, IDB | One-off | 1-2 years | 2024 |
| UN-Water GLAAS | WHO, UNICEF | Every 2-3 years | 1-3 years | 2021/22 |
| Investment cases | SHF | One-off | <1 year | 2023 |
| Investment Climate for Waste Reuse | IWMI | One-off | <1 year | 2023 |
| Market-Based Sanitation Indicators | WASHPaLS #2 | One-off | <1 year | 2023 |
| Market-Based Sanitation | UNICEF | Periodic | <1 year | |
| **Market-Based Sanitation Favourability** | iDE | TBD | | |
| Market Driven Approach for FST Products | Eawag | One-off | <1 year | 2015 |
| Market System Resilience Index | iDE | Annual | Immediate | 2024 |
| Policies, Institutions and Regulations | World Bank | One-off | <1 year | 2022 |
| Principles on Water Governance | OECD | Periodic[1] | 1-3 years | 2024 |
| Regulation Strategy and Framework For Inclusive Urban Sanitation | ESAWAS | Periodic[1] | <1 year | 2023 |
| Scaling Up Rural Sanitation | World Bank | Annual | <1 year | 2016 |
| Scorecard | OECD | Periodic1 | TBD | 2023 |

| | | | | |
|---|---|---|---|---|
| SDG 6 Global Acceleration Framework | UN-Water | - | - | - |
| Sector Functionality Framework | WSUP | Periodic[2] | Immediate | 2018 |
| Service Delivery Assessment | World Bank | One-off | <1 year | 2015 |
| **Stargazer framework** | PSI | TBD | <1 year | ND |
| WASH Bottleneck Analysis Tool | UNICEF | One-off/ periodic | Immediate | 2024 |
| WASH Poverty Diagnostics | World Bank | One-off | 1-2 years | 2018 |
| Water Investment Scorecard | AIP-PIDA | Periodic[1] | 1-2 years | 2023 |
| Water Integrity Risk Index | WIN | One-off | 1-2 years | 2019 |

**Key:** *[1] regular exercises are planned, but with unknown frequency. [2] Included endline assessments conducted in 2019 as part of reporting to donors.*

Table 9 presents the number of countries, frequency, lag period and latest data of non-sanitation tools or indices which report data of relevance to Sanitation Economy maturity. The strength of most of these initiatives is that they report data every year, although for most of them there is still a lag of at least 1-2 years due to the time to collect, approve and publish official data, and the added lag time until the initiative's report is published. The majority of initiatives are global, while some are regional or focused on low-income (World Bank's International Development Assistance - IDA) countries. A general data source for Asian countries is the ASEAN Statistics Data Portal[8] which contains statistics other than those reported by global institutions such as the World Bank or IMF on topics such as Foreign Direct Investment, trade, macroeconomy, transport and labour.

One other strength of the data compilation initiatives in Table 9 is that all initiatives report results at the national level, which will be important for an understanding of the Sanitation Economy at the national level. On the other hand, there is likely to be only limited data reporting at sub-national level to understand the specifics of Sanitation Economy maturity at different sub-national levels. Sub-national data could be strengthened if the original data sets are sourced (e.g., national surveys) to provide breakdown of some indicators at the first sub-national administrative level (e.g., poverty rates, income levels, or education).

8 https://data.aseanstats.org/

**Table 9.** Countries, data frequency, lag period and latest data reporting of current sanitation assessment tools

| Initiative name | Countries | Frequency | Lag | Latest |
|---|---|---|---|---|
| **Business Ready Index (World Bank)** | 50, 100, 180[1] | Annual | 1-2 years | 2024 |
| **Country Policy & Institutional Assessment (World Bank)** | IDA countries | Annual | 1-2 years | 2023 |
| **Country Policy & Institutional Assessment (African Development Bank)** | Africa | Annual | 1-2 years | 2020 |
| **Creditor Reporting System (OECD)** | All | Annual | 1-2 years | 2023 |
| **Debt Sustainability Analysis (World Bank)** | IDA countries | Annual | 1-2 years | 2022 |
| **Ease of Doing Business** | All | Annual | 1-2 years | 2020 |
| **Educational Statistics (UNESCO)** | All | Annual | 1-2 years | 2023 |
| **Global Competitiveness Index (World Economic Forum)** | All | Annual | 1-2 years | 2020 |
| **Global Corruption Barometer (Transparency International)** | All | Periodic | 1-2 years | 2023 |
| **Global Development Indicators (World Bank)** | All | Annual | 1-2 years | 2023 |
| **Ibrahim Index of African Governance** | Africa | Annual | 1-2 years | 2021 |
| **Rule of Law Index (World Justice Project)** | All | Annual | 1-2 years | 2023 |
| **Sovereign Risk Ratings (S&P)** | Most | Annual | 1-2 years | 2023 |
| **Sovereign Risk and Debt Sustainability (International Monetary Fund)** | Most | Nothing yet | 1-2 years | 2023 |
| **Terrorism Index (Trading Economics)** | All | Annual | 1-2 years | 2023 |
| **Worldwide Governance Indicators (World Bank)** | All | Annual | 1-2 years | 2023 |
| **World Population Prospects (United Nations Population Division)** | All | Annual | 1-2 years | 2023 |

[1] *50 countries reported in 2024, with plans to report 100 countries in 2025 and 180 countries in 2026*

For the majority of indicators, the lag in reporting does not have major implications for the assessment of Sanitation Economy maturity, as there will not be major changes in most indicators in a period of 1-2 years. However, there may be some important changes in some indicators, especially relating to political, institutional or regulatory issues, or exchange rate fluctuations, which can change very quickly under some conditions.

## 4.4 Data collection methodologies and verification

The credibility of data is of paramount importance to gaining the buy-in of any framework's audiences. While it is relatively easy and cheap to access data reported through other initiatives, it is critical to have confidence in these data. This is particularly important for several frameworks given they often involve assessments made by individuals or in groups based on a perceived strength of accomplishment (e.g., Likert scale). Therefore, for any initiative drawing on data sets from other frameworks, it is important to triangulate data sources and incorporate stakeholder validation to enhance accuracy and credibility. Table 10 evaluates four criteria to indicate the credibility of data from WASH frameworks:

Is the question clear in what it is asking and are definitions provided in the survey form on what should be reported to reduce the chances of misinterpretation?

1. How are scores generated? Are scores generated from verifiable quantitative information, or instead is a score given based on a ranking scale (e.g., Likert scale)?
2. Is it an opportunity for consultation or peer review from stakeholders who may have a different perspective?
3. Is the data approved by a mandated institution, preferably by the government?

Frameworks that involve assessments by an individual or groups and that are later peer reviewed or validated, and have some form of government verification process, endorsement or approval include: the UN-Water GLAAS survey, the WASH Bottleneck Analysis Tool, the Equiserve tool, the AIP-PIDA Water Investment Scorecard, OECD's Principles on Water Governance, and the SWA Building Blocks and Collaborative Behaviours. The assessments provide a scoring from 1 to 5, or 0 to 6, for example, which are typically based on the perceived degree of development of a particular issue and using explicit criteria (e.g., a strategy or plan is judged not by its presence alone, but whether it is officially approved, up-to-date, evidence-based and specifically addresses equity concerns). Some frameworks provide clear scoring criteria, such as UN-Water GLAAS, while others do not. For example, the SWA Building Blocks and the UNICEF WASHBAT do not provide strong criteria for scoring the indicators – therefore requiring some interpretation in the context they are being applied.

OECD's Principles on Water Governance framework requests respondents to signal the level of consensus among stakeholders in order to reflect the diversity of opinions during the discussion. The OECD's tool also asks if changes are expected in three years' time on water governance performance, with response 'improvement', 'stable' and 'decrease'. There is limited information on several initiatives that are under development and have yet to be implemented widely, such as OECD's Scorecard (see initiatives with 'ND' - no data – in Table 10).

iDE's MRSI includes 'determinants' rather than indicators, and provides guidance with definitions, data sources, and interview questions and how they should be assessed/scored (iDE, no date). WSUP provides definitions for each indicator, which are shared with workshop

participants and market actors as annexes to sector functionality reports.

The data compilation initiatives not specific to sanitation or WASH are largely based on actual data from reporting of official statistics, based on administrative data, financial data or household or enterprise surveys. As the data are reported by international organisations, there is assumed to be overall buy-in and acceptance of the figures by governments, although this will not always be the case. If there is any disagreement, there is an opportunity for countries to raise it through formal or informal channels with the publishing organisations, when the disagreement can be reviewed and might be settled. Many of these initiatives have been well established for many years. Some issues that can be more controversial are around governance, and initiatives vary in what they report – but several have gained credibility. For example, the Global Corruption Barometer has reported the experiences of tens of thousands of people confronting corruption around the world since 2003. The World Bank's World Governance Indicators aggregates data from more than 30 think tanks, international organizations, nongovernmental organizations, and private firms across the world selected on the basis of three key criteria: 1) they are produced by credible organizations; 2) they provide comparable cross-country data; and 3) they are regularly updated.

To generate indices, several indicators need to be combined – hence requiring conversion of indicator values (that might be objectively verifiable data points) into a common scoring system. For example, the World Bank's CPIA measures the extent to which a country's policy and institutional framework supports sustainable growth and poverty reduction. The CPIA macroeconomic management rating is converted into a Likert score of 1 (low) to 6 (high).

Lessons from data collection have been reported by some initiatives, either formally or in personal communication. For example, to collect information efficiently in the roll out of the AIP-PIDA Water Investment Scorecard, it is acknowledged that there should be a country focal point who can facilitate data collection in-country and engage and coordinate relevant stakeholders in the process. Furthermore, in-country validation of data collected is critical to ensure stakeholder buy-in.

## 4.5 Conclusion

A very large number of indicators have been defined by the reviewed frameworks, many of which are similar – if not the same – between frameworks. However, few frameworks are regularly applied in a large number of countries. This will be due to a variety of reasons, and will depend on the aims and resources of implementing agencies, demands from national partners and willingness to participate, and the expertise requirements and costs of implementation (and resources being available).

In conclusion, few of the tools or frameworks that include sanitation indicators have significant potential to provide an up-to-date understanding of the Sanitation Economy maturity in a large number of countries. It is noted that some key indicator areas – especially around policy and financing – are covered by the UN-Water GLAAS, which is applied every two or three years in at least 100 countries. No other sanitation-specific frameworks report data in a regular cycle for any country. In terms of general governance, regulatory, and finance indicators (i.e., that are not specific to sanitation or WASH), these can be compiled from existing international or national data sources, and thus draw on existing indicators. However, most data – even when reported – can have a considerable lag time.

**Table 10**. Countries, application level, data frequency, lag period and latest data reporting of current sanitation assessment tools

| **Tool name** (alphabetical order) | **Lead agency** | **Indicator clarity** | **Data or assessment** | **Peer review** | **Approval by authorities**[1] |
|---|---|---|---|---|---|
| Accountability, Mandate and Resources | Sanivation | Partial | Assessment | No | No |
| Barriers to Scaling Up Sanitation Enterprises | Oxford, Eawag | Yes | Data | Yes2 | No |
| **Building blocks** | SWA | No | Assessment | Yes | Yes |
| | IRC | No | Assessment | Yes | No |
| | WaterAid | No | Assessment | Yes | Yes |
| | UNICEF & SIWI | See WASH BAT | | | |
| Citywide Inclusive Sanitation (CWIS) Initiative | World Bank | Yes | Mixture | Yes | No |
| | BMGF, Athena | Yes | Mixture | Yes | Yes |
| | WSUP | Yes | Mixture | Yes | ND |
| | CSDA | Yes | Mixture | Yes | ND |
| Collaborative Behaviours | SWA | Yes | Mixture | Yes | Yes |
| Equiserve | Athena Info. | Yes | Mixture | Yes | Yes |
| Integrity in Infrastructure Planning (FIIP) | WIN, CoST, IDB | Yes | Data | Yes | Yes |
| UN-Water GLAAS | WHO, UNICEF | Yes | Mixture | Yes | Yes |
| Investment Cases | SHF | Yes | Mixture | Yes | No |
| Investment Climate for Waste Reuse | IWMI | Yes | Data | Yes1 | No |
| Market-Based Sanitation Indicators | WASHPaLS #2 | Yes | Mixture | Yes | No |
| Market-Based Sanitation | UNICEF | Yes | Mixture | Yes | No |
| **Market-Based Sanitation Favourability** | iDE | Yes | Mixture | Yes | No |
| Market Driven Approach for FST Products | Eawag | Yes | Mixture | Yes | No |
| Market System Resilience Index | iDE | Yes | Assessment | Yes | No |
| Policies, Institutions and Regulations | World Bank | No | Assessment | Yes | No |
| Principles on Water Governance | OECD | Yes | Assessment | Yes | Yes |

| | | | | | |
|---|---|---|---|---|---|
| Regulation Strategy and Framework For Inclusive Urban Sanitation | ESAWAS | No | Assessment | Yes | No |
| Scaling Up Rural Sanitation | World Bank | Yes | Assessment | Yes | No |
| Scorecard | OECD | Yes | Mixture | Yes | Yes |
| SDG 6 Global Acceleration Framework | UN-Water | - | - | - | - |
| Sector Functionality Framework | WSUP | Yes | Assessment | Yes | No |
| Service Delivery Assessment | World Bank | Yes | Assessment | Yes | Yes |
| Stargazer framework | PSI | No | Assessment | Yes | No |
| WASH Bottleneck Analysis Tool | UNICEF | No | Assessment | Yes | Yes |
| WASH Poverty Diagnostics | World Bank | - | Assessment | Yes | No |
| Water Investment Scorecard | AIP-PIDA | Yes | Mixture | Yes | Yes |
| Water Integrity Risk Index | WIN | Yes | Assessment | Yes | No |

**Key:** *[1] Some form of government verification, endorsement or approval. [2] Includes academic paper*

# 5. Presentation of information and dissemination

## 5.1 Report type

To be impactful, a framework should not only collect valuable information, but also present it convincingly and engage with a range of stakeholders who act on the information. Table 11 presents how sanitation and WASH frameworks fare with respect to dissemination.

**Table 11**. WASH frameworks frequency, lag period and latest year of data

| **Tool name** *(alphabetical order)* | **Lead agency** | **Report type** | **Presentation** | **Dissemination** |
|---|---|---|---|---|
| **Accountability, Mandate and Resources** | Sanivation | Internal briefs and reports | Infographic[1], Tables[2] | Internal use |
| **Barriers to Scaling Up Sanitation Enterprises** | Oxford, Eawag | Article | Tables | Academic pub. |
| **Building blocks** | SWA | Framework only | Traffic | Website, HLM[3] |
| | IRC | Annual reports | Tables, Traffic | Website, Weblink |
| | WaterAid | Agency report | Tables, Traffic | Website, Weblink |
| | UNICEF/SIWI | Framework only | NA | Weblink |
| **Citywide Inclusive Sanitation (CWIS) Initiative** | World Bank | Framework only | NA | Website, Weblink |
| | BMGF/Athena | Online data | Dashboard | Website |
| | WSUP | Framework only | NA | Website, Weblink |
| | CSDA | Framework only | None | None |
| **Collaborative Behaviours** | SWA | Agency report | Tables | Website, HLM[3] |
| **Equiserve** | Athena Info. | User stories[4] | Text | Website |
| **Integrity in Infrastructure Planning (FIIP)** | WIN/CoST/ IDB | Framework only | NA | Weblink (PP) |
| **UN-Water GLAAS** | WHO/UNICEF | Agency report InfoGraphic | Tables, Graphs, Maps | Website, PR, Key findings, events[5] |
| **Investment Cases** | SHF | Agency report | Tables | Resources page |
| **Investment Climate for Waste Reuse** | IWMI | Article | Tables, Graphs | Academic pub. |
| **Market-Based Sanitation Indicators** | WASHPaLS #2 | None | NA | NA (PP) |
| **Market-Based Sanitation** | UNICEF | Framework only | NA | Weblink |
| **Market-Based Sanitation Favourability** | iDE | Agency reports | NA | NA (PP) |
| **Market Driven Approach for FST Products** | Eawag | Framework only | Tables, Graphs | Workshops, Weblink |
| **Market System Resilience Index** | iDE | None | NA | NA (PP) |

| **Tool name** *(alphabetical order)* | **Lead agency** | **Report type** | **Presentation** | **Dissemination** |
|---|---|---|---|---|
| **Policies, Institutions and Regulations** | World Bank | Agency report | Graphs | Weblink |
| **Principles on Water Governance** | OECD | Agency report | Traffic, Tables, Graphs, Maps | Website[6] |
| **Regulation Strategy and Framework For Inclusive Urban Sanitation** | ESAWAS | Agency report | Infographics | Weblink |
| **Scaling Up Rural Sanitation** | World Bank | Agency report Donor reports | Graphs, Traffic Tables, Maps | Weblink |
| **Scorecard** | OECD | Agency report | Graphs | Website (PP) |
| **SDG 6 Global Acceleration Framework** | UN-Water | Framework only | None | Website |
| **Sector Functionality Framework** | WSUP | Agency reports | Traffic | Weblink, events |
| **Service Delivery Assessment** | World Bank | Agency report | Traffic | Weblink, events[5] |
| **Stargazer framework** | PSI | None | NA | NA (PP) |
| **WASH Bottleneck Analysis Tool** | UNICEF | Agency report | Traffic | Website |
| **WASH Poverty Diagnostics** | World Bank | Agency report Synthesis | Graphs, Tables, Maps | Website |
| **Water Investment Scorecard** | AIP-PIDA | Framework only | Tables | Website, National workshops |
| **Water Integrity Risk Index** | WIN | Agency report | Tables, Graphs | Website |

**Key:** *NA – not available (could not be obtained); PR – press release; PP – still in pilot phase; Traffic – Traffic light colour to indicate strength of achievement. FST – fecal sludge treatment; [1] for country market brief; [2] for country market assessment; [3] HLM – SWA high level meetings, although the data are not publicly available; [4] user stories are available for selected cities, though not all data collected are available; [5] includes global webinars and country dissemination events, and international conferences; [6] report documents evolving water governance practices but does not provide scores for governance principles*

The majority of frameworks that present results are in the form of a formal agency report, i.e., 14 frameworks. Two frameworks generated an academic article instead of an agency report. Some frameworks provide data through a dashboard or presentation of online data, either instead of – or in addition to – a report. Examples include UN-Water GLAAS, Equiserve and the CWIS initiative of BMGF and Athena Infonomics, and IRC's Building Blocks[9]. Agenda for Change – of which IRC and WaterAid are members – also provides its own reports with some national

9 https://www.ircwash.org/data-behind-our-work and Annex 2 in https://www.ircwash.org/annual-reports

and district building block assessments and systems strengthening case studies[10]. As well as standard agency reports, some initiatives use InfoGraphics to communicate the main results and messages. The Equiserve tool presents user stories from selected cities where it has been applied. Ten frameworks only present their framework in a formal agency publication, but no results from applications of the framework. In several cases this is because the framework is still under development or piloting. Four frameworks do not provide public access to their framework as it is for internal use only or in pilot phase.

It is rare that a framework report is co-badged with the governments of the countries they have collected data on. Some workshops reports from the UNICEF WASH BAT are co-badged with the governments. Fourteen frameworks do not produce an accessible report from country application, several of which are because the framework is still in the pilot phase.

## 5.2 Presentation of information

Frameworks report data in a variety of ways. The majority of frameworks use standard tables and graphs, accompanied by text (e.g., OECD Scorecard, SWA Collaborative Behaviours, ESAWAS). Some frameworks use mainly data visualisations such as traffic light scoring (e.g., SWA Building Blocks, UNICEF WASH BAT), while some use other data visualisations accompanied by tables and interpretative text (e.g., UN-Water GLAAS, WSUP Sector Functionality, World Bank SDA, WaterAid Building Blocks). Frameworks collecting data in multiple countries use maps with colour-coding to visualize differences between countries and regions (e.g., UN-Water GLAAS, World Bank WASH Poverty Diagnostics). Fewer initiatives provide colour-coding for multiple administrative levels within a country (e.g., World Bank Scaling Up Rural Sanitation and World Bank Poverty Diagnostics).

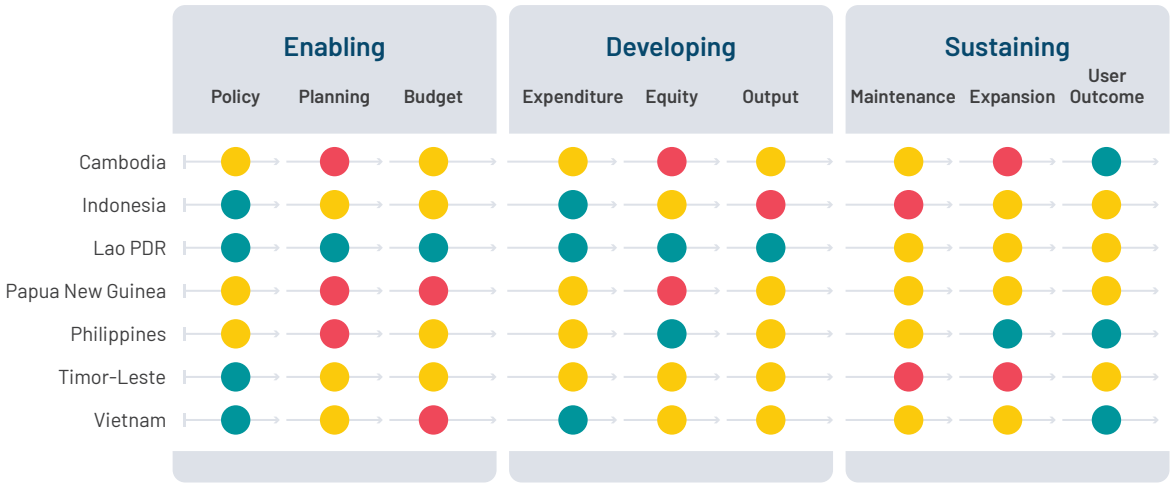
Several examples are provided here which provide insights to understanding the Sanitation Economy, although these are by no means exhaustive of the different ways that data have been presented in visual form. Figures 2 to 5 provides examples of traffic light scoring from the WSUP, SDA, WASH BAT and OECD frameworks, respectively. Figure 6 provides an example of a multi-country presentation of data in a map from UN-Water GLAAS. Figure 7 provides an example of presenting colour-coded data on two indicators simultaneously at sub-national level. Figures 8 and 9 present examples of an infographic from ESAWAS and UN-Water GLAAS. Figure 10 provides an example of presenting selected data on several indicators across several countries.

10 https://washagendaforchange.org/strong-wash-systems/

**Figure 2.** Traffic light scoring for 21 sector functions in WSUP's sector functionality framework

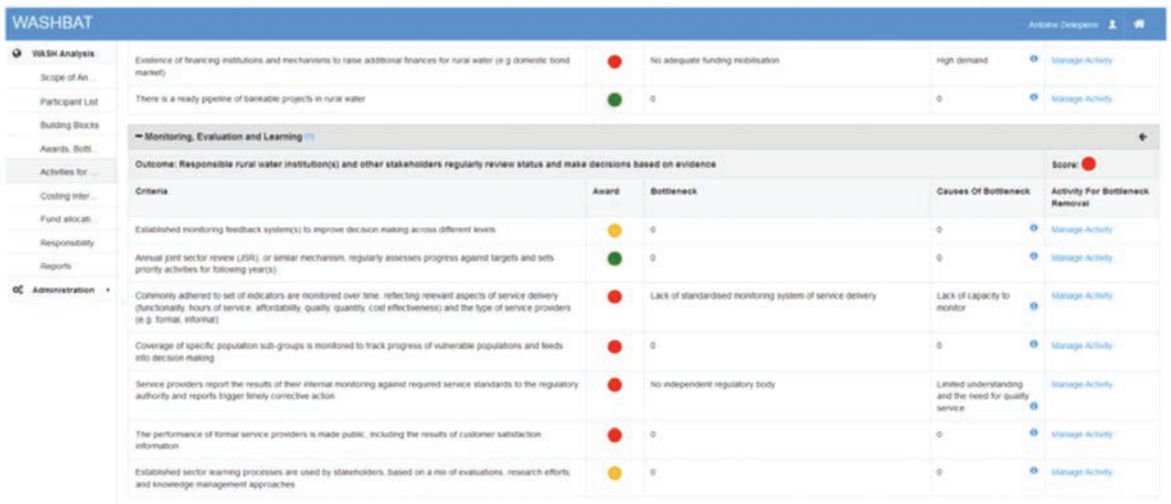

**Source:** *WSUP (2018). An evaluative framework for urban WASH sector functionality. London: Water and Sanitation for the Urban Poor.*

**Figure 3.** Traffic light scoring across World Bank's 3 service delivery pathways (example: urban water supply scorecard in East Asia and Pacific)




**Source:** *World Bank (Water and Sanitation Program). Turning Finance into Services for the Future. A Regional Synthesis of the Service Delivery Assessments (SDA) for Water Supply and Sanitation in East Asia and the Pacific. June 2015.*

**Figure 4.** UNICEF's WASH BAT scoring of criteria




*UNICEF & SIWI (2017). WASH BAT workshop report. Ethiopia. Link*

**Figure 5.** OECD's Principles on Water Governance (left side reflects the score and consensus, right side reflects the changes expected in the next 3 years)

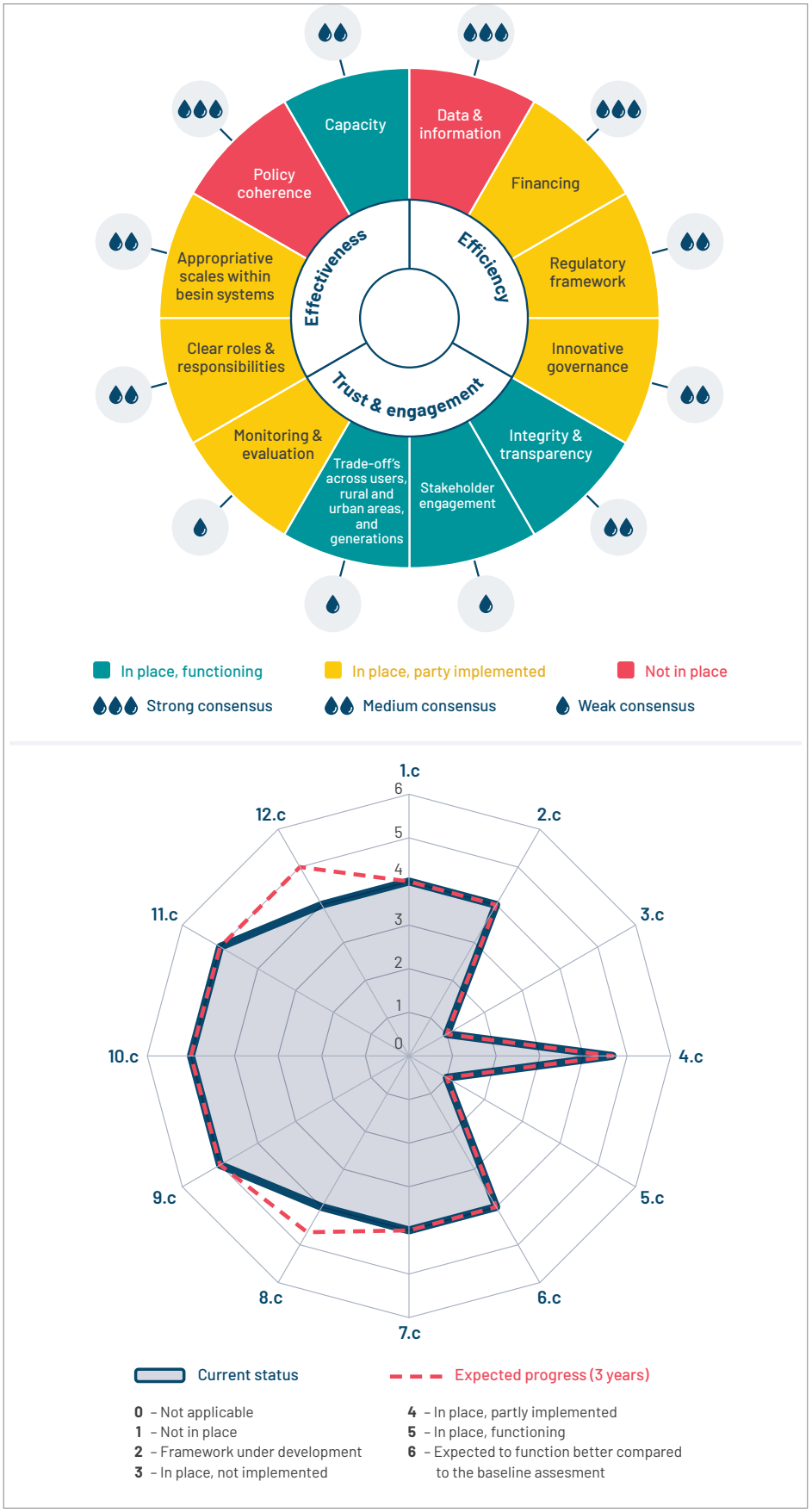
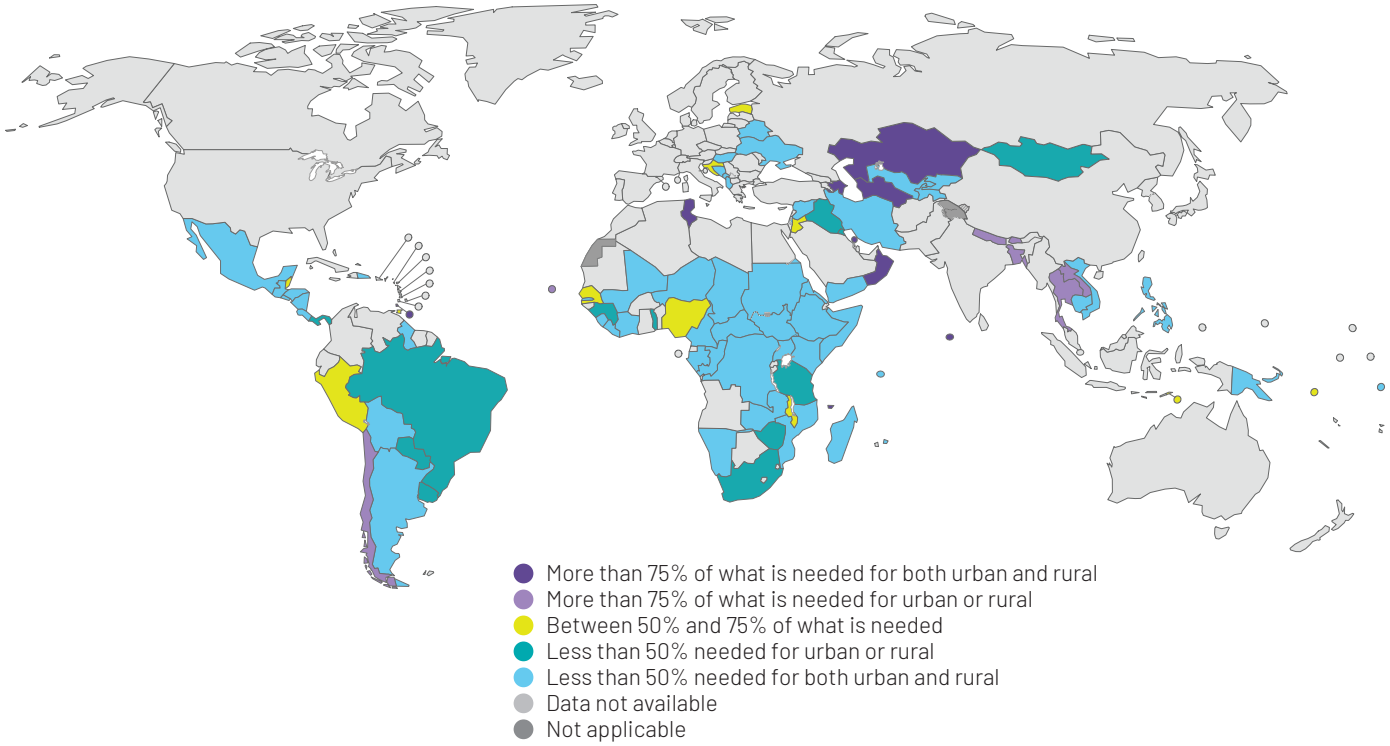
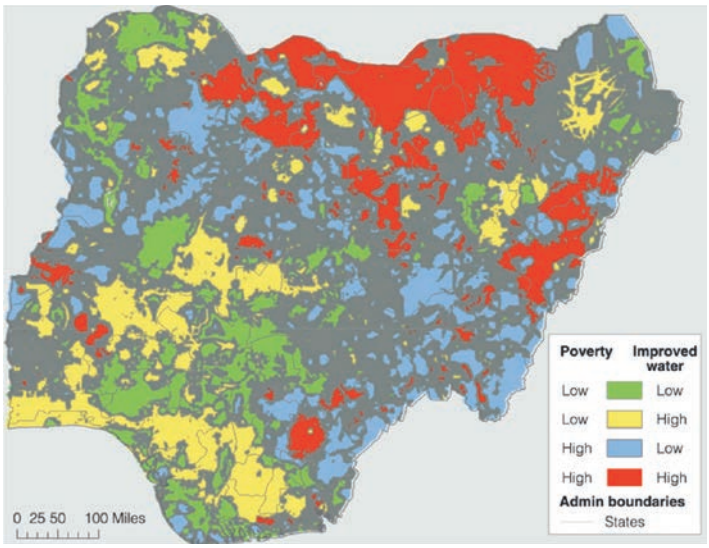


**Figure 6.** UN-Water GLAAS global map (Example: sufficiency of funding from all sources to reach national sanitation targets)



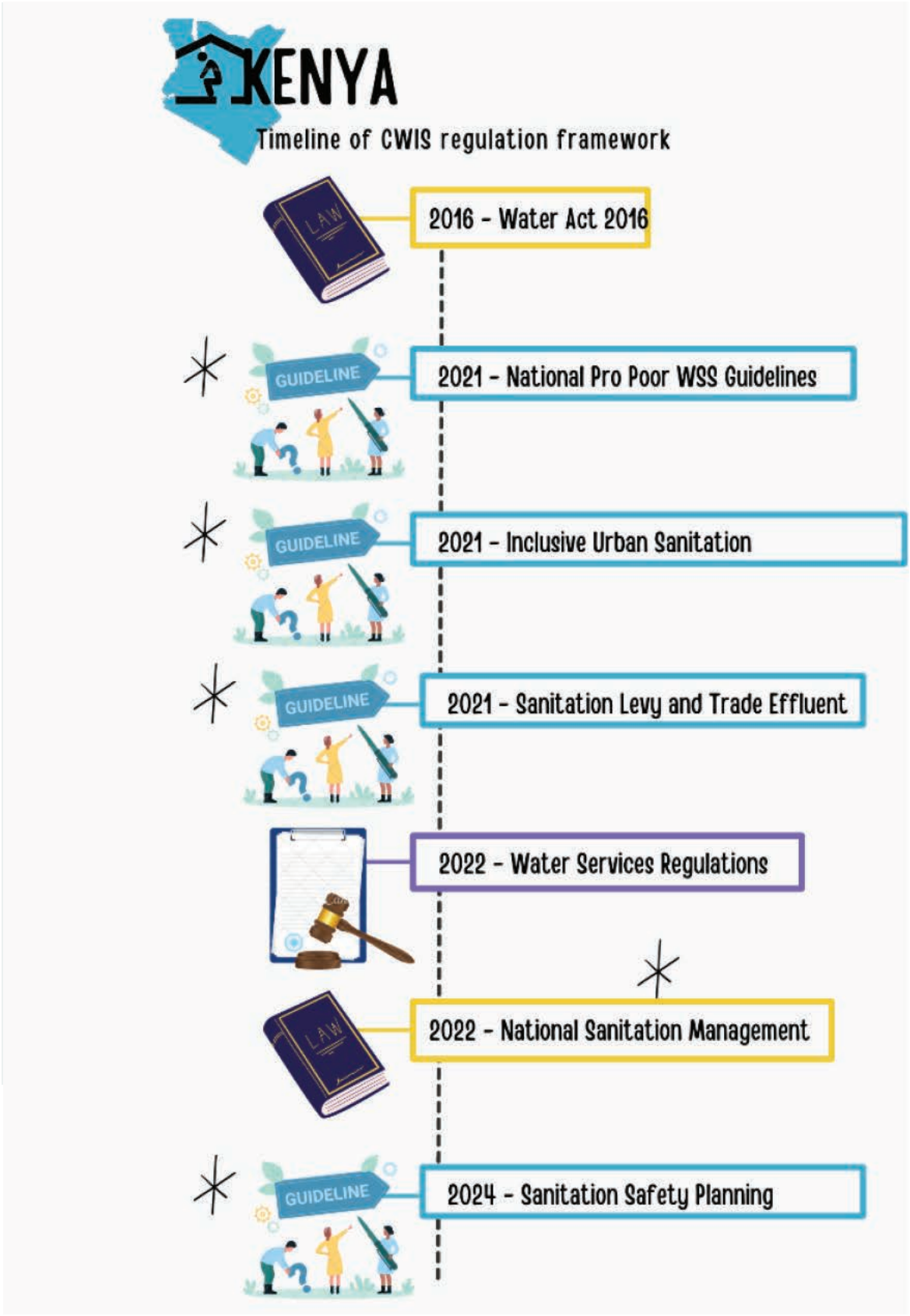

**Source:** *UN-Water GLAAS report (2022)*

**Figure 7.** Combining two indicators at the sub-national level from the World Bank WASH PovertyDiagnostic (Example: access to improved water and improved sanitation in Nigeria, 2015)



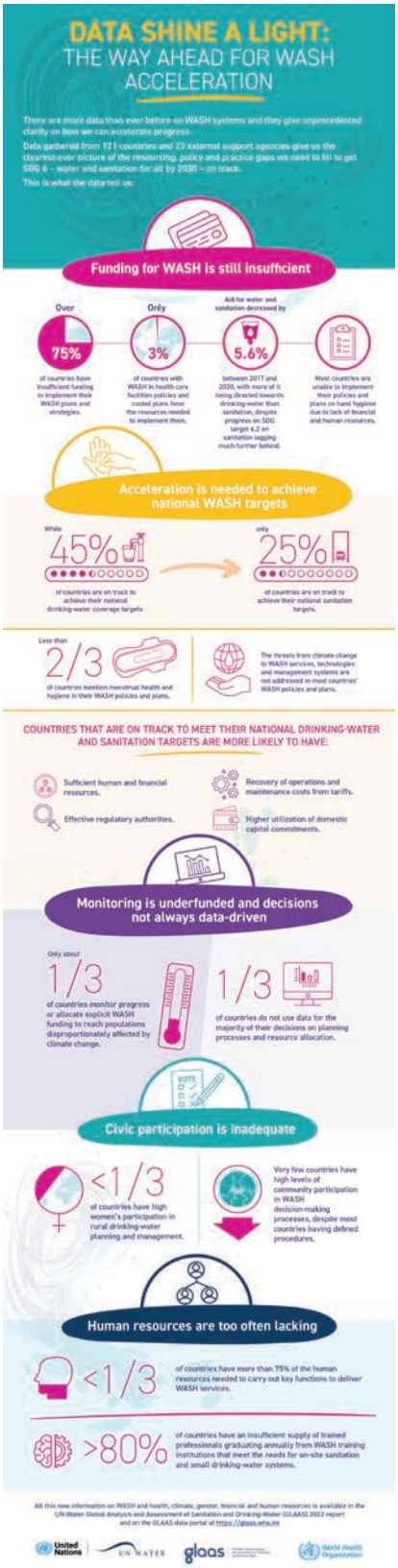

**Source:** *Synthesis report: World Bank. 2017. Reducing Inequalities in Water Supply, Sanitation, and Hygiene in the Era of the Sustainable Development Goals: Synthesis Report of the WASH Poverty Diagnostic Initiative. WASH Synthesis Report. World Bank, Washington, DC.*

**Figure 8.** Infographic example from ESAWAS



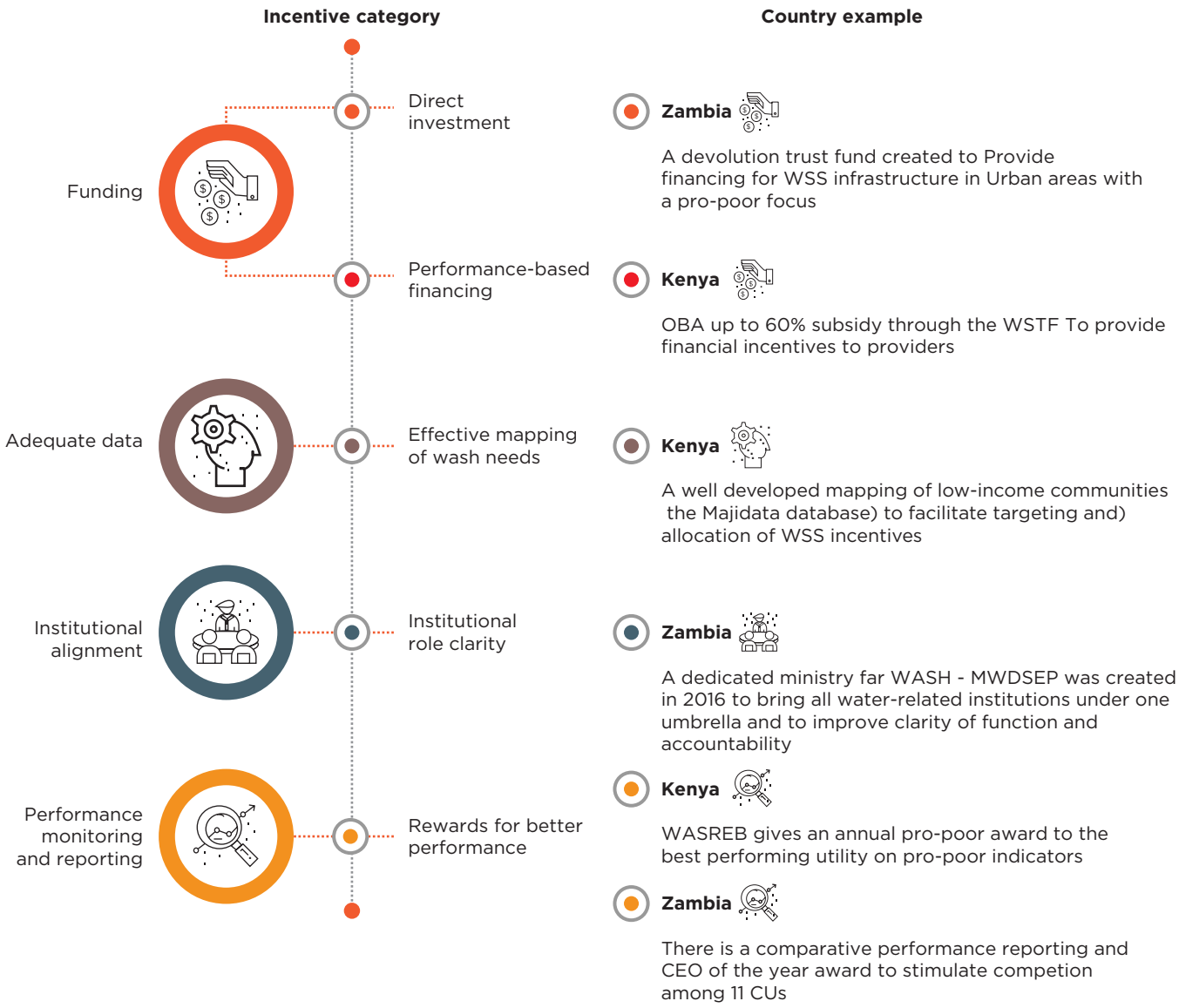

**Source:** *ESAWAS (2024). Citywide inclusive sanitation (CWIS) regulatory journeys in six countries of Eastern and Southern Africa.*

**Figure 9.** Infographic example* from UN-Water GLAAS




**Source:** *UN-Water GLAAS, WHO website Link. * Top half of infographic only shown*

**Figure 10.** Presenting country examples along a continuum of diverse categories (example: Incentives for Improving the Contribution of Informal Service Provision)




**Source:** *World Bank (2022)*

## 5.3 Dissemination

The main routes for dissemination that are easier to identify are websites dedicated to an initiative and/or weblinks with a specific publication. Fifteen frameworks have their own webpage detailing the framework and providing related resources, while an additional eight frameworks have a weblink to a report describing the framework, but no landing page. Two frameworks disseminate their results through an academic article.

Several webpages or weblinks provided in Table 11 do not report actual results from a country application of the framework. This is either because the framework is still in (or recently completed) the pilot phase (e.g., Integrity in Infrastructure Planning from WIN) or the results are for internal or selected partner use only (e.g., Water Investment Scorecard from AIP-PIDA). On the other hand, some frameworks are intended to be picked up and used but do not necessarily intend to provide results (e.g., UN-Water SDG6 Accelerator Framework; UNICEF/SIWI Building Blocks; and some CWIS initiatives).

Aside from publications, some initiatives have used international conferences and workshops and national events to publicize their results and be used by partners. However, it is difficult to systematically record these for the thirty-four frameworks. It is known that organisations such as WHO (for the UN-Water GLAAS), OECD (for the Principles on Water Governance and the Scorecard), the World Bank (Service Delivery Assessment and WASH Poverty Diagnostics), the AIP-PIDA (Water Investment Scorecard), and the Agenda for Change initiative have all used international events and/or national workshops to consult with partners during framework implementation and to disseminate their results at the time of report launch. Other events, such as the IRC's WASH Systems Symposia, are intended to assemble a critical mass of experts, governments and development partner representatives to share learnings and discuss innovations on systems strengthening topics. The national reports generated by the AIP-PIDA scorecard – and the progress to address the gaps – are planned to be presented to African Union Heads of States. Workshops, launch events and sessions at international conferences are therefore key moments to sensitize audiences and receive valuable feedback on how to use the results and how to scale up implementation.

## 5.4 Impact of frameworks

Few frameworks have conducted a review of their impact. Some frameworks have not led to the generation of data or results, either because it is not their purpose or because they are still quite new or in the pilot phase. New frameworks which have already been piloted in several countries and that have some potential for scale-up and use are OECD's Scorecard and AIP-PIDA's Water Investment Scorecard. However, their impact in pilot countries has not yet been evaluated. Some frameworks are for internal use only (so far), such as Sanivation's Accountability, Mandates and Resources framework and PSI's Stargazer framework.

Some frameworks have been implemented in the context of ongoing programs and have led to some uptake by local decision makers. However, evidence is lacking on the extent of uptake and the impact. For example, the WASH Poverty Diagnostics which was implemented in 18 countries from 2015-2018 informed the national dialogue on how to scale up WASH services and make them more available to poor households, and informed the World Bank's engagement with countries. In implementing the sector functionality framework in cities in six countries, WSUP contributed to evidence-based planning and coordination amongst partners. WaterAid is in the process of drawing lessons from its building block assessment, with a focus on the process of implementation and not (yet) the uptake and impact. The Water Integrity Risk Index, which was used in 12 communities across seven countries between 2012 and 2019, has been stated by the Water Integrity Network to have not been taken up by decision makers.

The WASH Bottleneck Analysis Tool from UNICEF is a methodology to score the enabling environment, identify bottlenecks, and collaboratively identify solutions to the identified bottlenecks, with a costed, prioritized and sequenced implementation plan. In 2020, UNICEF published a review of 5 years of implementing version 2 of the WASH BAT from 2016 to 2020 (UNICEF, 2020). During this period, 58 WASH BAT workshops – which is a key stage in the WASH BAT process – had been completed in 32 countries. The review found that most of the stakeholders interviewed – whether they were moderators, facilitators, UNICEF staff, government staff or other WASH sector stakeholders – agreed the WASH BAT workshop and process created the ideal environment for a structured and systematic discussion of the key bottlenecks hindering progress, and what can be done to resolve them. There is evidence that the outputs developed led to positive outcomes in the countries where the Action Plan arising from the WASH BAT has been implemented. In the majority of countries, a range of outcomes can be traced back to the WASH BAT process. Findings suggest that the WASH BAT might be less successful in contexts where government and other institutions have low capacity and poor coordination. Settings in conflict situations or other political fragility may make prioritization more difficult. Findings suggest that more successful WASH BATs are found in contexts where the WASH BAT has been adapted to the needs of the country, and integrated into national processes, directly feeding into a program or strategy.

Another tool which has been reviewed in detail is UN-Water GLAAS, although the reviews have limited public availability. The "UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) Strategy: 2023–2030" states that GLAAS activities aim to achieve two outcomes: national monitoring systems for WASH are strengthened, and decisions by governments and development partners are informed by easily accessible data on WASH systems (WHO, 2022). As part of the GLAAS 2021/22 cycle, WHO sought feedback from countries through its Country Feedback Form[11] which covered the value-added of GLAAS at country level, how the data are being used, how decision-making has been supported, and the process of data collection. The results are presented in a document titled "Using data collected through GLAAS: Making the most of the GLAAS Process" (WHO, 2023). According to this report, different countries have used data collected through the GLAAS process differently depending on the status of their WASH sector, national processes and priorities. The following areas emerged as aspects that GLAAS has strengthened across multiple countries: sector coordination; formulation of policies, plans, regulations and programs; advocacy for funding/financing for WASH; national monitoring and review systems; international and regional reporting. Examples are provided in WHO (2023).

One of the donors that has supported WHO financially to implement GLAAS has been the UK Foreign, Commonwealth and Development Office (FCDO), formerly the Department for International Development (DFID). To assess the performance of its investments in the global monitoring enabling environment, FCDO conducted a Project Completion Review[12] of their program "Strengthening Global Coordination and International Monitoring to support delivery of Universal Access to Water and Sanitation" which supported JMP, SWA, WHO and GLAAS from August 2016 – March 2020. Overall, the role and necessity of GLAAS in global monitoring were recognised, in particular its relevance and impact at national level. Since the FCDO review was published, GLAAS has worked to increase its impact to increase its impact in each subsequent cycle.

The SWA Building Blocks and Collaborative Behaviours have had quite extensive use at country level. The SWA Building Blocks have influenced the development or refinement of other Building Block frameworks, such as UNICEF, IRC and WaterAid. Starting at the Sector Ministers' Meeting in March 2016 in Addis Ababa, Ethiopia, the SWA Building Blocks have helped structure the SWA High-Level Meetings, and have been used to prepare countries for these meetings and identify some of the key issues to address. To date, there is no publicly available document formally assessing the impact of the SWA Building Blocks framework or the country profiles.

---

**11** Link here.

**12** Link here.

The SWA Collaborative Behaviours were developed in 2016 and have undergone two formal processes of publishing Country Profiles. The first edition in 2016-17 was released at High-Level Meetings in 2017 and led to the refinement of the framework. The second edition in 2020 had country profiles generated for 68 countries – these were released to countries for national debate. Published after the first edition of country profiles, the document "The Collaborative Behaviours Country Profiles – Understanding their role in the SWA framework and suggestions on how they can be used" recommended five major uses: deepen sector analysis; develop a common vision and agenda for development effectiveness; agree intermediate steps to be taken by all actors to achieve the jointly agreed vision and agenda; regularly review progress; and take corrective actions (SWA, 2018). To date, there is no publicly available document formally assessing the impact of the SWA Collaborative Behaviour framework or the country profiles.

EquiServe claims it helps shape investments and strengthen city systems to advance equity in sanitation services, and on its website[13] five user stories are provided from cities where it has been applied. The user stories essentially describe how the tool identified key needs and how those needs were addressed by using the EquiServe tool. Its impacts include updates to city master plans, justify new tariff levels to the regulator, develop monitoring plans, improve investment planning, providing insights to household behaviour, identify data gaps, service gaps, and affordable technological options for households. Its initial successes has led to EquiServe's expansion into additional cities.

13 https://www.equiserve.io/resources-equiserve


50
25

# 6. Conclusions

A number of lessons can be gathered from the development and application of WASH frameworks reviewed in this report. Frameworks have had different objectives, and the level of ambition has been varied – and therefore enjoyed different levels of success. As evidenced, several frameworks have gone out of use, although they have left their mark on the sector, and influenced the next generation of frameworks. Several frameworks have been recently developed and hence not yet applied at the scale that is planned for them. As is demonstrated by many examples, frameworks tend to be developed so that one stakeholder can influence another stakeholder, and for that, the target stakeholder has to adopt the framework or else be influenced by its findings. Second, for continued application over a longer period of time, the framework developers need to maintain institutional support and continue to raise and commit budgets to the framework's continued use. Some key recommendations are made here, drawing on lessons from the frameworks reviewed.

Prior to development, a new framework should be consulted with relevant stakeholders on what is needed and identify what knowledge gaps the framework's application can usefully fill. The framework should therefore meet the informational needs of the users or target audiences, selecting the right scope to engage them. Whether the intention is to work with public stakeholders around governance and public budgets, to work with private stakeholders around market development, or both, the objective and target audience should be clear. The level at which the framework is applied – from national down to local level (city, district) – should be clarified, noting that it is challenging to define a tool that is flexibly applied at any level. Make the framework, and any corresponding tool, user friendly in its structure and the way results are presented, with the 'happy medium' of not too few but not too many

indicators. A user-centric design that emphasizes simplicity and accessibility will encourage broader adoption. A piloting phase is a good way of increasing success, to allow for changes in the framework before it is finalized and rolled out.

Make results freely available. To engage a range of stakeholders to strengthen the sanitation economy requires stakeholders to have access to the same quality information, which requires information to be freely available and the methodologies and sources to be transparent. Therefore, access to the data should not be charged for.

The costs of data collection need to (significantly) exceed the benefits of having the data. Therefore, costs need to be minimized to the extent possible. Drawing on other sanitation and non-sanitation frameworks that collect data is a means of reducing the costs. These data will need to be carefully extracted from different sources, compiled, assessed, validated through triangulation and indicator values proposed. Drawing on available data sets and reports can save significant effort and resources through avoiding having to collect the same information from scratch. However, to have real value, an understanding of the Sanitation Economy is enhanced through localized, real-time data. This requires adequate budgets to be set aside and the right skillsets to collect and analyze the data for correct interpretation and use. Collecting data from key informants requires information to be freely and honestly shared by a range of stakeholders, and who are prepared to devote their time to the exercise.

Results should be updated at least every 2 years for the framework (and results) to remain relevant, noting that data for many indicators may have a lag time of 1-2 years. The implementation costs of repeated applications of a framework should reduce over time, if learning is built into the data collection methodology (to reduce costs next time).

While frameworks need to be flexibly implemented to provide the most value for a specific context, there is also value in the standardisation of indicators and methodologies to enable comparability of results across settings. Standardisation must account for the fact that data sources will vary across different national and sub-national applications.

Governments should be engaged early on in implementation of the framework so that the results are officially recognized, and it can align with government processes and gain support from donors. Given that sanitation is a public as well as private good, and is unlikely to advance without strong government engagement and support, it is of key importance that the government is involved at an early stage of framework application in a country. The government should be free to choose what role it wants to play – as owner, leader, contributor, funder, etc. – and invite partners to play supporting roles too. The timing and outputs of the tool should also be aligned with government policies, strategies, planning and budgeting cycles, and monitoring and evaluation. Furthermore, engagement across multiple sectors is vital, including ministries or departments responsible for sanitation, health, environment, private sector development, planning and finance.

In conclusion, given the large number of tools that cover both the sanitation enabling environment and sanitation market assessments, it is important that a new tool – if it is to be developed – must provide new information that adds to knowledge already provided through existing frameworks.

# References


AMCOW, African Development Bank, EU Water Initiative, World Bank and UNDP (2006). Getting Africa on track to meet the MDGs on water and sanitation: a status overview of sixteen African countries. October 2006. Link.

AMCOW, African Development Bank and World Bank (2012). Can Africa Afford to Miss the Sanitation MDG Target? A review of the sanitation and hygiene status in 32 countries. A joint initiative by AMCOW, AfDB, the World Bank, and WSP. Link.

Ansoff (1957). Ansoff Matrix: Market (or product) development strategies. Link.

Auerbach D, Rosenberg R, Poulet I, Kibuthult S (2020). It Does Not Take A Unicorn: How Cities Can Attract Private Sector Participation In Addressing The Urban Sanitation Crisis. Sanergy. February 2020. Link.

BCG (1970). Growth-Share Matrix. Boston Consulting Group. Link.

Bergerson JA, Brandt A, Cresko J, Carbajales-Dale M, et al (2019). Life Cycle Assessment of Emerging Technologies. Evaluation Techniques at Different Stages of Market and Technical Maturity. Journal of Industrial Ecology 24: 11-25. Link.

Blank, SG (2005). The Four Steps to the Epiphany: Successful Strategies for Products That Win. K & S Ranch. Link.

BMGF (The Bill & Melinda Gates Foundation), Emory University, Plan International, The University of Leeds, WaterAid, the World Bank (2016). Citywide Inclusive Sanitation (CWIS): A Call to Action. Link.

BMGF (The Bill & Melinda Gates Foundation) (2019). Transforming Sanitation: Commercializing Partnership Opportunities [version 1; not peer reviewed]. Gates Open Res 2019, 3:1687. Link.

Chapin J, Pedi D, Jenkins M (2013). Sanitation Supply Chains and Business Models: How can we improve market systems? UNICEF Sanitation Marketing Learning Series, Guidance Note 3. Link.

Dalberg (2017). Market Insights for the Reinvented Toilet: Findings from Urban Kenya and Nigeria. Sanitation Technology Platform (STeP). Bill & Melinda Gates Foundation. Link.

Foro IN, Tuppinger J (2023). Proposal of a Holistic Maturity Model for Technology, Market and Founders. Journal of Entrepreneurship and Business Innovation 10:1. Link.

Frost and Sullivan (2020). Sanitation Economy Value Chain Opportunity Assessment. Commissioned by the Water Research Commission. August 2020. Link.

FSG (2016). Market Insights for the Reinvented Toilet, India. Sanitation Technology Platform (STeP). Bill & Melinda Gates Foundation. Link.

Gartner (2003). Gartner Hype Cycle. Link.

Gensch R, Tillett W (2019). Strengthening Sanitation and Hygiene in the WASH Systems Conceptual Framework. Discussion Paper. Welthungerhilfe: Bonn, Germany. Link.

GOAL Sierra Leone (2011). Sanitation market assessment, Freetown, Sierre Leone. Assessment of Faecal Sludge Emptying Services. Funded by UK-DFID. Link.

Hutton G, Varughese M (2016). Costs of meeting the 2030 Sustainable Development Agenda targets on drinking water, sanitation and hygiene. World Bank, Water and Sanitation Program: Washington DC. Link.

Hutton G, Varughese M (2020). Global and Regional Costs of Achieving Universal Access to Sanitation to Meet SDG Target 6.2. UNICEF: New York. Link.

iDE (no date). Measuring Market Resilience to Shocks and Stressors. Link.

Khan A (2016). Innovationsmanagement in der Energiewirtschaft - Entwicklung eines Reifegradmodells. Wiesbaden: Springer Gabler. Link.

Kraemer P, Balachandran BR, Haran S, Pai R, Prochaska CF, Sachdeva R (2010). City-wide Planning for Decentralized Basic Needs Services (DBNS): A Methodology to Plan Decentralized Sanitation Solutions at City Level. Water Practice & Technology Vol 5 No 4. IWA Publishing, London. Link.

Linden A, Fenn J (2003). Strategic Analysis Report. Gartner Research. © 2003 Gartner, Inc. and/or its Affiliates. Link.

Lüthi C, Morel A, Tilley E, Ulrich L (2011) Community-Led Urban Environmental Sanitation (CLUES). Swiss Federal Institute of Aquatic Science and Technology (Eawag), WSSCC, UN-HABITAT. Link.

Moore, GA (1991). Crossing the Chasm: Marketing and Selling High-Tech Products to Mainstream Customers. Revised 1999 and 2004. Link.

Mumssen Y, Saltiel G, Kingdom B (2018). Aligning Institutions and Incentives for Sustainable Water Supply and Sanitation Services. Report of the Water Supply and Sanitation Global Solutions Group, Water Global Practice. Washington, D.C.: World Bank. May 2018. Link.

OECD (2015). Principles on Water Governance. Centre for Entrepreneurship, SMEs, Regions and Cities. Adopted by the OECD Regional Development Policy Committee on 11 May 2015. Link. Initiative website: Link.

OECD (2018). Implementing the OECD Principles on Water Governance: Indicator Framework and Evolving Practices, OECD Publishing, Paris. Link. Initiative website: Link.

OECD (2021a). Water Governance in Asia-Pacific. Link.

OECD (2021b). Water Governance in African Cities. Link.

OECD (2022). Guide on How To Assess Water Governance. Link.

OECD (2024). Handbook of What Works: Solutions for the local implementation of the Water Governance Principles. Link.

Parkinson J, Lüthi C, Walther D (2014). Sanitation 21: A Planning Framework for Improving City-wide Sanitation Services. The International Water Association (IWA), The Swiss Federal Institute of Aquatic Science and Technology (Eawag) and The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). Link.

Porter ME (1979). How Competitive Forces Shape Strategy." Harvard Business Review. March-April 1979. pp. 137-145. Link.

Porter ME (1980). Competitive Strategy: Techniques for Analyzing Industries and Competitors. New York: Free Press. Republished in 1998. Link.

Rammstedt, B. (2010). Reliabilität, Validität, Objektivität. In C. Wolf, & H. Best (Eds.), Handbuch der sozialwissenschaftlichen Datenanalyse (pp. 239-258). Wiesbaden: VS Verlag für Sozialwissenschaften. Link.

Rogers E (1962). Diffusion of Innovations. Fifth edition. Simon & Shuster. Link.

RTI International (2015). Public School Toilets: An Indian Market Landscape. PPT Presentation. Bill & Melinda Gates Foundation. November 2015. Link.

RTI International (2016). Business Model Assessment of Sewage Treatment Plants. Secondary and Primary Data Capture, India. PPT Presentation. Bill & Melinda Gates Foundation. Link.

RTI International (2019a). India Water Market Analysis. PPT Presentation. Bill & Melinda Gates Foundation. Link.

RTI International (2019b). Techno-Economic Analysis of Model Fecal Fecal-Sludge Management and Sewer Sewer-Based Systems in India. PPT Presentation. Stantec and Bill & Melinda Gates Foundation. Link.

Sanitation and Hygiene Fund (2022). Sanitation Economy and Menstrual Hygiene Marketplace Assessment. UNOPS, Geneva, Switzerland. Reports for Benin, Kenya, Nigeria, Sierra Leone and Uganda.

Sanitation and Hygiene Fund (2023). From Human Waste to Prosperity: The Sanitation Economy. Geneva: UNOPS. Link.

Schoebitz L, Andriessen N, Bollier S, Bassan M, Strande L (2016). Market Driven Approach for Selection of Faecal Sludge Treatment Products. Eawag: Swiss Federal Institute of Aquatic Science and Techno logy. Dübendorf, Switzerland. June 2016. Link.

SIWI and UNICEF (2016). Enabling environment and water governance. A Conceptual Framework. SIWI, UNDP Water Governance Facility, UNICEF. March 2016. Link.

SWA (2018). The Collaborative Behaviours Country Profiles – Understanding their role in the SWA framework and suggestions on how they can be used. Link.

SWA (2016, 2020). Collaborative Behaviours - Country Profiles. Link.

Toilet Board Coalition (2017). Introducing the Sanitation Economy. November 2017. Link.

Toilet Board Coalition (2019). Scaling Up the Sanitation Economy 2020-2025. November 2019. Link.

UNICEF (2014). Key Findings of a Sanitation Supply Chains Study in Eastern and Southern Africa. WASH Technical Brief. December 2014. Link.

UNICEF (2020a). Review of the WASH Bottleneck Analysis Tool (BAT): Improving the WASH BAT as a tool for planning and partnering for sustainability. New York: UNICEF. Authors: Henning Göransson Sandberg, Ricard Gine, Antoine Delepiere, Alejandro Jimenez, Guy Hutton. Link. See WASH BAT website: https://www.washbat.org/map/

UNICEF (2020b). Guidance on Market-Based Sanitation. New York: UNICEF. Link.

UNICEF (2022): The UNICEF Game Plan to Reach Safely Managed Sanitation 2022–2030. New York: UNICEF. Link.

UNICEF Sanitation Marketing Learning Series. Link.

USAID (2018). Scaling Market Based Sanitation: Desk Review on Market-Based Rural Sanitation Development Programs. Washington, DC., USAID. Water, Sanitation, and Hygiene Partnerships and Learning for Sustainability (WASHPaLS) Project. Link.

USAID (2018). Rapid water and sanitation market assessment (Mozambique). December 2018. Link.

USAID (2025). Supplemental market-based sanitation indicators. WASHPaLS #2.

USAID (2021a). PREVENT Project: Private sector landscape analysis report (PSLAR). March, 2021. Link.

USAID (2021b). How to Assess the Size of a Sanitation Market and Segment It. USAID, Pro-WASH, PSI, Practica Foundation. December 2021. Link.

Vegter D, van Hillegersberg J, Olthaar M (2020). Supply Chains in Circular Business Models: Processes and Performance Objectives. Resources, Conservation and Recycling 162: 105046. Link.

World Bank (2011). Domestic Private Sector Participation in Peru: Sanitation Markets at the Bottom of the Pyramid A Win-Win Scenario for Government, the Private Sector, and Communities. Water and Sanitation Program Learning Note. Link.

World Bank (2012). What Does It Take to Scale Up Rural Sanitation? Perez E, Cardosi J, Coombes Y, Devine J, Grossman A, Kullmann C et al. Washington, D.C.: World Bank, Water and Sanitation Program. Link.

World Bank (2015a). Turning Finance into Services for the Future: A Regional Synthesis of the Service Delivery Assessments for Water Supply and Sanitation in East Asia and the Pacific. Washington, D.C.: World Bank, Water and Sanitation Programme. Link.

World Bank (2015b). Monitoring Country Progress in Drinking Water and Sanitation. Regional synthesis: Central America and Dominican Republic. Washington, D.C.: World Bank, Water and Sanitation Programme. Link.

World Bank (2016). Public-Private Dialogue (PPD): Stakeholder Mapping Toolkit. Washington, D.C.: World Bank. Link.

World Bank (2017). Reducing Inequalities in Water Supply, Sanitation, and Hygiene in the Era of the Sustainable Development Goals: Synthesis Report of the WASH Poverty Diagnostic Initiative. Washington, D.C.: World Bank. Link.

World Bank (2022). "Water Supply and Sanitation Policies, Institutions, and Regulation: Adapting to a Changing World—Synthesis Report." World Bank, Washington, DC. Link.

WHO (2000). Water Supply and Sanitation Sector Report Year 2000. Africa Regional Assessment. Geneva: World Health Organization. Link.

WHO (2022). UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) Strategy: 2023–2030. Geneva: World Health Organization. Link

WHO (2023). Using data collected through GLAAS: Making the most of the GLAAS Process. UN-Water GLAAS. Link.

WHO (2022). Strong systems and sound investments: evidence on and key insights into accelerating progress on sanitation, drinking-water and hygiene. The UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) 2022 report. Link.

WHO and UNICEF (2023). Progress on household drinking water, sanitation and hygiene 2000–2022: special focus on gender. WHO/UNICEF Joint Monitoring Programme. New York: United Nations Children's Fund (UNICEF) and World Health Organization (WHO). Link.

WIN, CoST, IDB (2023). A Framework for Integrity in Infrastructure Planning (FIIP). A data tool to improve early-stage water infrastructure planning and decision-making. Water Integrity Brief, July 2023. Link.


SHF
The Sanitation & Hygiene Fund