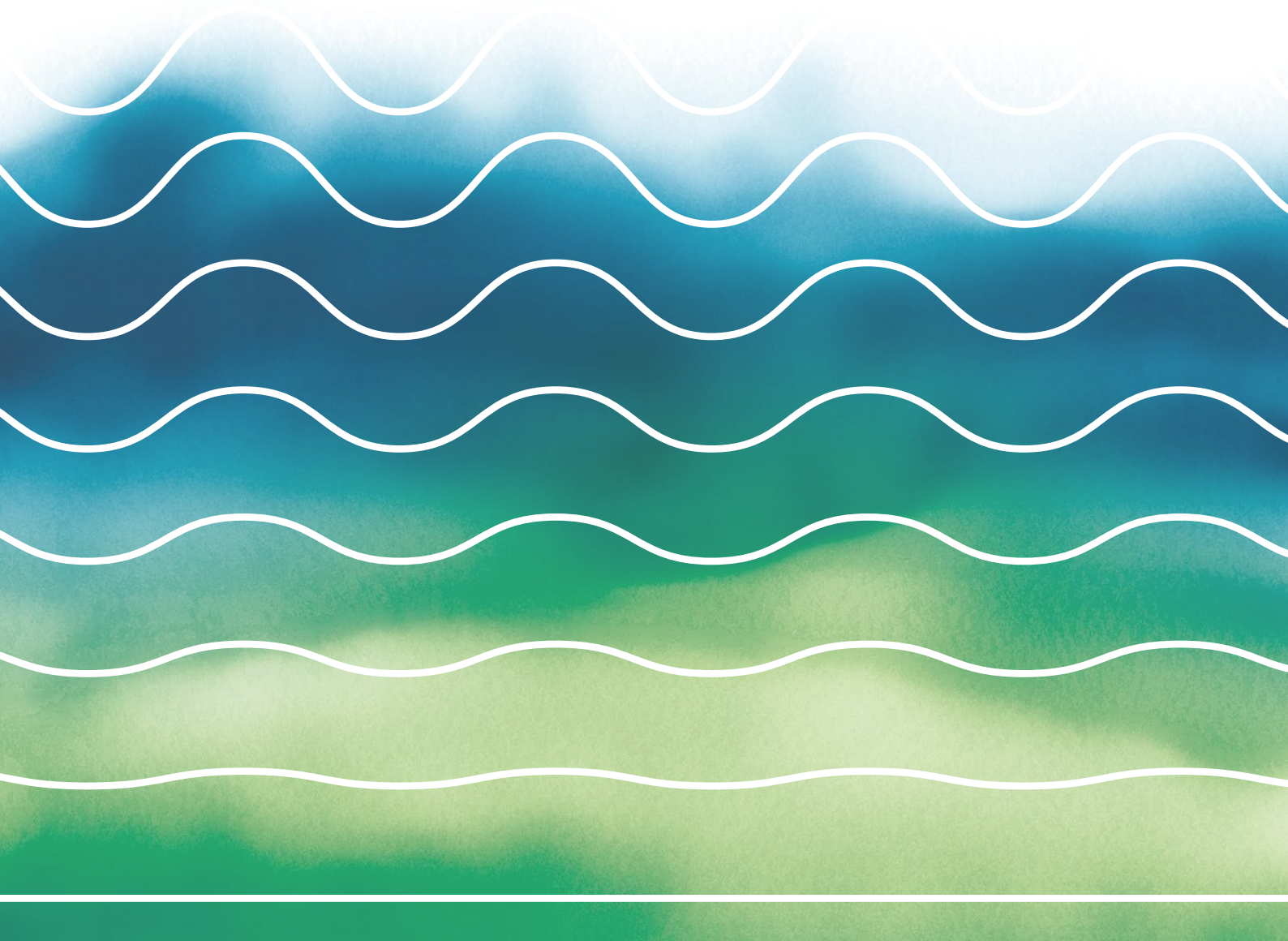


WHO GLOBAL WATER, SANITATION AND HYGIENE ANNUAL REPORT 2018



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Acronyms and abbreviations

ADB	Asian Development Bank
AFD	Agence Française de Développement
AMCOW	African Ministers' Council on Water
AMR	antimicrobial resistance
ASPG	Africa Sanitation Policy Guidelines
CR-WSP	climate resilient water safety planning
DFAT	Australian Department of Foreign Trade and Industry
DFID	Department for International Development, United Kingdom of Great Britain and Northern Ireland
ESA	external support agency
EC	European Commission
FTE	full time equivalent
GDWQ	Guidelines for Drinking-Water Quality
GEMI	Inter-agency initiative focused on monitoring Sustainable Development Goal 6
GLAAS	UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water
GPW 13	WHO Thirteenth General Programme of Work 2019–2023
GTFCC	WHO-led Global Task Force on Cholera Control
HCF	health care facilities
HWT	Household water treatment
IPC	infection prevention and control
IWA	International Water Association
JMP	WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene
MNCH	maternal, newborn and child health
NGO	nongovernmental organization
NTDs	neglected tropical diseases
PAHO	Pan American Health Organization
PHE	WHO Department for Public Health, Environment and Social Determinants of Health
SSP	sanitation safety planning
SDGs	Sustainable Development Goals
SHINE	Sanitation, Hygiene, Infant Nutrition Efficacy Project
TrackFin	methodology for tracking finance in the WASH sector
UHC	universal health coverage
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WASH	water, sanitation and hygiene
WAPT	WASH Accounts Production Tool
WASHFIT	WASH for Health Facility Improvement Tool
WSP	water safety plan(planning)

WHA	World Health Assembly
WHO	World Health Organization
WSSCC	Water Supply and Sanitation Collaborative Council

Executive summary

An estimated 2 billion people drink water that is faecally contaminated, 4.5 billion people use a sanitation system that does not adequately protect either their family or the downstream community from harm¹, and many vulnerable patients and students suffer from poor access to water, sanitation and hygiene (WASH). Extended burden of disease estimates show that improvements to drinking-water, sanitation, hygiene and water resource management could result in the reduction of almost 10% of the total burden of disease worldwide². However, progress is not yet on track to meet the global aspirations of the Sustainable Development Goals (SDGs) to promote both higher levels of WASH service in the form of well-managed services, and to ensure access to at least basic service levels as part of the “leave no one behind” agenda.

Consequently, WHO has identified safely managed water and safely managed sanitation as high priorities and two of 46 impact targets for which the Organization will be held accountable. The importance of WASH in health care facilities is confirmed by the World Health Assembly Resolution (WHA 72.7)³ approved in May 2019 that mandates WHO “to work with Member States and partners to review, update and implement the global action plan and support Member States in the development of national road maps and targets for safe WASH in health care facilities.”

2018 marked the first year of the implementation of WHO’s 2018–2025 WASH Strategy⁴, outlining WHO’s vision **“to substantially improve health through the safe management of water, sanitation and hygiene services in all settings”**. The strategy aligns WHO WASH work with the SDG framework, objectives presented in the WHO Thirteenth General Programme of Work 2019–2023 (GPW 13)⁵, and WHO’s comparative advantages in WASH.

During 2018, WHO remained focussed on tackling, with its partners, the still unacceptably high WASH-related burden of disease. WHO contributed by publishing norms and guidance that promote evidence-based practices in safe management of water and sanitation, developing guidance and delivering training for improving WASH in health care facilities, engaging in robust global monitoring to mobilize political will, and providing targeted technical assistance to countries through a network of environmental health officers in six regions and over 70 countries. WHO also worked to promote active and meaningful communication and collaboration between health and WASH sectors, emphasizing the most achievable interventions and management approaches.

Acknowledging that attainment of universal access to safely managed WASH is a highly aspirational goal for some countries, WHO and partners continued to work with countries to support the development of relevant and achievable national objectives by decision-makers, and to ensure that progress can be meaningfully measured by country-owned processes.

Process accomplishments during 2018 include greater alignment and efficiencies between country, regional and headquarter levels within WHO, more efficient technical support to countries through use of communication technologies and training collaborations with partners, and significant contributions to common platforms such as the Global Network on Quality Care for Mothers,

¹ <https://washdata.org/sites/default/files/documents/reports/2018-01/JMP-2017-report-final.pdf>

² https://www.who.int/gho/phe/water_sanitation/burden/en/index2.html

³ Resolution WHA 72.7. Water, sanitation and hygiene in health care facilities. In: Seventy-second World Health Assembly, Geneva, 20–28 May 2019. Resolutions and decisions, annexes. Geneva: World Health Organization; in press.

⁴ https://www.who.int/water_sanitation_health/publications/wash-strategy-2018-2025/en/

⁵ Thirteenth General Programme of Work 2019–2023. Geneva: World Health Organization; 2019

Newborns and Children, the Global Task Force on Cholera Control (GTFCC), GEMI and Sanitation and Water for All.

Highlights of 2018 results

- Publication of the WHO Guidelines on Sanitation and Health, the most significant new normative document introduced by WHO WASH since 1958.
- First ever global baseline on WASH in schools (for SDG Target 4.1 with UNICEF)⁶.
- First ever global indicator report on wastewater (for SDG Target 6.3.1 with UN-Habitat)⁷.
- Publication of over 25 normative, monitoring and training documents ranging from specific technical reviews of emerging contaminants in drinking-water to global monitoring reports on access to WASH to updated guidance on tracking WASH funding flows. In addition, WHO contributed to major WASH research papers, websites providing data and information, books and articles. Please see Annex 1 for a full list of 2018 publications.
- Confirmation that 104 countries periodically use WHO's Guidelines for drinking-water quality as a scientific point of departure (as confirmed by a WHO review of national standards⁸).
- Twelve countries⁹ initiated or continued implementation of WHO's Trackfin methodology to track funding to WASH – bringing the cumulative total to 16 – benefitting from technical assistance, a training of trainers and the availability of tailored software.
- Submission of 69 UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) country surveys on the WASH enabling environment, on track to reach the target of at least 100 country survey submissions by 15 February 2019.
- With the Bill & Melinda Gates Foundation, convened a consensus response¹⁰ to three large randomized control trials, of unprecedented scale and cost, which evaluated the impact of WASH interventions on diarrhoea and stunting.
- Enhanced context-specific technical support and collaboration by WHO regions, headquarters and country offices in line with WHO's increased focus on country results through the transformation. For example, 20 countries received in-country technical support on water safety plans (WSPs) in collaboration with partners, 19 countries received trainings on WASH and health care facilities (HCF), 26 countries received technical support on water quality testing and 36 African countries participated in trainings on implementation of the GLAAS survey.

⁶ <https://data.unicef.org/resources/wash-in-schools/>

⁷ https://www.who.int/water_sanitation_health/publications/progress-of-wastewater-treatment/en/

⁸ https://www.who.int/water_sanitation_health/publications/national-regulations-and-standards-for-drinking-water-quality/en/

⁹ Bangladesh, Burkina Faso, Ghana, India, Kenya, Kyrgyzstan, Madagascar, Mali, Mozambique, Nigeria, Senegal, Uganda

¹⁰ In press, 2019 "The Implications of Three Major New Trials for the Effect of Water, Sanitation and Hygiene on Childhood Diarrhea and Stunting - A Consensus Statement", BMC Medicine.

- WHO programmes are increasingly incorporating WASH elements at the political and programmatic levels with concrete WASH and health programme collaborations including on WASH and antimicrobial resistance (AMR), cholera, emergencies, infection prevention and control (IPC), maternal, newborn and child health (MNCH), neglected tropical diseases (NTDs) and polio.
- WHO fully achieved or exceeded 19 of 22 (86%) 2018 output milestones presented in the WASH logframe, and the remaining three output milestones are on course for achievement during 2019.

Strategic context 2018

As part of its SDG monitoring, the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) estimates that 2 billion people drink water that is faecally contaminated and that 4.5 billion people use a sanitation system that does not adequately protect either their family or the downstream community from harm¹¹. Emerging data from WASH in health care facilities and recent data on WASH in schools indicate that many vulnerable patients and students suffer from poor access to WASH. One in four health care facilities lack basic water services and one in five has no sanitation service – impacting 2.0 billion and 1.5 billion people, respectively¹².

Consequently, WHO has identified “safely managed water” and “safely managed sanitation” as high priorities and two of 46 Organization-wide impact targets for which the Organization will be held accountable. WHO’s 13th GPW 2019–2023 describes how the Organization’s work will contribute to the health of three billion: one billion becoming “healthier populations” through multisectoral actions and addressing environmental risk factors and health determinants; one billion benefiting from better emergency preparedness and response; and one billion with universal health coverage (UHC). WASH will be a key element to achieving these targets.

The importance of WASH in health care facilities is confirmed by the United Nations Secretary-General global call to action on WASH in health care facilities issues in March 2018, and the WHA Resolution 72.7 approved with overwhelming support from Member States in May 2019 that mandates the WHO “to work with Member States and partners to review, update and implement the global action plan and support Member States in the development of national road maps and targets for safe WASH in health care facilities.”

The SDGs promote both higher levels of WASH service in the form of well-managed services and are also firm about ensuring access to at least basic service levels as part of the “leave no one behind” agenda. In this regard, WHO’s work on monitoring, both in terms of JMP work on new country estimates and new data on inequalities within countries, and GLAAS evidence around funding to WASH, will provide a sound basis for influencing political will to expand pro-poor prevention and treatment measures.

Early results from the SDG period indicate that most countries with currently less than 99% basic coverage are off track for universal basic access to WASH by 2030. Quantitative data on funding WASH from the GLAAS 2018/19 country survey dataset and Trackfin demonstrate that many “modest” WASH budgets are not even half funded and that the rates of coverage required to meet national WASH targets are exceptionally high. Achieving SDG 6 – and reducing waterborne disease (expressed in SDG Targets 3.3 and 3.9) – will require a step change in investments in WASH and dramatic improvements to the quality of WASH service delivery.

Within the WASH sector a dominant emerging theme is “systems thinking” and “transformative WASH”. Although the terms are not yet well defined, the interpretation draws parallels with more established thinking on health system strengthening – with elements of service delivery, workforce, information systems, essential technologies, financing leadership and governance. This shift is a departure from a more traditional WASH intervention mindset.

¹¹ <https://washdata.org/sites/default/files/documents/reports/2018-01/JMP-2017-report-final.pdf>

¹² WHO/UNICEF. WASH in health care facilities global baseline report 2019.
https://www.who.int/water_sanitation_health/publications/wash-in-health-care-facilities-global-report/en/

Within the health sector, it has been commonplace to acknowledge the importance of WASH as a primary preventive measure but advancing beyond rhetoric to develop concrete WASH collaborations has been a perennial challenge. In 2018, many health programmes, including those focussed on quality care, cholera prevention and control, AMR and NTDs, began actively incorporating WASH elements at political and programmatic levels in response to demands to ensure results are achieved and sustained.

While the world has always accepted that sanitation is good for health, three new high-quality studies¹³ raise important questions about the effectiveness of basic interventions in transitioning to “improved” sanitation. Study results have challenged practitioners to do better and sparked introspection by key WASH stakeholders, raising questions such as: What does this mean for business as usual? Is sanitation a good investment compared to other interventions?

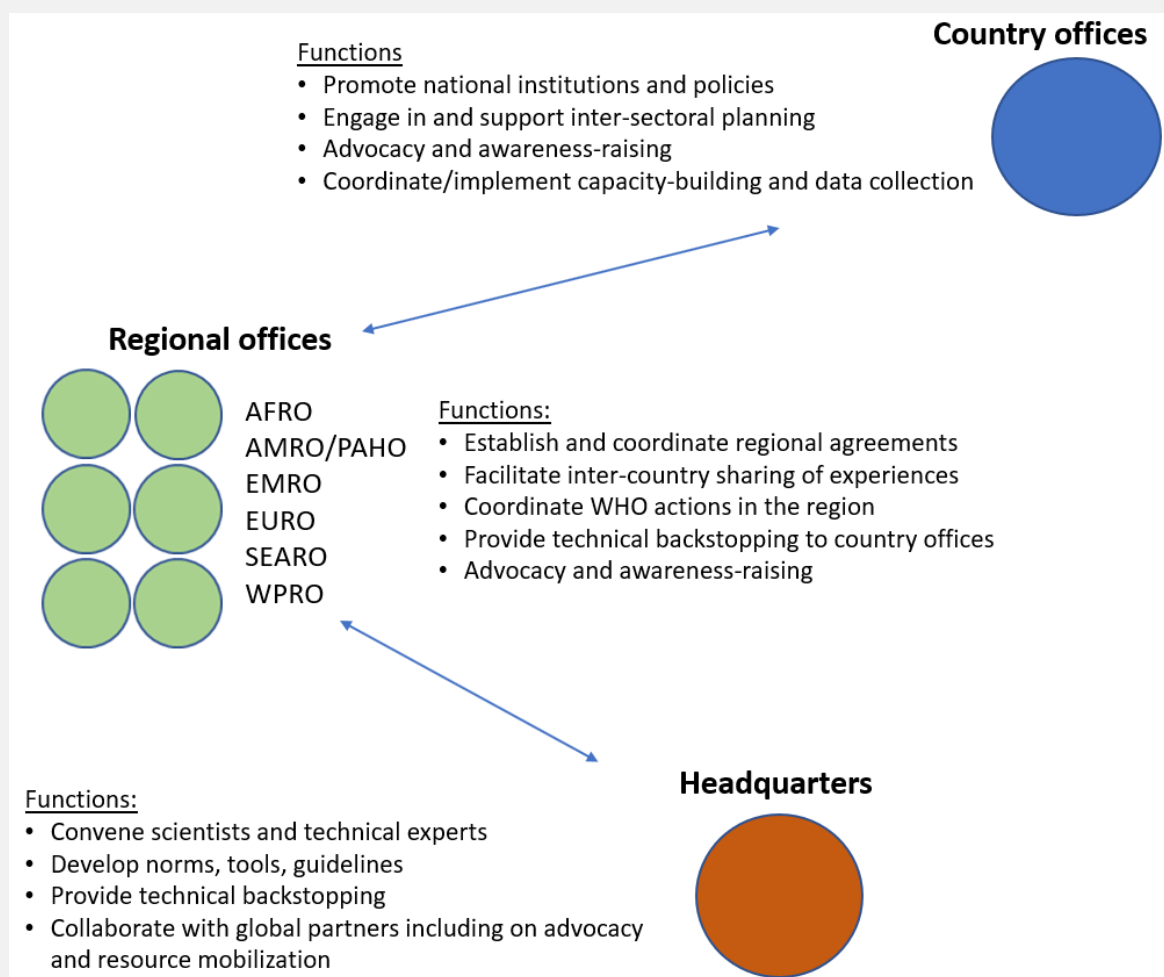
WHO was called upon to shed light on emerging risks, such as those associated with a potential health risk from ingestion of microplastics. Despite scientific uncertainty, these emerging risks continue to generate high public concern.

¹³ WASH Benefits studies in Kenya and Bangladesh, and the Sanitation, Hygiene, Infant Nutrition Efficacy Project (SHINE) in United Republic of Tanzania.

Box 1: WHO work at all levels of the organization

WASH is an example of a WHO priority area of work that has been effectively implemented at country, regional and headquarter level for decades, with each level of the organization uniquely adding value. Headquarters convenes scientists and assembles the best evidence for global norms, tools and guidelines; regional offices establish and coordinate regional agreements, facilitate inter-country sharing of experiences, and along with Headquarters, provide technical backstopping to country offices. Country offices promote strengthening of national WASH institutions, policies and intersectoral planning and collaborate with WHO headquarters and regions, national governments and other stakeholders on capacity-building and data collection.

Historically, multi-level WASH efforts have focused on technical assistance, for example, around the Guidelines for Drinking-Water Quality (GDWQ) to promote and support an extensive programme around enhancing small community water supplies. Since 2004, the Organization has come together to promote WSPs in all regions. This has led to inter-country and inter-regional sharing of experiences, and importantly, allowed for greater communication between users of WHO norms and those revising them, so they can be continually improved. WHO's global strategy 2018–2025 sets forth a framework for action on WASH shared by the whole organization and covers actions on sanitation and hygiene, water, monitoring, WASH in institutions and emerging issues.



Monitoring and measuring impact

2018 marked the first year of the implementation of WHO's 2018–2025 WASH strategy¹⁴, outlining WHO's vision **"to substantially improve health through the safe management of water, sanitation and hygiene services in all settings"**.

The strategy aligns WHO WASH work against the SDG framework, objectives presented in the WHO GPW 13, and WHO's comparative advantages in WASH.

WHO's strategic plan for WASH for 2018–2025 is summarized in an overarching strategic framework confirming underlying principles, strategic approaches and results areas, and the outputs that will contribute to impacts and the overarching vision (see Annex 2). This framework is complemented by a theory of change (see Annex 2), and a separate WHO WASH logical framework for monitoring progress and performance and includes activities and milestones for 2018 and 2019. Milestones for subsequent years will be developed on a biannual basis.

This report describes progress in each of the results areas through a technical narrative and presents quantitative results against the milestones articulated in the logframe. WHO achieved or surpassed 19 of 22 (86%) of 2018 output milestones, and made progress towards remaining output milestones, which are on course for achievement during 2019.

Given the longer timeframe needed to monitor and document results against outcomes, the outcome targets were set starting from 2019. This allows time for meaningful progress and for consolidation and use of data from the GLAAS 2018/19 country surveys as a means of verification. This report therefore presents information on progress made towards these 2019 targets through achievement of 2018 outputs and activities that contribute to outcomes. The annual report on 2019 results will provide information on achievement against outcome targets as well as against the WHO GPW 13 indicators.

WHO's corporate impact framework will monitor and document progress against WHO's GPW 13, including on WASH and WASH-related targets beginning in 2019. This includes access to safely managed drinking-water, sanitation and hygiene in households, and additional targets associated with UHC linked to improving WASH in health care facilities. WHO's work on WASH will also contribute to GPW 13 targets related to AMR (deaths from sepsis caused by resistant organisms), health emergencies (number of persons in fragile settings with access to essential health services) and UHC (reduction of maternal mortality and newborns and children) through its cross-cutting WASH and health programme linkages work. Moreover, other indicators, largely linked to essential health services, child and maternal mortality and AMR, will require improving water, sanitation and energy, especially in health care facilities. Within the WHO impact framework, WASH targets have been established to be pursued collectively by Member States and partners.

WHO's work on WASH is consistent with the vision of its transformation to a more effective and efficient organization, delivering results at country level, and promoting healthier populations by addressing the determinants of health.

¹⁴ https://www.who.int/water_sanitation_health/publications/wash-strategy-2018-2025/en/

Key accomplishments against the strategic plan

Results area: drinking-water quality and safety

OUTPUT 1 – DRINKING-WATER: Risk management approaches based on up-to-date guidelines for drinking-water are available and disseminated to national and international WASH partners		
Output 1 indicators	Target 2018	Results 2018
1.1 Health-based guidelines that respond to Member State needs and emerging issues published and disseminated.	2 health-based supporting resources published	Achieved: 2 publications
1.2 Supporting resources and/or training materials on regulations, (climate resilient) WSPs and surveillance for drinking-water developed and disseminated to facilitate implementation of the Guidelines.	4 publications	Achieved: 4 publications + 1 submitted
1.3 Results from WHO International Scheme to evaluate household water treatment and safe storage documented and disseminated.	Round II report published; Final evaluation protocols and training package	Delayed and on track for 2019
1.4 Number of countries receiving technical support for implementation of the Guidelines.	Technical support to at least 6 countries	Surpassed: 24 countries

During 2018, WHO developed and published, including with partners, normative and supporting resources on drinking-water quality including WSP case studies and outcomes from an impact assessment on WSP implementation¹⁵, and practical guidance to support the development of drinking-water regulations based on the GDWQ. Significant effort has been invested in developing the second addendum to the 4th edition of the GDWQ that covers an update of the microbial treatment tables (with accompanying systematic reviews), microbial fact sheets (with literature reviews for over 30 pathogens, many in collaboration with the sanitation team) and chemical background documents (with updated or new risk assessments for over 10 chemicals). The second addendum is on track for publication in late 2019 or early 2020.

In parallel, WHO continued to intensely promote WSPs, the centre-piece recommendation of its GDWQ, through technical support including auditing of WSPs and direct training using expert consultants, training of partners and facilitating peer-to-peer exchanges. During 2018, WHO provided technical assistance to 24 countries, and in addition reached researchers and practitioners from academia, government and non-government organizations through a capacity-building workshop on climate resilient water safety planning (CR-WSP) held at the Water Engineering and Development Centre international conference in Kenya. WHO also supported an International Water Association (IWA) global webinar on CR-WSP in 2018, reaching over 100 participants, including representatives from the African region.

There is increasing evidence that even “light touch” technical assistance on WSPs – conducting regional/national advocacy workshops and/or basic training with follow-on technical backstop

¹⁵ Kumpel E, Delaire C, Peletz R, Kisiangani J, Rinehold A, De France J, Sutherland D, Khush R (2018). Measuring the Impacts of Water Safety Plans in the Asia-Pacific Region. Int. J. Environ. Res. Public Health 15(6). <https://www.mdpi.com/1660-4601/15/6/1223/htm>

support – results in changed thinking among both national government and water suppliers, which are key drivers for WSP programme development. See Box 2 for an example from Liberia.

Box 2: Building WSP momentum in Liberia

A CR-WSP advocacy and technical orientation workshop was held in April 2017. From this initial small investment, significant national interest was generated which kick-started country-driven pursuance of a national WSP programme, including the establishment of a national WSP task group. From this “light-touch” support, three CR-WSPs were initiated by the National Water Authority in urban water supply systems with very limited funding from WHO. WHO continued to provide remote technical backstop support in 2018 to maintain momentum and further develop these nascent CR-WSPs towards future implementation.



Hazard identification in the field during CR-WSP training in Buchanan, Liberia.

In addition, this work led to a national discussion between the Liberian WHO and UNICEF county offices to coordinate WSP activities in the urban and rural subsectors.

Developing and maintaining strong working relationships with key implementation partners has supported WSP efforts at global, regional and national levels, ensuring harmonized approaches, accelerating uptake and leveraging of experience and funds to support WSP activities from site to programme level. Examples from 2018 includes:

- WHO and UNICEF country-level partnerships in Ghana, Liberia, Madagascar, Mali and Senegal.
- WHO and IWA global level collaborative support to WSP activities for urban utilities with a focus on CR-WSP through two global webinars and coordination in Ghana, Ethiopia, Kenya and Senegal.
- Joint workshops with UNICEF or IWA at high-profile international events (Water & Health Conference at the University of North Carolina and the IWA World Water Congress in Tokyo) to promote our partnerships and present a combined, coherent vision for WSP development and implementation globally.
- Partnerships with the Asian Development Bank (ADB) that resulted in integration of WSPs into ADB's urban water projects in West Bengal.
- In Viet Nam, collaboration with the Finnish Water Forum to implement WSPs, and with the Australian Water Association to build capacity for water quality risk management.

Awareness of WSPs is high, with WSPs being implemented in over 90 countries and in every region of the world. Many countries have introduced policy or regulatory instruments promoting or requiring WSPs.¹⁶ The concrete benefits of WSP impacts continue to be documented, including the results of one study commissioned by WHO¹⁷. This study, which assessed WSP effectiveness from 99 water supply systems in 12 countries in the Asia-Pacific region, found statistically significant changes in operations and management practices, stakeholder communications related to water safety, unaccounted-for water, water quality testing activities, and monitoring of consumer satisfaction. Further, a collection of case studies published by WHO and IWA in 2018¹⁸ presents several examples of cost savings through operational efficiencies realized through WSP implementation, including an annual savings of US\$ 603 000 reported by a large water supplier in the Philippines. The case studies also offer evidence of numerous additional WSP-related benefits, including better microbial water quality, less treatment plant down time and fewer disinfection plant failures.

As part of WHO's normative programme of work on drinking-water quality, WHO has continued its independent evaluation of the performance of household water treatment (HWT) technologies to inform decision makers, implementers and users. Effective HWT technologies can reduce the risk of diarrhoeal disease by as much as 61%¹⁹ in populations at risk of waterborne disease when used appropriately.

During 2018, WHO tested 20 products during Round II of the International Scheme to Evaluate HWT Technologies, bringing the total to 30 products including several disinfectants commonly procured for responding to cholera outbreaks and emergencies. In parallel, WHO continued work on simplified evaluation protocols to increase efficiency and adaptability for testing in low-resource settings. The Round II report and protocols will be published in the second quarter of 2019. Testing and reporting was delayed in Round II due, in part, to additional investigations into the various factors that impact chlorine demand and effectiveness and implications for testing as well as use as a primary treatment method in the field. This work resulted in a greater appreciation for the need for technical oversight and monitoring of chlorine residuals and recommendation to apply chlorine, as much as possible, in more centralized chlorine treatment approaches.

Perhaps the greatest value of the Scheme lies in ensuring that products that provide limited or no pathogen removal are kept off the market. Of the 30 products tested, four fail to meet WHO performance criteria²⁰, and result in little to no microbial removal. National and regional technical workshops, including one held in 2018 for five countries²¹, have increased awareness of the health-based performance criteria of the Scheme and evaluation results among governments. WHO is increasingly being called upon to provide guidance to procuring agencies, including in the context of emergency response and cholera outbreaks.

¹⁶ A full status report of WSP implementation is available at: http://www.who.int/water_sanitation_health/publications/global-status-report-on-water-safety-plans/en/

¹⁷ <https://www.mdpi.com/1660-4601/15/6/1223/htm>

¹⁸ The collection of case studies is available at: https://www.who.int/water_sanitation_health/publications/strengthening-om-thru-water-safety-planning/en/

¹⁹ Wolf J, Hunter PR, Freeman MC, Cumming O, Clasen T, Bartram J, et al. (2018). Impact of drinking water, sanitation and handwashing with soap on childhood diarrhoeal disease: updated meta-analysis and meta-regression. *Tropical Medicine & International Health* 23(5):508–25. <http://dx.doi.org/10.1111/tmi.13051> pmid: 29537671

²⁰ To view the latest testing results, protocols and training materials visit: https://www.who.int/water_sanitation_health/water-quality/household/scheme-household-water-treatment/en/

²¹ Ethiopia, Ghana, Liberia, United Republic of Tanzania, Zambia.

Results area: sanitation and wastewater



The UN Secretary-General and Prime Minister of India look on as the WHO Deputy Director-General announces the launch of the WHO Guidelines on Sanitation and Health at the Mahatma Gandhi International Sanitation Convention, 1 Oct 2018.

OUTPUT 2 – SANITATION AND WASTEWATER: Risk management approaches based on up-to-date guidelines for sanitation, safe use of wastewater, excreta and greywater, and recreational water are available with tools to support implementation and disseminated to national and international WASH partners

Output 2 indicators	Target 2018	Results 2018
2.1 Evidence-based WHO Sanitation and Health Guidelines published and disseminated to countries and end users.	Guidelines published	Achieved: Published 1 October
2.2 Supporting materials published and regional training capacity established for Sanitation Safety Planning (SSP) and Safe Use of Wastewater, Excreta and Greywater in Agriculture and Aquaculture.	Supporting materials completed	Achieved
2.3 Guidelines on recreational water quality updated and publicly available.	Final WHO advice to the European Commission (EC) Bathing Water Directive	Achieved: Recommendations + publication
2.4 Number of countries receiving technical support for implementation of WHO sanitation guidance (through technical cooperation or regional trainings).	No target for 2018	Plans for WHO Guidelines outreach with partners

Since the announcement in Stockholm in 2013 that WHO would create a dedicated team on sanitation in response to the Director Secretary-General's call to action, WHO has built a strong strategic, normative and monitoring basis for engagement on sanitation. 2018 saw the culmination of this major push on sanitation resulting in five new publications, a high profile for sanitation within the new WHO GPW 13 architecture and strengthened partnerships for implementation. Table 1 below summarizes new sanitation programme elements since the call to action.

Table 1: New sanitation programme elements

Strategy →	Evidence →	Guidelines →	Monitoring →	Tools →	Country engagement
WHO WASH Strategy (2018–2025)	2018 WASH burden of disease reflects community- level coverage and safely managed sanitation FAECI paper synthesizes WASH randomized control trial findings in terms of faecal load in the environment [WASH Benefits and SHINE position paper] Climate resilient sanitation initiated	First ever WHO Sanitation and Health Guidelines (2018)	SDG 6.2.1 extended to safely managed sanitation covering the full service chain	SSP Manuals in 7 languages, face-to-face training package and online overview Sanitation inspection forms for sanitation systems (beta version 2018) [Sanitation related pathogen factsheets under development]	Guidelines on Sanitation and Health launch and global sensitization Case studies and strategic advice to inform Africa Sanitation Policy Guidelines (ASPG)
		[WHO Guidelines on Safe Use of Wastewater, Excreta and Greywater in Agriculture and Aquaculture (2006)]	SDG 6.3 on ambient water quality and safe treatment and use of wastewater included for the first time in global monitoring. First ever indicator report for 6.3.1 on safe treatment and use (2018)		Country readiness for SSP scaling through training in four regions and implementation in 12 countries SSP at policy level in EC legislation Initiation of climate resilient sanitation safety planning in Nepal
	Recreational water evidence updated Expert meeting and outline for 2020 update	[WHO Guidelines on safe recreational water environments Vol 1 (2009), Vol 2 (2006)]	WHO on steering committee for GEMS-Water and collaborating with UN Environment Programme on SDG 6.3.2 and the world water quality assessment	[Recreational water safety plan outlined in draft 2020 recreational water guidelines]	Recommendations to the EC on updates to the bathing water directive (2018) Technical advice for major events (e.g Olympic games)

WHO's focus for 2018 has been to continue building a strong base of sanitation and health evidence and tools, contributing to 'systems thinking' for sanitation, providing capacity development to SSP implementation in countries and engaging with implementing partners to integrate core concepts into their programmes.

Sanitation and health evidence - The 2018 publication and launch of the [WHO Guidelines on Sanitation and Health](#), based on a comprehensive review of evidence and wide expert and stakeholder consultation, was ideally timed to bring clarity to and aid interpretation of the WASH Benefits and SHINE studies. WHO research²² in response and the new F-diagram in the Guidelines, suggested that high prevailing faecal contamination might explain the poor effectiveness of interventions.

Strengthening national systems - The emerging theme of "systems thinking" within the WASH sector draws parallels with more established thinking on health system strengthening that covers elements

²² <https://www.sciencedirect.com/science/article/pii/S1438463918307028?via%3Dihub>

of service delivery, workforce, information systems, essential technologies, financing leadership and governance. This shift is a departure from a more traditional sanitation intervention mindset.

WHO contributed to systems thinking in sanitation by leading the shift from *facilities* to *services* in the SDG indicators so that the term “safely managed” encompasses the overall system. The WHO Guidelines on Sanitation and Health also point to the need for coordinated management of risks along the whole sanitation chain to achieve health gains and include guidance on system elements in Chapter 4 and related overarching recommendations. A key priority moving forward will be making sure that risk assessment and management by the sector are key system components as the systems thinking concept is further defined.

Local level sanitation risk assessment and management - Programme activities during 2018 completed preparation for the scaling phase of SSP, which aimed to establish a global base of capacity, partnerships and country experience to support SSP scale-up. The initiative now includes seven experienced multi-lingual trainers and SSP manuals in eight languages²³ (Farsi and Japanese translations added in 2018). Trainers developed a flexible training package used in four trainings during 2018 to support implementation in at least 12 countries building on partnerships with large implementers (ADB, World Bank, WaterAid, Container Based Sanitation Alliance). SSP is also incorporated in the 2018 [resource recovery from waste business model catalogue](#) developed under the WHO/International Water Management Institute resource recovery and reuse project.

SSP has been showcased at major international conferences, including Stockholm Water Week and the Water & Health Conference at the University of North Carolina, and as a result, independent adoption of SSP has appeared in interesting and unexpected places during 2018. For example, wastewater use in the Islamic Republic of Iran, an online SSP tool in Finland and an emergency SSP by BORDA in Iraq.

Ownership and uptake of SSP is now established in all WHO regions and a range of training hubs (IHE Delft Institute for Water Education; Asian Institute of Technology; Centre for Science and Environment, India; University of Jordan; ETRAS (Pan American Health Organization (PAHO) regional technical team in water and sanitation)) and implementing partners (ADB, EC, European Protocol on Water and Health, World Bank, GIZ (German development agency), and IWA). SSP implementation at policy level is being pursued partly at county level but also via engagement with regional institution such as the ABD and EC. In May 2018, a [proposal for European Commission legislation](#) on safe use of wastewater includes SSP, and will serve as an excellent example for other regions and countries to adapt.

Future work on SSP scaling will be done together with dissemination and implementation of the WHO Guidelines on Sanitation and Health.

Recreational water safety - In June 2018, WHO published an updated global evidence review and [WHO recommendations](#) for updates to the EC’s bathing water directive. WHO also convened an expert group meeting to finalize advice to the EC and at the same time developed a revised outline and workplan to complete a revision of the [WHO recreational water guidelines for coastal and fresh water](#) by 2020.

²³ www.who.int/water_sanitation_health/publications/ssp-manual/en/

Results area: WASH in health care facilities (HCF)

OUTPUT 3 - WASH IN HEALTH PROGRAMMES: Health and other programmes are aware of the importance of WASH and have access to up-to-date technical materials for their programming and policies.		
Output indicators for WASH in HCF	Target 2018	Results 2018
3.1 Global workplan to improve WASH in HCF, responding to Secretary General's Call to Action, is updated and disseminated.	Updated global workplan	Achieved
3.2 Number of countries receiving technical assistance and field support on WASH/Health for improving quality of care and WASH in HCF based on WASH-FIT tools and WHO standards.	8 countries	Surpassed: 12 countries

The United Nations Secretary-General issued a global call to action on WASH in HCF in March 2018. WHO and UNICEF, in collaboration with 35 partners and with leadership from over 30 early-adopter countries, have developed a global work plan on WASH in health care facilities²⁴ to implement the Secretary General's call to action.²⁵ The effort promotes a vision in which every health care facility has functional WASH services and practices that enable essential, quality health services for everyone, everywhere. Global targets and metrics for progress have been established and will be verified through monitoring of SDG 3 (health) and SDG 6 (safe water and sanitation). Specifically, the global targets call for at least 50% of all health care facilities globally and in each region to have basic WASH services by 2022, 80% by 2025 and 100% by 2030. In countries where universal basic WASH services have already been achieved, targets call for higher levels of WASH services to be defined and monitored by 2022 and achieved in 80% of these countries by 2030. A joint WHO/UNICEF document to be launched in the second quarter of 2019 will outline eight practical steps for achieving targets for WASH in HCF including establishing national plans and targets, improving infrastructure and maintenance and engaging communities. The WHO/UNICEF JMP will regularly report on progress, with the first global baseline report to be launched in 2019 in time to inform WHA discussions.

WHO Member States coordinated during 2018 to prepare for and lay the foundation for the WHA Resolution on WASH and Health Care Facilities²⁶. The resolution calls for greater attention, investments and cross-sectoral collaboration to address WASH in health care facilities as a fundamental aspect of providing safe and quality care.

Improvements to WASH in health care facilities are supported by guidance, standards and tools published during 2018 including [Standards for improving the quality of care for child and young adolescents](#), [Handbook for national quality policy and strategy](#), and the second edition of the [WHO/UNICEF Water and Sanitation for Health Improvement Tool \(WASH FIT\)](#).

²⁴ WHO/UNICEF, 2019. Water, sanitation and hygiene in health care facilities. Practical steps to achieve universal access to quality care. https://www.who.int/water_sanitation_health/publications/wash-in-health-care-facilities/en/

²⁵ Meeting the challenge: responding to the UN Secretary General's Call on WASH in health care facilities. Meeting report. Geneva: World Health Organization/UNICEF; 2018 (https://www.who.int/water_sanitation_health/facilities/en/, accessed 2 November 2018).

²⁶ Member States of the WHO Executive Board (EB) showed their overwhelming support for the draft resolution on water, sanitation and hygiene in health care facilities [EB144/CONF./2Rev.1](#) and the accompanying report [EB144/30](#). Formal adoption of the resolution will be discussed by all Member States at the 2019 World Health Assembly in May.

WASH FIT guides multisectoral teams through a continuous cycle of assessing and prioritizing risks, defining and implementing improvements, and continually monitoring progress. The WASH FIT guide is available in English, Arabic, French, Russian and Spanish, and training materials are currently available in English, French, Russian and Lao. In addition, a [mobile application](#) has been developed to facilitate tracking of progress and sharing of lessons among team members and facilities.

Partners have used and adapted WASH FIT with minimal support in a range of regions and settings such as Iraq, Malawi, South Sudan and Timor-Leste. Box 5 below describes the autonomous implementation and impact of WASH FIT in South Sudan.

Box 3: WASH FIT in South Sudan

Message to WHO WASH from Emilia Mmbando Raila, Chief Environment Engineer
United Nations Mission in South Sudan (Former national WASH FIT trainer in Liberia)

Greetings from Juba. I have no words to thank you for the WASH FIT/Safety plan tool that my team and I call "a genius tool."

When I joined the United Nations Mission in South Sudan to lead the environment team there was no proper entry point to ensure environmentally friendly military and civilian camps. Immediately after settling in, I oriented my team and the operational players on the (WASH FIT) concept, and we tailored the tool to capture the environmental parameters of concern.

...We were able to reach out over 87 camps (Over 20,000 individuals) with the worst environmental condition. We went ahead and produced the quantitative inspection tool and evaluated the camps accordingly through green camp award competition. This led to significant improvements in healthcare waste management, water and wastewater management and energy efficiency, that made us smile.

WASH FIT is being implemented in 15 countries²⁷, with three new countries (Bangladesh, Kenya and Tajikistan) launching WASH FIT during 2018. Four additional countries (Bhutan, Indonesia, Philippines and Viet Nam) began national policy processes and WASH FIT adaptation developments in 2018 to prepare for national trainings and launching in 2019. This work is part of a five-year (2018–2022) project funded by the Australian Department of Foreign Trade and Industry (DFAT). During 2018 WHO provided in-country technical support on WASH in HCF to 12 countries and provided remote technical support to an additional five countries²⁸.

WHO work on WASH in health care facilities at all levels of the organization is strengthened by strategic partnerships. One example is collaboration with the Global Network on Quality Care for Mothers, Newborns and Children during 2018 that included a joint mission in Ethiopia, adapting elements of WASH FIT into their training and monitoring and leading a webinar on WASH in HCF as part of their training series.

²⁷ Bangladesh, Cambodia, Chad, Ethiopia, Ghana, Indonesia, Kenya, Lao People's Democratic Republic, Liberia, Madagascar, Mali, Nepal, South Sudan, Tajikistan, United Republic of Tanzania.

²⁸ In-country support: Bangladesh, Cambodia, Ethiopia, Ghana, Indonesia, Lao People's Democratic Republic, Liberia, Madagascar, Mali, Philippines, Tajikistan, United Republic of Tanzania. Remote support: Bhutan, Guinea, Kenya, Nepal, South Sudan.

Results area: integration of WASH with other health programmes

OUTPUT 3 - WASH IN HEALTH PROGRAMMES: Health and other programmes are aware of the importance of WASH and have access to up-to-date technical materials for their programming and policies.		
Output indicator	Target 2018	Results 2018
3.3 Number of countries receiving technical assistance related to health care waste management and integration with WASH and IPC efforts.	4 countries	Surpassed: 9 countries
3.5 WASH technical information for outbreaks and emergency response published and disseminated.	Information on web	Achieved
3.6 Number of countries receiving technical support to integrate WASH with cholera prevention and control efforts.	2 countries	Surpassed: 5 countries
3.7 Technical resources to support implementation of the WASH and NTD Strategy developed and disseminated.	WASH and NTD toolkit published	Achieved: Completed 2018, publication Jan 2019

In 2018, many health programmes are incorporating WASH elements at the political and programmatic levels in response to demands for ensuring that results are achieved and sustained. This has led to concrete collaborations across WHO including on AMR, cholera, health systems, IPCs, maternal and child health, NTDs, and polio.

WHO led integration of WASH into health programmes through its WASH and NTD strategy and new tools to support practical application, for example, the WASH and NTD toolkit. The [WASH and Health working together: A 'how to' guide for neglected tropical disease programmes](#) was launched on 30 January to coincide with the 7th anniversary celebration of the London Declaration on NTDs. An interactive web version will be available soon. WHO is promoting use of the toolkit through WHO and partner networks such as the NTD nongovernmental organization (NGO) network that assisted in developing the toolkit. In parallel WHO is also contributing WASH elements to global post-2020 roadmap targets for NTDs so that WASH is embedded at the highest political level as well as at the practical level as described in the toolkit.

WHO also worked on IPC in health care and specifically on sepsis (response to the WHA70.7 resolution on improving the prevention, diagnosis and clinical management of sepsis) and development of guidance on the implementation of the 2017 guidelines for the prevention and control of carbapenem-resistant *Enterobacteriaceae*, *Acinetobacter baumannii* and *Pseudomonas aeruginosa* in health care facilities. Technical assistance was provided to nine countries (Ghana, Lao People's Democratic Republic, Liberia, Madagascar, Mali, Philippines, Tajikistan, United Republic of Tanzania, Zambia) to improve health care waste management.

WHO provided technical support to integrate WASH with cholera prevention and control efforts by contributing to technical guidance on WASH and IPC in cholera treatment centers²⁹ and making information on WASH in health care facilities for outbreaks and emergency response available on line and through technical backstopping to the WHO emergencies team in five countries (Bangladesh, Democratic Republic of the Congo, Madagascar, Mali, United Republic of Tanzania).

²⁹ This guidance is being finalized by the GTFCC for publication by June 2019 here: <https://www.who.int/cholera/en/>

Results area: emerging issues

OUTPUT 3 - WASH IN HEALTH PROGRAMMES: Health and other programmes are aware of the importance of WASH and have access to up-to-date technical materials for their programming and policies.

Output indicator for AMR	Target 2018	Results 2018
3.4 Policy brief and action plan (derived from technical inputs on surveillance and research) on sanitation and wastewater barriers to combat AMR infections published and disseminated.	Policy brief and action plan published	Delayed and on track for 2019

Note: There is no specific output indicator related to climate change as this work is integrated into work in results area 1 on drinking-water quality and safety and area 2 on sanitation.

WASH and antimicrobial resistance (AMR)

Inadequate WASH and environmental reservoirs play significant roles at many parts of the lifecycle of antimicrobial production, use and disposal contributing to the emergence and spread of AMR. Safe water supply and sanitation, especially in health care facilities is an important measure for the prevention of infection to reduce avoidable use of antimicrobials. Wastewater treatment from all sources is also needed to limit emission of resistant bacteria, genes and residues to water bodies where they may contribute to the development and transmission of resistance in environmental media thereby increasing the likelihood of reinfection of humans and animals with resistant strains.

Throughout 2018, WHO worked to clarify the extent to which environmental reservoirs play a role in AMR, the relevance and importance of WASH and what immediate policy steps can be taken. The WASH team contributed to the WHO Advisory Group on Integrated Surveillance of AMR on the project protocol of the so-called Tricycle project, with special emphasis on analyzing residues in wastewater. WHO contributions to other AMR processes and documents include:

- Substantial input on WASH-related issues into the [UN Interagency Coordinating Group on AMR discussion paper on optimized use of antimicrobials](#), ensuring that WASH will be included in the final recommendations to the UN General Assembly 2019.
- Inputs to WASH section of the [Self-assessment questionnaire 2018–2019 for global monitoring of country progress on addressing antimicrobial resistance](#).
- Contributions to the [EC Director-General Environment strategy on pharmaceuticals in the environment](#), OECD's development of policies against pharmaceutical residues in freshwater, the Global Framework for Development and Stewardship to Combat AMR, WHO guidance on preventing AMR in health care facilities and to WHO/FAO Codex Intergovernmental Task Force on Antimicrobial Resistance.

Development of a policy briefing and scientific background paper on WASH as a means to mitigate AMR progressed during 2018, with publication delayed to 2019 due to an expansion of WASH topics covered by these documents. AMR and WASH-related topics covered include wastewater treatment (both municipal and pharmaceutical), natural degradation of antimicrobials in water, drinking-water treatment, infection prevention and control in health care facilities, AMR and WASH cost and financing, and reuse of human waste in food production.

WASH and climate change

In 2018, WHO initiated work on climate-resilient sanitation under a broader climate change and health initiative. Initial activities included a scoping paper and an expert and stakeholder meeting in March dedicated to sanitation and climate change, engagement of sanitation expertise in the wider strategic advisory function for climate change and health, and initiation of climate resilient sanitation pilots in Nepal. Over the last year(s), WHO has adopted a climate-resilient lens to the WSP approach, undertaking CR- WSP activities in Bangladesh (see Box 3), Ethiopia and beyond.

Box 4: CR-WSPs in Bangladesh

Climate variability and change is having a profound impact on public health in Bangladesh. To build resilience to these impacts, CR-WSPs were developed in 20 pilot locations from 2015 to 2018 with support from the Department for International Development, United Kingdom of Great Britain and Northern Ireland (DFID). Mitigation measures ranged from catchment management/source protection to safe household-level storage interventions.



CR-WSP audits in late 2018 identified many low-cost, low-technology improvements that contribute to a more climate resilient water supply can be made locally. Audit results will inform future scale-up activities by the Department of Public Health Engineering and the development of national guidance for CR-WSPs.

During 2018, WHO led two climate-resilient rural WSP trainings – one at the Water Engineering and Development Centre conference and the other with UNICEF – reaching 17 African countries. CR-WSP activities were also conducted with IWA, as described in the drinking-water quality and safety section. Indeed, climate resilience has been a strong entry-point to kick-start WSP activities, arising from country need to ensure that drinking-water supplies are resilient to climate impacts on water quality and quantity. Work in this sphere in resource-limited settings has highlighted the importance of assessing all threats within the systems (both climate and non-climate) and prioritizing action for those risks deemed to be most significant to ensure that current and shorter-term climate impacts are prioritized (using locally-appropriate incremental improvement strategies) before managing longer-term future issues. Supporting local WSP teams to access and interpret complex climate information currently represents a challenge to developing effective CR-WSPs. Efforts are now underway to develop appropriate guidance for water suppliers, governments and other stakeholders on how to utilize climatic and hydrological information to support CR-WSP activities.

Microplastics

Microplastics in the environment has generated intense public concern, questions to WHO from Member States and recurring queries from the media, particularly as a result of recent studies and media coverage reporting the detection of microplastics in both tap water and bottled water. Recognizing this interest, WHO initiated an evidence review on microplastics in drinking-water and plans to publish a report assessing the potential risks to human health in 2019. This is informed by a WHO commissioned assessment of the quality of microplastic occurrence studies in drinking-water, freshwater and wastewater, which was published in March 2019.

Results area: WASH evidence and monitoring

OUTPUT 4 – JMP: Robust and up-to-date evidence base of country, regional and global progress on WASH and wastewater services in different settings is produced and publicly accessible		
Output indicator	Target 2018	Results 2018
4.1 Global, regional and national progress on household WASH services is documented and publicly available.	No target for 2018	Progress towards 2019 publication
4.2 Global, regional and national progress on access to basic WASH services in Health Care Facilities and in schools is documented and publicly available.	Schools report published	Achieved
4.3 Number of countries receiving WHO technical support to strengthen monitoring of WASH services.	8 countries	Surpassed: 15 countries
4.4 Report(s) on global, regional and national progress on safe treatment and reuse of wastewater published and disseminated.	Report published	Achieved

During 2018, WHO through the WHO and UNICEF JMP continued to provide reliable data on WASH and wastewater services that inform global and regional fora and reports such as the High-Level Political Forum in July, and the SDG 6 synthesis report. Importantly, JMP data mobilize political will to address WASH issues. For example, following review of JMP WASH statistics, President Muhammadu Buhari of Nigeria declared a state of emergency on Nigeria's water supply, sanitation and hygiene sector. He directed government at all levels to redouble efforts on WASH and to implement the National WASH Action Plan to end open defecation by 2025.

In the context of universal access to WASH, the JMP committed to reporting on WASH in schools and WASH in health care facilities during the SDG period. This work commenced in 2015 with JMP expert groups advising on the development of standardized indicators for WASH services in these institutions and recommendations on how these indicators could be monitored. In 2018 the JMP published a short set of recommended 'core questions' and indicators for WASH in schools (in [English](#), [French](#), [Spanish](#), [Russian](#) and [Arabic](#)) and WASH in health care facilities (in [English](#), [French](#), [Spanish](#), [Russian](#) and [Arabic](#)). These were followed in August by the publication of the first global report on WASH in schools (in [English](#), [French](#), [Spanish](#), [Russian](#) and [Arabic](#)). At the end of 2018, draft estimates of WASH in health care facilities were sent out to countries for review.

As part of its role as custodian agencies for monitoring WASH outcome indicators under SDG Targets 6.1 and 6.2, in 2018 WHO and UNICEF through the JMP published a [Methodological Note](#) describing in detail the methods used to produce the 2017 SDG baseline report. This document increases the transparency of JMP methods and helps partners understand exactly how JMP estimates are produced from national statistics.

WHO together with UN-Habitat also published the [SDG 6.3.1 indicator report](#) on “proportion of wastewater safely treated” describing the monitoring methodology developed and tested in consultation with wastewater experts, national sector experts and statistical authorities and harmonized with the International Recommendations for Water Statistics and established regional monitoring mechanisms. The report also presents preliminary estimates for domestic wastewater for 79 mostly high- and middle-income countries and includes supplementary data on safe use of wastewater. Separate files can be downloaded for each country showing data sources, methods and assumptions applied to generate estimates.

In addition to focused work on monitoring, WHO has undertaken activities in Madagascar, Mali and Senegal to support the national governments’ efforts to incorporate the SDGs into their national plans. In Senegal, the focus was on preparing a baseline survey for WASH, which includes water quality testing. In Mali, support was provided to the National Directorate of Water on the development of a national drinking-water plan that includes elements of the SDGs. In Madagascar, support focused on preparations for SDG 6 and developing regional budget sectoral plans.

The JMP water quality testing module was implemented in several countries in 2018 as part of household surveys, with field work started or completed in 12 countries (Algeria, Fiji, Gambia, Georgia, Guinea-Bissau, Iraq, Kiribati, Lesotho, Madagascar, Mongolia, Suriname and Tunisia). In addition, independent sub-national surveys were implemented in four provinces of Pakistan (Balochistan, Islamabad, Punjab and Sindh) and informal settlements in Yangon, Myanmar. Technical support was provided to a further 12 countries (Bangladesh, Central African Republic, Chad, Dominican Republic, Guyana, Honduras, Malawi, Nepal, Trinidad and Tobago, Turks and Caicos, United Republic of Tanzania and Zimbabwe) that plan to implement water quality surveys in 2019. Final reports were published from five surveys which were conducted in 2017 (Afghanistan, Democratic People’s Republic of Korea, Lao People’s Democratic Republic, Nigeria and Sierra Leone). A video of the water quality testing module application in Afghanistan is available on the [JMP website](#).

Support on monitoring was provided to all regions during 2018, including through participation at events like the South Asian conference on sanitation (SACOSAN VII), African Ministers’ Council on Water (AMCOW) SDG monitoring, Middle East SDG monitoring, and the PAHO Symposium.

OUTPUT 5 – GLAAS: Robust and up-to-date evidence base on WASH enabling environment (inputs, processes, finance) is produced and publicly accessible		
Output indicator	Target 2018	Results 2018
5.1 National, regional and global data on WASH enabling environment are documented and publicly available.	Data from 60/100 countries; External Support Agency (ESA) survey outreach to at least 60 ESAs	Achieved: Data from 69 countries by end 2018; ESA surveys sent to 65 ESAs
5.2 Information on national WASH policies, plans and targets including alignment with SDGs developed and publicly available.	In-depth analysis on 7 countries	Partially achieved and on target for 2019 – In-depth analysis on 5 countries
5.3 Number of countries implementing TrackFin methodology.	7 countries continue implementation; 5 countries newly implementing	Achieved: 7 continued or completed + 6 new countries or new cycles

WHO through the UN Water GLAAS launched the 2018/2019 GLAAS cycle in early 2018 with revisions to both the GLAAS [country](#) and [ESA](#) surveys to reflect the focus on national policies, plans and targets. The GLAAS team worked closely with regions and the sanitation, JMP, WASH in healthcare facilities and drinking-water quality teams to ensure that GLAAS data align with monitoring needs. The GLAAS country survey was released in June 2018 along with guidance materials including [informational modules](#) in English and French and detailed [guidance on the survey questions](#) in English, French, Arabic, Spanish, Russian, Portuguese and Chinese. WHO offices in all regions provided capacity building, technical support and advocacy to support implementation through training workshops and webinars. In addition, WHO, IRC and Aguaconsult jointly organized two training workshops on GLAAS and the GLAAS survey in Africa with representatives from 36 countries and three partners³⁰. By the end of 2018, 69 countries had submitted surveys, and the target of 100 countries was surpassed in early 2019.

WHO convened a meeting of development partners in October to collaborate on improvements to the GLAAS ESA survey including reducing the number of questions and including new topics such as leveraged financing. The GLAAS ESA survey was released in November.

Final products from the last GLAAS cycle – the remaining 2016/2017 country highlights in French, English, Spanish and Portuguese – were finalized during 2018 in consultation with countries. A total of 106 GLAAS country highlights from 2016/2017 are available [on line](#). Work towards GLAAS 2019 products during 2018 included development of new templates for GLAAS country and ESA highlights and a draft report outline shared with selected partners for inputs.

While there is growing evidence of use of GLAAS data by countries and by ESAs (see Box 7 below for examples, and Annex 3 for additional information), during 2018 WHO increased its support to data use through advocacy and commitment to rapid release of country- and agency-specific data summaries. WHO will release GLAAS country and ESA highlights in the first half of 2019, prior to publication of the full report in August 2019, to facilitate use of data in country and global planning and policy processes.

³⁰ The Water Supply and Sanitation Collaborative Council (WSSCC), Sanitation and Water for All and WaterAid.

Box 5: Use of GLAAS data by countries and ESAs

GLAAS data for SDG 6 country reporting and for monitoring progress – GLAAS survey data from questions A14 and D9 provide specific information needed for country reporting on SDG 6a and 6b. For countries without an established mechanism for monitoring progress, GLAAS data provide information about policies and targets, monitoring, human resources and funding for reporting. In Serbia during the 2018 process, the National Statistical Office and SDG 6 National Focal Points could access reporting data that has not previously been available to them.

GLAAS data as reference for establishing a new sanitation unit in Botswana and a national sanitation strategy in Namibia – During review of the GLAAS 2018 data in a national workshop, Botswana recognized critical gaps related to sanitation. Using GLAAS data in conjunction with the WHO Sanitation Guidelines, the government established a new sanitation division, updating the department name to 'Department of Water and Sanitation Affairs'. Similarly, gaps in sanitation highlighted through GLAAS 2018 data resulted in a stronger and more inclusive process for developing Namibia's new sanitation strategy, which will now reference the WHO Guidelines and include SSP, financing mechanisms, faecal sludge management and the service chain –all of which were previously omitted.

GLAAS data used in country joint sector reviews – Many countries have indicated that GLAAS data are used to identify gaps and as a basis for prioritizing resources. In some countries, the GLAAS survey represents the only 'joint review' for the WASH sector.

GLAAS data used by donors to prioritize activities in countries and to inform programming – During 2018 meetings including a WASH donor roundtable at World Water Week in Stockholm, WHO WASH donors including Agence Française de Développement (AFD), Swedish International Cooperation Agency (SIDA), UNICEF, UN-Water and USAID, confirmed the use of GLAAS data to inform allocations and programmes.

WHO launched work in 2018 supported by the Bill & Melinda Gates Foundation to strengthen national water and sanitation policies, plans and targets through better assessment and monitoring, and analysis of how countries are considering elements of SDG 6. In complement to the GLAAS 2018/2019 cycle on national WASH policies, plans and targets, WHO developed a case study methodology and outline with a focus on urban sanitation, and proceeded with in-depth analyses in seven countries. Five country analyses were completed during 2018, and seven final country case studies on national WASH policies, plans and targets will be released during 2019, with summary information included in the GLAAS 2019 report. WHO also made important contributions to work led by AMCOW on development of Africa sanitation policy guidelines (ASPG) including participation in consultative meetings through membership in the ASPG Expert Committee, supporting advocacy about the ASPG including co-facilitating a session at Africa Water Week, promoting alignment with the WHO Sanitation Guidelines and providing strategic input to documents.

As co-custodian for monitoring SDG 6.a and 6.b, WHO GLAAS submitted data and storylines to the UN Statistical Division for global SDG reporting, continued collaboration with OECD on data for SDG 6.a, and took an active role in drafting key sections of the UN Water [SDG 6 Synthesis Report](#) in collaboration with JMP, UN Environment Programme and UNESCO as part of the Integrated Monitoring Initiative. An exploratory analysis to broaden the scope of reporting for Target 6.a was undertaken in 2018 to be followed by consultation with key stakeholders and donors. In addition, several rounds of consultation with experts in community participation took place as part of the Target 6.b in-depth study. Findings from the in-depth study will be published in 2019.

During 2018, WHO continued efforts to improve the amount and quality of WASH financial data through TrackFin implementation. Three new countries initiated TrackFin (Bangladesh, Kyrgyzstan and Mozambique), three countries initiated new TrackFin cycles (Kenya - 2nd cycle, Madagascar - 2nd cycle, Mali - 3rd cycle) and seven countries (Ghana, India, Kenya, Madagascar, Mali, Senegal and Uganda) continued TrackFin implementation and developed national TrackFin reports and/or WASH accounts. To continue developing country capacity in WASH financing and TrackFin, WHO improved TrackFin training materials including updates to the [TrackFin Guidance Document](#) in English, French, Portuguese and Russian, and provided in-country expert technical support in Mali, Madagascar, Senegal and Uganda and distance support to all implementing countries.

WHO supported development of a software tool, the WASH Accounts Production Tool (WAPT), to facilitate compilation and analyses of data and generation of WASH accounts indicators and tables by countries. The WAPT is available in English, French, Portuguese and Russian and was launched in February 2018 at a TrackFin workshop in Kenya implemented in partnership with USAID's WASH-FIN and AMCOW. This workshop brought together government officials from nine countries that are implementing TrackFin and partners at national, regional and global levels that are supporting the process to share results and experiences. This was followed by a WAPT training workshop in May in Senegal for four francophone countries to build capacity around TrackFin methodology and the WAPT, and to generate national WASH accounts and key indicators using the WAPT. In August, WHO established an online TrackFin Community of Practice platform for posting country WASH accounts and documents and providing a discussion forum for methodological and other issues.

Countries are increasingly using TrackFin data to inform national processes such as joint sector reviews, with Burkina Faso, Mali, Madagascar and Uganda presenting data to inform reviews during 2018. For all countries implementing TrackFin, compiling information and data to develop national WASH accounts has enhanced collaboration amongst actors (different ministries and levels of government, development partners, NGOs, private sector) and across the multiple sectors engaged in WASH activities. Countries that have generated WASH accounts using the TrackFin methodology have benefited from an improved understanding of funding flows in the WASH sector, enabling budget allocations across the sector that align with desired results (for example, the Ministry of Water can use WASH accounts and financial data to make a business case to the Finance Ministry), and better positioning and information for effective fundraising with development partners.

OUTPUT 6 - BURDEN OF DISEASE: Estimates of diarrhoeal and other diseases attributable to WASH are updated and publicly accessible		
Output indicator	Target 2018	Results 2018
6.1 Global report on disease burden from WASH accessible online.	Up-to-date burden of disease estimates, at least 1 publication.	Achieved: Dataset on WHO website, 2 publications

During 2018, WHO continued to regularly update the [WHO dataset](#) on the burden of disease attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe WASH), and contributed to two articles on burden of disease from WASH: [Impact of drinking water, sanitation and handwashing with soap on childhood diarrhoeal disease: updated meta-analysis and meta-regression](#), and [A Faecal Contamination Index for interpreting heterogeneous diarrhoea impacts of water, sanitation and hygiene interventions and overall, regional and country estimates of community sanitation coverage with a focus on low- and middle-income countries](#).

WHO also produced the complete first draft of a comprehensive report on disease burden from WASH, which is undergoing an extensive review process. The report will be published during 2019.

Progress towards outcomes/impact

Programmatic OUTCOME 1: National and international WASH and health programmes, regulations and initiatives are based on normative guidance produced by WHO. Risk-based approaches are adopted at national level.		
Outcome 1 indicators	Target 2018	Results 2018
1.1 Number of countries with water safety planning policies (using risk-based approaches) (GPW 13 language).	No target for 2018	On track for 2019 target of 60 countries ³¹
1.2 Number of countries that are implementing a) WHO sanitation guidelines and b) sanitation safety planning (using risk-based approaches) where uptake is directly supported by WHO.	No target for 2018	SSP uptake is on track, WHO Guidelines released Oct 2018
1.3 Evidence of international partners integrating WHO guidelines/information in their programming approaches.	Examples from countries and partners	Achieved

WHO continues to be an objective and respected source of international WASH guidelines, standards and normative information; authoritative technical guidance on water quality management, sanitation and wastewater; and WASH policies and regulations. During 2018, WHO WASH published over 15 new or updated normative documents including [Guidelines on sanitation and health](#), [Developing drinking-water quality regulations and standards](#), [WHO recommendations on scientific, analytical and epidemiological developments relevant to bathing water quality in the Bathing Water Directive \(2006/7/EC\)](#), [Alternative drinking-water disinfectants](#) and [Management of radioactivity in drinking-water](#), complemented by training and support materials for application of norms such as the updated [Water and sanitation for health facility improvement tool \(WASH FIT\)](#). Please see Annex 1 for a full list.

In parallel to its work on developing normative guidelines and supporting document, WHO also focused on dissemination of information, providing technical assistance to implement and integrate guidance into national systems, and strengthening collaboration with international WASH partners. Since WHO is not itself an implementing agency, international partner integration of WHO guidelines and information in their programmes, and active collaboration by WHO with international partners on guidance development and technical support, is essential to achieving impacts

During 2018 WHO used anecdotal evidence from WHO WASH team members to monitor progress against outcome indicator 1.3 since limited resources and other priorities precluded a more comprehensive research effort. Even with only anecdotal evidence, the recognition and importance of WHO normative guidelines as established global standards is apparent, with examples of over 30 international WASH partners integrating WHO guidelines, plus other WHO health programmes adapting WHO WASH standards, and many examples of country use of WHO normative guidance and information. Please see Annex 3 for a list of selected 2018 examples.

³¹ Preliminary data from GLAAS 2018/19 suggest that WHO is on track to meet the 2019 target.

Results against outcome indicators 1.1 and 1.2 are being informed by country data from the 2018/2019 GLAAS survey, with this information available in mid-2019. Progress through achievements of related outputs (technical support to countries, publication of guidelines and supporting materials) is presented in the above results sections on drinking-water and on sanitation.

Programmatic OUTCOME 2: National and international WASH and health programmes and initiatives are informed by monitoring data produced by WHO.		
Outcome 2 indicators	Target 2018	Results 2018
2.1 Number of countries that are implementing national standards on WASH in health care facilities.	No target for 2018	On track to meet 2019 target of 40 countries
2.2 Number of countries with national targets in alignment with SDG criteria for safe management of excreta along the sanitation chain. (This language from the GPW 13)	No target for 2018	On track to meet 2019 target of 50 countries
2.3 Number of countries with national targets in alignment with SDG criteria for safe management of drinking-water.	No target for 2018	On track to meet 2019 target of 75 countries
2.4 WASH partner publications, informational materials and websites use WHO-generated WASH data.	Examples from countries and partners	Achieved

Like outcome indicators 1.1 and 1.2 above, progress on outcomes indicators 2.1, 2.2 and 2.3 will be available during 2019 and reported against 2019 targets in the next Annual Report. Progress through achievement of linked outputs is discussed in the relevant results sections above.

During 2018, WHO in conjunction with partners continued to provide a reliable and comprehensive WASH evidence base to inform country policy decisions and WASH resource allocations by countries, partners and donors, and to support national and global SDG monitoring. WHO publications of WASH data and information during 2018 included the [Drinking water, sanitation and hygiene in schools: Global baseline report 2018](#), the first ever comprehensive report on WASH in schools, [Progress of wastewater treatment: Piloting the monitoring methodology and initial findings for SDG 6.3.1](#), [Core questions and indicators for monitoring WASH in health care facilities in the SDGs](#), country highlights on the WASH enabling environment based on data from the 2016/2017 GLAAS country survey and [A global overview of national regulations and standards for drinking-water quality](#). Please see Annex 1 for a complete list of 2018 WHO publications, as well as a list of selected articles co-authored by WHO.

Publication of WHO WASH data help to disseminate information so that it is available and used by WASH and health programmes and initiatives. Use of WASH data and information by countries is evidence of how data can lead to impact by providing information for taking evidence-based policy and programme decisions. Annex 4 provides 2018 examples of WHO WASH data in partner publications and information, and examples of how countries have used WHO WASH data to inform allocation of funds, programme priorities and to identify critical gaps in WASH policies or programmes.

Risk management, operations and value for money

OUTPUT 7 - OPERATIONS: WHO WASH demonstrates organizational excellence through better targeting of resources, effective partnerships, and documented results at country level.		
Output indicator	Target 2018	Results 2018
7.1 Annual publication that captures WHO WASH results including risk management and value for money.	Compile results from 2018 for 2018 Annual Report to be released in 2019	Monitoring towards development of this report.
7.2 Clear roles and responsibilities across three levels of WHO in relation to the WASH strategy and regular updates.	Agreed strategy section with inputs from regions and countries	Achieved: Section 2.2 includes input from regions and countries.

The WHO reform and transformation agenda³² aligns WHO's processes and structures with the "triple billion" targets central to WHO's strategic plan for the next five years: one billion more people benefitting from UHC; one billion more people better protected from health emergencies; and one billion more people enjoying better health and well-being. These updated processes reinforce WHO WASH approaches and operations described in the WHO WASH strategy 2018–2025 by emphasizing coordinated work across programmes and the three levels of the organization and effective internal and external collaboration.

Section 2.2 of the Strategy outlines plans for delivering the WHO WASH strategy including supporting WASH work at all levels of the organization, documenting and monitoring risks and ensuring that operationalization of the strategy offers good value for money.

This first annual report and the accompanying document 'WHO WASH logframe results 2018' are part of these commitments to improved operations and accountability. Regular monitoring of the logframe also helped track risks and assumptions, which supported timely mitigation of risks. In addition, all project proposals include a mandatory risk assessment section, where risks are considered and documented, for subsequent monitoring. Key risk areas from Appendix C of the Strategy are:

- Insufficient government engagement and support to specific WASH activities at country level (such as WASH in HCF, WSPs, GLAAS, TrackFin) due to competing priorities and/or dispersed WASH responsibilities across multiple ministries.
- Limited engagement from other WHO programmes to implement integration of WASH with key programmes (NTDs, IPC, MNCH, nutrition, etc.)
- Insufficient partner engagement and support to specific WASH activities at country level (such as WASH in HCF, WSPs, GLAAS, TrackFin) (due to competing priorities).

These risks were mitigated by WHO during 2018 through advocacy and strategic presentations at global, regional and country meetings³³ as well as cross-programme meetings within WHO,

³² http://apps.who.int/gb/ebwha/pdf_files/EB144/B144_31-en.pdf;

<https://www.who.int/news-room/detail/06-03-2019-who-unveils-sweeping-reforms-in-drive-towards-triple-billion-targets>

³³ For example: SDG 6 synthesis report and final review meeting in February, WASH Futures meeting in March in Australia, AMCOW data validation meeting in March, Regional meeting on the European Protocol on Water and Health in April, South Asia Conference on Sanitation (SACOSAN) in April, Regional Workshop on Monitoring of SDG6 targets on WASH for countries of the WHO Eastern Mediterranean region in July, WEDEC meeting in Kenya in July, Stockholm World Water Week and the UN Water meeting in August, IWA congress in Tokyo in September, Regional meeting on WASH in HCF and Water Quality in Ghana in October, PAHO regional meeting on SDG monitoring in October, Water & Health Conference at the University of North Carolina in October, and Sanitation and Water for All steering committee in December.

responsiveness to requests for technical collaboration from countries and collaboration with partners for WASH activities.

Examples of WHO technical collaboration and capacity building with countries are cited throughout this report, as are examples of collaboration with partners for workshops and training, joint missions to countries, and implementation of WSP, SSP, TrackFin, WASH-FIT and other WASH activities with technical backstopping by all levels of WHO. Resulting government commitment to WASH activities at country level is demonstrated by country implementation of WSP, SSP, TrackFin and WASH-FIT as well as the pending requests from new countries to support their engagement in one or more of these areas of work. The unprecedented number of countries that have participated in the GLAAS 2018/2019 process and submitted country surveys is a further example of the impacts of strong outreach and partner collaboration, as well as work across all levels of WHO with headquarters, regional offices and country offices working together on GLAAS implementation.

To promote work at all levels of the organization during 2018, WHO increased resources for national project officers whose responsibilities include WASH and distributed approximately 50% of WASH activity funding to 63 countries directly and to all six WHO regions (who then also distributed some of these funds to countries). This reflects a progressive improvement in directing scarce resources to support all levels of the Organization, and also helps mitigate programmatic risks associated with insufficient human capacity in WHO regions and countries to participate in and support WASH work. Regular communications between the WHO WASH team at headquarters and WHO regional advisors with responsibility for WASH around WASH activities (for example, monthly calls about GLAAS implementation during 2018) has strengthened collaborative efforts such as the regional WSP training in Rwanda led by the Africa regional advisor with technical backstopping from headquarters. During 2018, WHO country offices mapped priority intervention areas for their country as part of cross-Organization work, which enabled review and mapping of WASH-related work by WHO regional offices and headquarters to identify potential synergies for increasing impacts.

WHO continues to focus on providing value for money through its operations and approaches, focusing on aspects of economy, efficiency and impact. Box 5 below provides 2018 examples of how WHO WASH has realized current (or future) cost savings or cost efficiencies while increasing impacts through integration, collaboration and other approaches. Box 6 below provides examples of 2018 cost savings and cost efficiencies based on an increased focus on value for money approaches for travel and human resources.

For the first time, WHO completed an ESA highlight that is included as Annex 5. The highlight summarizes WHO WASH resources, expenditures, aid priorities and distributions of aid disbursements and WHO's top donors to WASH.

Box 6: 2018 examples of 2018 cost savings/cost efficiencies for WHO WASH

- WHO WASH in HCF standards integrated in quality of care standards for mothers/newborns and paediatrics, vastly increasing outreach of these standards through another programme
- WASH-NTD strategy integrating WASH within other health programmes at WHO, meaning that costs for WASH interventions are part of NTD programming costs.
- Reduced document costs and greater reach through collaboration with other WHO teams on development, publication and dissemination of documents. 2018 examples include Management of radioactivity in drinking-water by WSH and Radiation team, WASH-NTD toolkit with NTD team.
- Development of the WAPT based on another in-house tool (the Health Accounts Production Tool - HAPT) resulted in significant cost and human resource efficiencies, plus facilitates country understanding of the WASH tool based on familiarity with the HAPT.
- Mobilizing the WHO system through our network of six regional offices and 147 country offices (e.g. by advocating for WASH within the country prioritization process, by decentralizing leadership on GLAAS implementation to the regional and country levels) results in cost savings and greater impact.
- The use of WHO sanitation and drinking-water guidelines, WSP and SSP by and with major implementing partners (e.g. WSSCC, UNICEF, GIZ and NGOs) shares costs and increases reach and impact.
- Training national consultants for taking up national and regional training results in lower training costs. Specific 2018 example is the training of national to lead future training in Bangladesh on climate resilient WSPs.
- Delivering monitoring and norms plus country technical assistance as one package in countries saves costs at all levels.
- Combined WSP and SSP implementation brings greater impact and efficiencies of resources. This is underway in Sri Lanka, with requests from Eastern Europe. The best impacts are realized at small community scale.
- JMP research and development to lower cost of water quality testing equipment by 3D printed funnel support and reuse of consumables will lead to significant costs savings at the country level.
- WHO use of local collaborating centres to support work in regions and countries reduces travel and human resource costs and promotes sustainability.
- USAID, IRC UNICEF and other partners have taken up funding and/or implementation support of TrackFin. For example, USAID is supporting TrackFin through WASH-FIN in Kenya and Mozambique, with plans to expand, UNICEF is providing support at the national level including in Ghana and Mali, and IRC is leading TrackFin implementation in Krygyzstan and Uganda.

Box 7: Cost savings/cost efficiencies related to travel and human resources

- Travel savings through 2018 use of webinars (rather than in-person meetings) to provide training and share information including on CR-WSPs (with IWA), Sanitation Guidelines Susana forum, Rural Water Supply Network (RWSP)/JMP, GLAAS training with European region countries.
- Travel savings by sharing resources and presentations with regional and country office staff for representation at meetings, such as the. HWT/Water safety event May 2018 in Colombia.
- Travel savings by reducing the number of WSH travellers to the same meetings (with participating team member(s) covering multiple topics).
- Travel savings by using WHO negotiated hotel rates, waiving business class entitlements on selected trips, staying with friends rather than in hotels.
- Human resources cost savings through ongoing use of qualified external individuals as their cost is approximately one-third the cost of staff. Total external technical expertise contracted during 2018 was equivalent to an estimated 10 full time equivalent (FTE) positions at a cost equivalent of 4 FTEs.
- Human resources cost savings through technical support from Collaborating Centres including to the HWT scheme (.5 FTE) and on chemical aspects of drinking-water (.5 FTE).
- Human resources cost savings through contributions to work by volunteers and interns who are no or very low cost³⁴. During 2018 the WHO WASH unit at headquarters benefitted from contributions by six volunteers or interns, together totalling 2 FTE over the year.
- Maximising existing staff resources by using administrative staff time to review and edit translations when relevant and identifying synergies and avoiding duplicative work by all staff during weekly team meetings.

Expression of thanks

WHO would like to express its appreciation to all partners who collaborate with WHO on achieving joint aims on WASH and health, particularly the Member States who work with us on this agenda.

Sincere gratitude is directed to the ESAs who support the important work described in this report including the Agence Française de Développement (AFD, France), the Bill & Melinda Gates Foundation, the Department for International Development (DFID, United Kingdom of Great Britain and Northern Ireland United Kingdom), the Department of Foreign Affairs and Trade (DFAT, Australia), the Directorate General for International Cooperation (DGIS, The Netherlands), the Federal Ministry of Health, Germany, the Ministry of Health, Labour and Welfare (MHLW, Japan), the Ministry of the Environment and Water Resources, Singapore, the Norwegian Agency for Development Cooperation (NORAD), the Swiss Agency for Development and Cooperation (SDC), the United States Agency for International Development (USAID), the United States Environmental Protection Agency (USEPA) and World Vision International.

Reflections and way forward

Based on the experiences covered in this report, WHO has published a series of reflective pieces – commentaries and insights from the WHO WASH team – on how to improve WASH programming.

³⁴ WHO, corporately, has committed to provide increased financial support to interns through various means. http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_BCONF1-en.pdf

These are available at https://www.who.int/water_sanitation_health/news-events/reflections-series/en/.

Many of the challenges faced in 2018 are associated with the key functions of normative and monitoring work. On norms and guidelines, WHO demands a rigorous, evidence-based approach to inform recommendations. For environmental health generally, and certainly for WASH, it has proved a challenge to establish simple and actionable recommendations, while at the same time respecting the limitations of an incomplete evidence base. Lessons learned include engaging end-users (such as policy-makers, regulators, practitioners) early in the guideline development process and avoiding overemphasis on an academic approach.

The biggest strategic hurdle for monitoring may be to meaningfully communicate country and global progress using the more complex and granular data, indicators and ladders. New JMP and GLAAS analysis present ever more precise data on WASH efforts and coverage – this needs to be buttressed with simple messages to WASH decision-makers.

The challenge for the future is for WHO, together with partners, to facilitate meaningful, step-wise progressive change towards a recommendation that may not be feasible in the near term for a country with limited resources. Therefore, interventions that fall short of an ideal WHO norm should nonetheless be prioritized for discussion with countries as valid interim solutions.

With respect to the WHO WASH targets articulated in its logframe, the vast majority were met, signalling on the surface that these were not overambitious for 2018. However, future targets will need to be carefully considered given the reality that the WHO team at all levels was stretched to capacity in terms of both the number and scope of products and initiatives. Maintaining this pace may not be sustainable.

Through its transformation, WHO has committed itself to strengthen its country offices and respond to a more focused set of country-proposed health topics. Key for the WASH programme is to ensure that the whole WHO system responds to issues of health promotion and disease prevention, and that determinants of health are addressed by non-health sectors like WASH. In its transformation strategy, the GPW 13, WHO has set out three pillars of work, one of which addresses determinants of health.

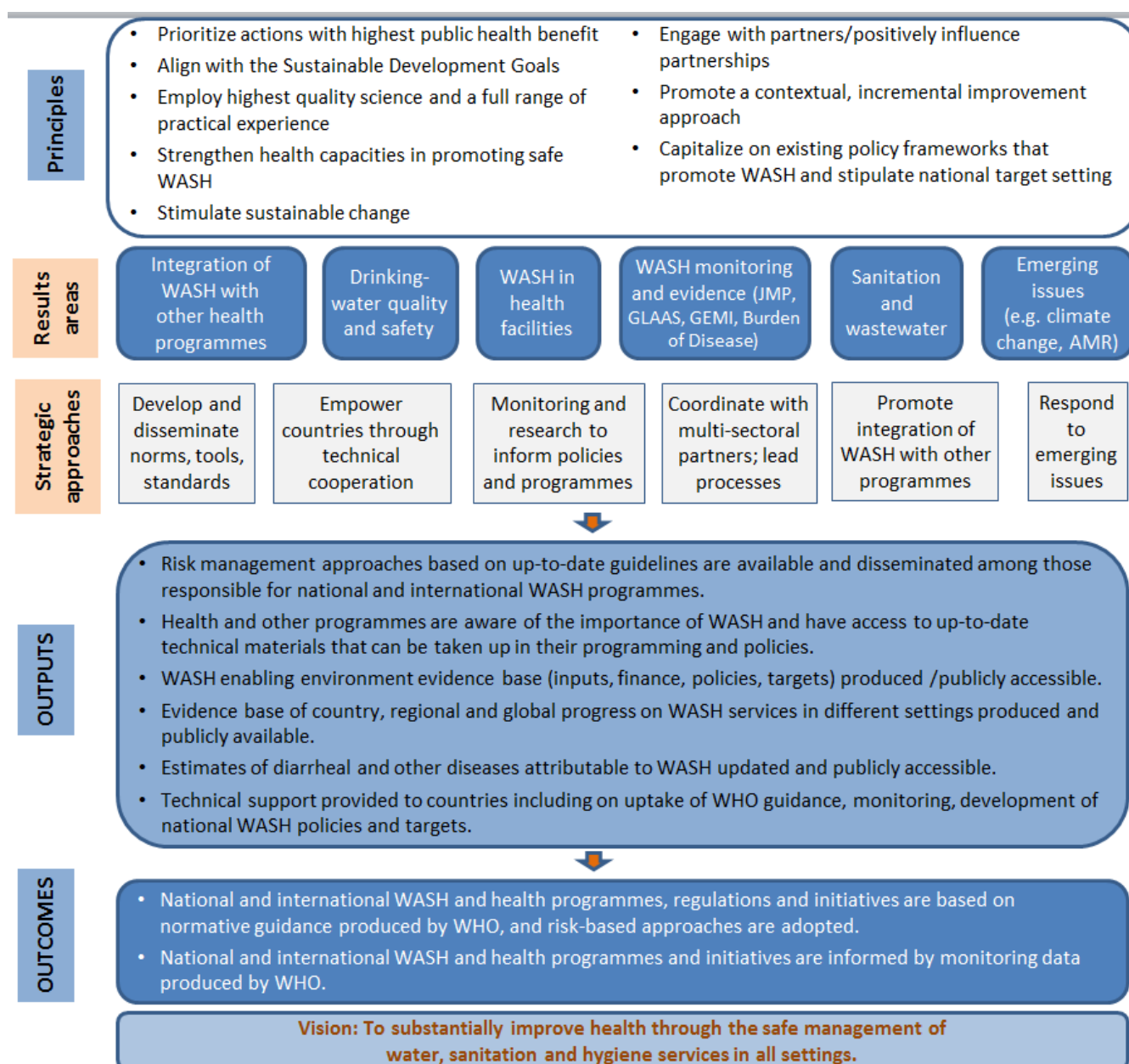
Annex 1 – WHO 2018 WASH publications

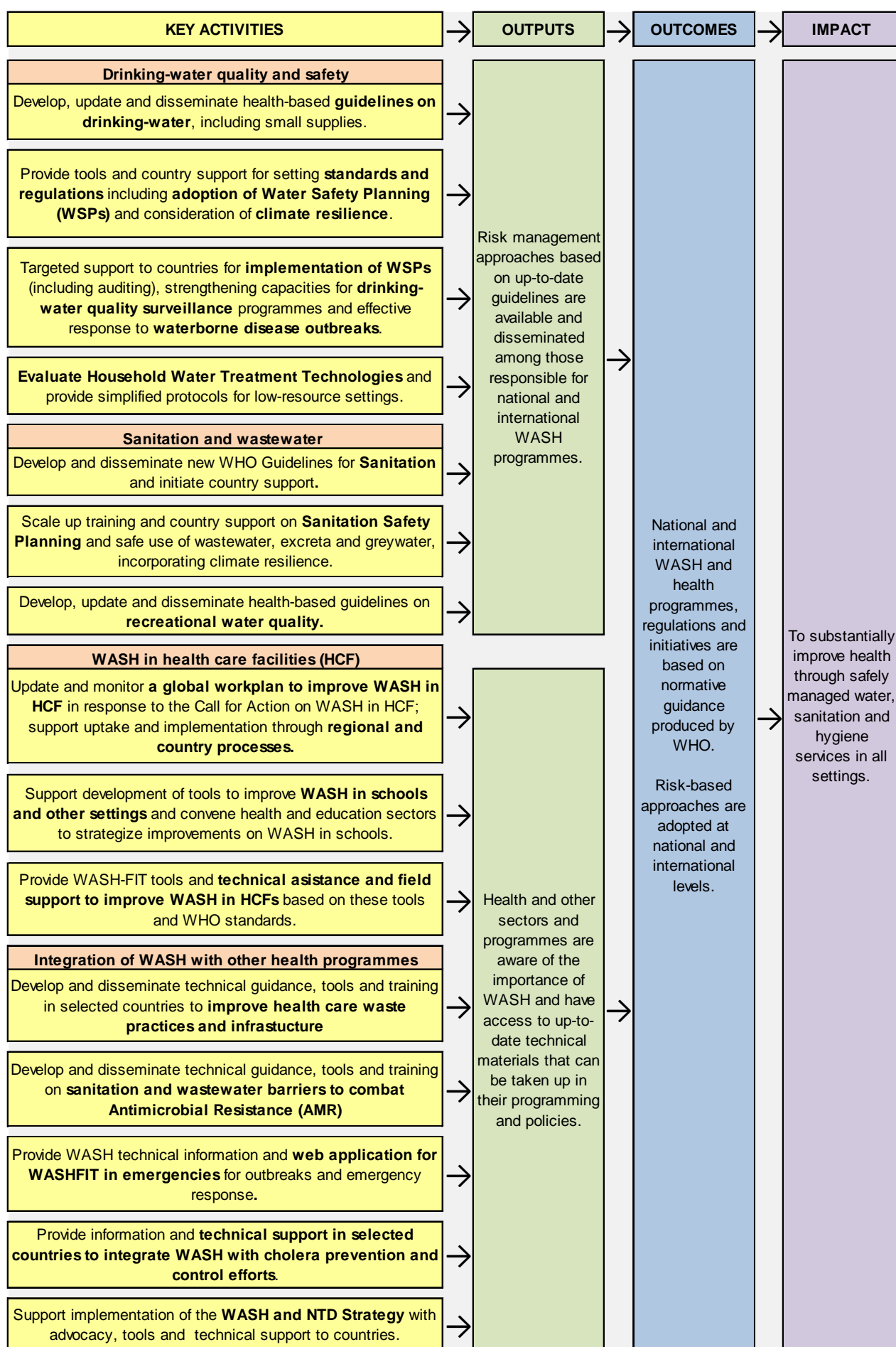
Publications Title (with link)	Languages	Output indicator
Guidelines for drinking-water quality, 4th edition, incorporating the 1st addendum (Spanish version added in 2018)	SP	1.1
Management of radioactivity in drinking-water	EN	1.1
Alternative drinking-water disinfectants: Bromine, iodine and silver	EN	1.1
Water safety portal (regularly updated during 2018)	EN	1.1, 1.2
A global overview of national regulations and standards for drinking-water quality	EN	1.2
Developing drinking-water quality regulations and standards	EN	1.2
Strengthening operations & maintenance through water safety planning: A collection of case studies	EN	1.2
WHO Guidelines on sanitation and health	EN, RU	2.1
Sanitation safety planning: Manual for safe use and disposal of wastewater, greywater and excreta - three additional language versions	AR, Farsi, Japanese	2.2
WHO recommendations on scientific, analytical and epidemiological developments relevant to the parameters for bathing water quality in the Bathing Water Directive (2006/7/EC)	EN	2.3
Water and sanitation for health facility improvement tool (WASHFIT) (second edition)	EN, FR, SP, AR, RU	3.2
WASHFIT training report Madagascar	FR	3.2
Handbook for national quality policy and strategy: A practical approach for developing policy and strategy to improve quality of care	EN, RU, SP	3.2
Standards for improving the quality of care for children and young adolescents in health facilities	EN	3.2
Core questions and indicators for monitoring WASH in health care facilities in the Sustainable Development Goals	EN, FR, RU, AR	3.2
Under development during 2018: WASH in HCF knowledge portal	EN, FR	3.2
Summary of safe management of health care waste (FR translation in 2018)	EN, FR, RU	3.3
Infographic on Sepsis prevention	EN	3.4
Global Monitoring of Country Progress on Antimicrobial Resistance (AMR): Tripartite AMR country self-assessment survey (TrACSS)	AR, CH, EN, FR, RU, SP	3.4
WASH and health working together: A 'how-to' guide for Neglected Tropical Disease programmes	EN, FR	3.7
JMP website	EN	4.1, 4.2
2018 dataset on WASH in schools	EN	4.2
Updated methods for WASH in schools and WASH in health care facilities	EN	4.2
Drinking Water, Sanitation and Hygiene in Schools: Global baseline report 2018	SP, FR, RU, AR, EN	4.2

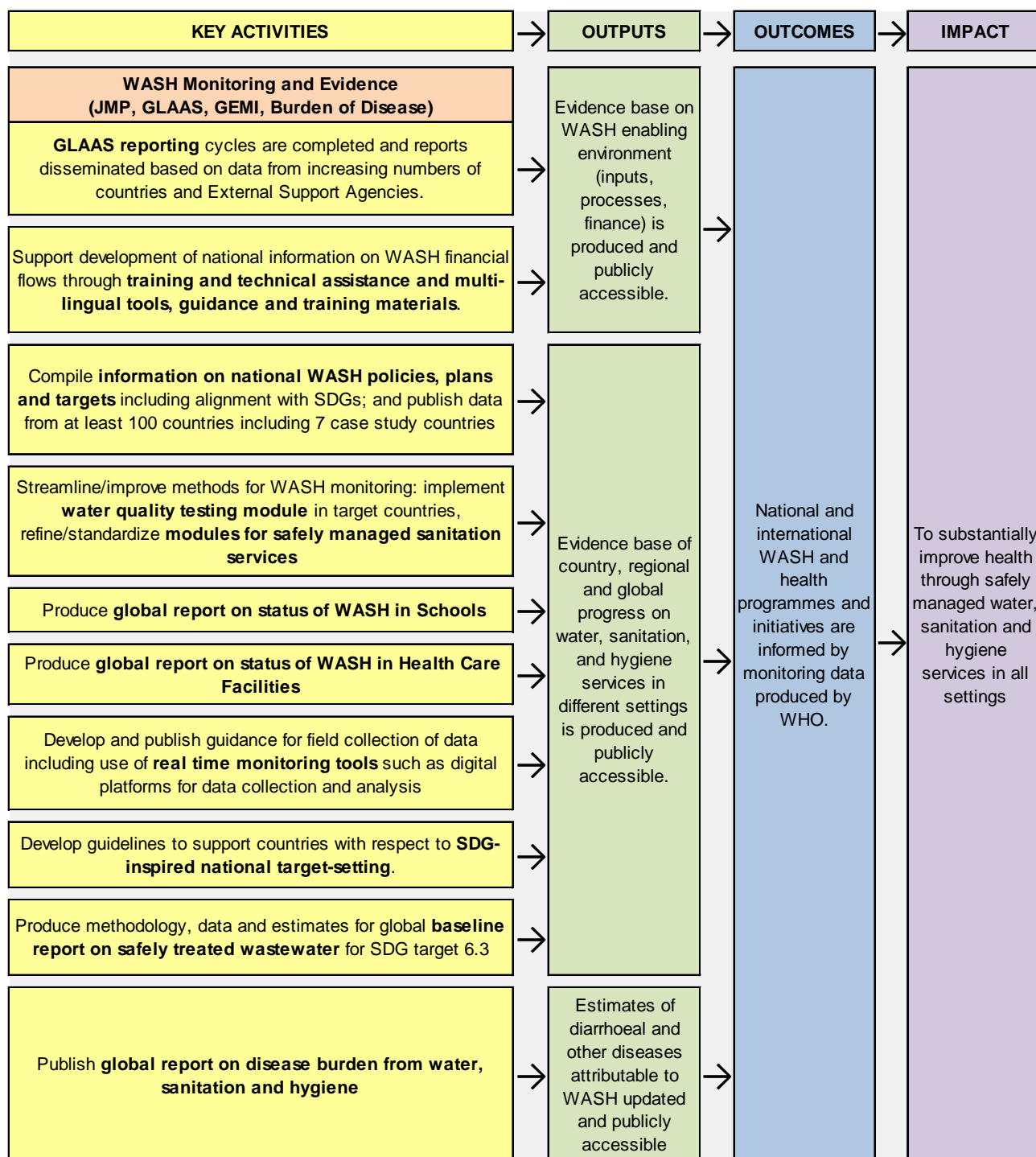
WHO 2018 WASH publications (continued)

Publications Title (with link)	Languages	Output indicator
Progress on drinking-water, sanitation and hygiene: 2017 update and SDG baselines	SP, FR, RU, AR, EN, CH	4.3
Progress of wastewater treatment: Piloting the monitoring methodology and initial findings for SDG 6.3.1 and 79 country files	SP, FR, RU, AR, EN, CH	4.4
UN-Water GLAAS Trackfin Initiative: Tracking financing to sanitation, hygiene and drinking-water at national level (updates)	EN, FR, RU, PT	5.3
GLAAS country highlights	EN,FR,SP,PT	5.1
WASH burden of disease data on the WHO Global Health Observatory	EN	6.1
WHO water, sanitation and hygiene strategy 2018–2025	EN, FR	Outcome 2.4
Articles including webinars (WHO WASH co-authored/contributed) Title (with link)		Output indicator
Measuring the Impacts of Water Safety Plans in the Asia-Pacific Region		1.2
Safe Use of Wastewater in Agriculture. Development of Sanitation Safety Plans to Implement World Health Organization Guidelines: Jordanian Experience (book chapter)		Outcome 1.3
Recording of the public webinar on the Sanitation and health guidelines originally held on World Toilet Day		2.1
Resource recovery from waste: Business models for energy, nutrient and water reuse in low - and middle-income countries		2.2
Strengthening Healthcare Facilities Through Water, Sanitation, and Hygiene (WASH) Improvements: A Pilot Evaluation of “WASH FIT” in Togo		3.2
Editorial in WHO bulletin No end to cholera without basic water, sanitation and hygiene authored by WSH and WaterAid		3.5
Institutional WASH in the SDGs: data gaps and opportunities for national monitoring		4.2
Handwashing with soap after potential faecal contact: Global, regional and country estimates for handwashing with soap after potential faecal contact		4.2
The potential of the SDG framework to promote equality through WASH initiatives (Chapter 3) and Monitoring inequalities in WASH service levels (chapter 13) in book: Equality in Water and Sanitation Services, Edited by Oliver Cumming, Tom Slaymaker)		4.2
Establishing Sustainable Development Goal Baselines for Household Drinking Water, Sanitation and Hygiene Services		4.2
Subnational regional inequality in access to improved drinking water and sanitation in Indonesia: results from the 2015 Indonesian National Socioeconomic Survey (SUSENAS)		4.2
Institutional WASH in the SDGs: data gaps and opportunities for national monitoring		4.2
Access to drinking water: time matters		4.2
Global assessment of accountability in water and sanitation services using GLAAS data		5.1
Impact of drinking water, sanitation and handwashing with soap on childhood diarrhoeal disease: updated meta-analysis and meta-regression		6.1
A Faecal Contamination Index for interpreting heterogeneous diarrhoea impacts of water, sanitation and hygiene interventions and overall, regional and country estimates of community sanitation coverage with a focus on low- and middle-income countries		6.1

Annex 2 – Strategic framework and Theory of change







Annex 3 – Selected 2018 examples - International partners and countries integrating WHO guidelines in their programming approaches

International partners including donors – selected examples

- **ACUWA (Arab countries water utilities association)** translated the SSP training manual and materials into Arabic and introduced the SSP approach to utilities and service providers as a vehicle for transforming the way sanitation and wastewater use is managed (introducing risk-based management through the sanitation cycle).
- **ADB and World Bank** initiating SSP in Sri Lanka and India respectively
- **ADB** has incorporated SPP into a 200 million sanitation investment in West Bengal and Rajasthan in India.
- **Asian Institute of Technology (AIT)** and **Centre for Science and Environment, India** are both providing training based on SPPs.
- **BORDA (Bremen Overseas Research and Development Association)** implementing SSP in Iraq.
- **Center for Affordable Water and Sanitation Technology (CAWST)** including WSPs in water quality programming after shift to broader water safety in the household water treatment and safe storage network.
- **Container-based sanitation alliance** partners have embedded SSP within this increasingly popular form of sanitation service. Container-based sanitation provides a safe option in dense urban and humanitarian settings where traditional sanitation solutions are not feasible. A specific SSP training and typology was developed for container-based sanitation.
- **EC proposal for legislation on Safe Use of Wastewater in Agriculture** includes SSP throughout http://europa.eu/rapid/press-release_IP-18-3929_en.htm. Inclusion of SSP at this level will be a major achievement for SSP globally because Europe often leads the way in demonstrating application of WHO recommendations at policy and legislative level and serves as models for other countries.
- **The EU Drinking Water Directive** is informed by the GDWQ, and consultations with WHO EURO
- **German Bank for Reconstruction (known by the German acronym KfW)** one-page fact sheet describing key aspects of the Joint Monitoring Program (JMP) was created for inclusion in a digital catalogue of hardware, software, and data products for remotely managing, monitoring, and verifying KfW development and humanitarian aid projects.
- **IRC** and **USAID** are implementing TrackFin, the WHO-developed methodology for tracking finance in the WASH sector at national level.
- **Medical Care Development International (MCDI)**, based in Maryland, U.S. will use the WHO-developed WASH assessment tool in health facilities in Gabon.
- **SPHERE handbook** – an international resource on minimum standards in Humanitarian Response that is a primary reference tool for national and international NGOs, volunteers, UN agencies, governments, donors, the private sector, and many others – integrates content from WSH guidelines and standards.
- **UNICEF** and **Save the Children** use JMP core questions on WASH in Schools in programmes and monitoring.
- **USAID's** Water Quality Assurance Plans (WQAPs) reference WSPs. WQAPs are the preferred method for ensuring water quality in projects involving the provision of drinking-water.

- **WSSCC, SuSanA (Sustainable Sanitation Alliance), UN-Water** integrated elements of SPPs and WHO Sanitation Guidelines into World Toilet Day 2018 programming.
- **World Vision** programmes and monitoring use JMP core questions and indicators on WASH in Health care facilities (HCF).
- Additional partners using and/or training on WASH in HCF tools including WASHFIT are:
 - **Catholic Relief Services (CRS)**
 - **Centres for Disease Control and Prevention (CDC)**
 - **Emory University**
 - **International Committee of the Red Cross**
 - **Millennium Water Alliance** - [link to tool](#)
 - **Oxfam**
 - **Red Cross** – e.g. work in [Comoros](#)
 - **Save the Children**
 - **Terre des hommes** – [this report](#) from Mali on WASH FIT and another [report from Mali](#) – e.g. of partners using our tools
 - **UN mission in South Sudan**
 - **UN peacekeeping**
 - **UNHCR in camps (South Sudan) 20,000 people directly**
 - **WaterAid** – [this document](#)

WHO programmes – selected examples

- WHO executive board EB144 agenda include an item on Water, sanitation and hygiene in health care facilities that led to a resolution for the WHA.
- **WHO vaccine document** ([Working together: An integration resource guide for planning and strengthening immunization services throughout the life course](#)) includes discussion of WASH (largely centred on health care facilities on pg 47-50 and 133) and reference to the WSH strategy (pg 48).

Countries – selected examples

- **Many countries** strengthening WASH standards based on WHO Norms across drinking-water and sanitation. (*No research undertaken to document total numbers or countries.*)
- **Many countries** using WASHFIT without any advocacy or contact from WHO including **Iraq, Malawi, South Sudan and Timor-Leste**. (*No research undertaken to document total numbers or countries.*)
- **104 countries'** national standards are influenced by WHO drinking-water quality guidelines (as shown through RegScan - Global Regulatory Research Application).
- **3 to 6 Latin American countries** applying WHO HCF ladders in developing national standards
- **Many countries** strengthening standards based on WHO health care waste management norms including Biodigesters in **Nepal**, new health care waste management standards in **Liberia**, strengthened health care waste management in **Ghana, Madagascar, United Republic of Tanzania** and **Zambia**.
- **Finland** has developed and applied an online SSP tool, and also led a high-level panel on WSPs at UN headquarters in New York in July, sharing reflections on WSP and Viet Nam government work with support from WHO and DFAT.
- **France** MoH invited to present the WHO's take on WSPs on October 4 at our national school for public health (EHESP in Rennes). This is the very first national event on WSPs for French MoH and a MoH bill introduced formally the concept to colleagues in 2018.
- **Ghana** mainstreamed GLAAS indicators into the national monitoring system

- **India** programme on WASH in HCF in India incorporating information and graphic from WASHFIT.
- The **Islamic Republic of Iran** has translated the SSP manual to Farsi following the training in EMRO and implemented SSP in wastewater use for agriculture schemes.
- **Kenya, Ghana, Peru, Madagascar** and **Haiti** container-based sanitation partners have implemented SSP within their operations working with city level partners.
- **Serbia and Bhutan** WASH in HCF programmes are influenced by JMP core questions.
- **Uganda** MoH has harmonized WASH indicators into their Health Management Information System during 2018.
- **Zambia and Namibia** are revising national sanitation standards and plans based on Global Sanitation Guidelines (issue highlighted through GLAAS process)
- Article published in **Jordan** ([Maha Halalsheh , Ghada Kassab, Khaldoun Shatanawi, Munjed Al-Shareef, 2018: Safe Use of Wastewater in Agriculture. Development of Sanitation Safety Plans to Implement World Health Organization Guidelines: Jordanian Experience](#))

Annex 4 – Selected 2018 examples - WASH partners publishing or using WHO-generated WASH data

Countries – selected examples of use of data

- **All country national action plans on AMR** use JMP data to inform country self-assessment.
- **Mali** using TrackFin data for sector review and evidence-based planning in Mali (Planning and Stats unit government of Mali).
- **India** - Tweets from India prime minister Modi about WASH-quoted data from WHO.
- **Serbia (and other countries completing GLAAS survey during 2018)** used GLAAS data for SDG 6 country reporting specifically using GLAAS survey data from questions A14 and D9 for country reporting on SDG 6a and 6b. During the 2018 process, the National Statistical Office and SDG 6 National Focal Points were able to access reporting data that has not previously been available to them.
- **Botswana and Namibia used GLAAS data to strengthen sanitation** - Botswana using GLAAS data in conjunction with the WHO Sanitation Guidelines as reference for new sanitation division, and Namibia for informing their new sanitation strategy.
- **South Africa, Botswana, Zimbabwe, Mozambique, Angola, and Namibia** used GLAAS data from country surveys for a gap analysis to identify priority issues and actions in the areas of WASH governance, monitoring and financing as part of USAID's Resilient Waters project.
- **Countries of the WHO Eastern Mediterranean region** used GLAAS results and data to help identify regional priorities during a preparatory meeting on water issues for the 2018 Arab Forum on Sustainable Development.
- **Countries of the WHO Western Pacific region** used GLAAS data to help identify priority needs for WASH capacity building support to countries.

Partners – selected examples of data use including in publications

- **UNICEF, UN-Water, USAID, AFD, Swedish International Development Cooperation Agency (SIDA) and other donors** use JMP and GLAAS data to prioritize activities in countries and to inform programming (confirmed during donor meetings including a WASH donor roundtable at World Water Week in Stockholm in 2018).
- *The 2015 WHO UNICEF report on water, sanitation and hygiene in health care facilities* data has been used consistently by **WASH partners and publications discussing WASH in HCF** (and will soon be replaced by the new JMP figures)
- Ongoing and regular requests from **academia** for GLAAS and JMP data
- **Wellcome Trust/U.S. Centers for Disease Control and Prevention/UK Science and Innovation Network report on AMR and the environment** highlights WHO WASH information and data
- **Fordham Francis Global Poverty Index** uses JMP data.
- **GTFCC** WASH programmatic interventions informed by WSH chlorine findings.
- **South Asian Conference on Sanitation (SACOSAN) background papers** draw heavily on GLAAS data.
- **SDG 6 synthesis paper and other SDG reporting** uses GLAAS and JMP data for reporting on SDG 6
- **SDG reporting** uses WASH Burden of Disease figures from WHO (e.g. citation of burden of disease figures and meta regression: risk research for interventions for SDG 3.9.2 reporting).
- **UK educational database** using JMP data maps.

- **USAID Water Currents publications** includes GLAAS and JMP data, and highlights WHO publications including standards and guidelines. A good example is [Water Currents – Water & Data, April 3, 2018](#)
- **Water and Sanitation for the Urban Poor (WSUP) Business Plan** uses WHO WASH statistics. See the first pages of <https://www.wsup.com/content/uploads/2017/09/WSUP-Business-Plan-2016.pdf>
- **WHO regional websites** feature GLAAS country highlights (data on WASH enabling environment).
- **WHO website** statistics for 2018 showed that the WASH website was viewed **2,119,378 times**, ranking 24 out of 200 overall in terms of WHO topic pages.
- **World Bank in Nigeria** use of GLAAS data/information
- **World Bank Website** posts JMP statistics, and tracking statistics show substantial use of this data.

World Health Organization

WHO AND WASH

The World Health Organization's (WHO) vision for water, sanitation, and hygiene (WASH) is 'to substantially improve health through the safe management of water, sanitation and hygiene'. WHO's work has included drinking-water, sanitation and hygiene components since the Organization's inception in 1948. Sanitation and hygiene are enshrined in the WHO constitution, and WASH is the subject of a number of World Health Assembly resolutions.

WHO, as a technical agency, does not directly implement WASH infrastructure projects, and recognizes that infrastructure is insufficient to attain sustainable and effective service delivery. Therefore, WHO has played a longstanding, significant role promoting WASH and is an objective and respected source of international guidelines, standards and normative information; authoritative technical guidance on water quality management, sanitation and wastewater; and WASH policies and regulations. WHO also works to strengthen health sector capacities in providing WASH support and public health oversight through surveillance and regulation, promoting the generation of evidence, and empowering countries through technical cooperation to strengthen national systems and institutions, set health-based WASH objectives, carry out safe management, and to establish effective monitoring of WASH inputs and outputs, often in conjunction with partners.

WHO has also performed the function of global WASH monitoring since its inception and provides an increasingly reliable and comprehensive evidence base to inform country policy decisions as well as WASH resource allocations by countries, partners and donors.

WASH PROGRAMME TARGETS

WHO's 13th General Programme of Work (GPW) 2019–2023 describes how the Organization's work will contribute to the health of three billion: one billion becoming "healthier populations" through multisectoral actions and addressing environmental risk factors and health determinants; one billion benefiting from better emergency preparedness and response; and one billion with universal health coverage (UHC). WASH will be a key element to achieving these targets.

WASH elements for the targets include: increase access to safely managed drinking-water, sanitation and hygiene in households, and additional targets associated with UHC linked to improving WASH in health care facilities. Moreover, other indicators, largely linked to essential health services, child and maternal mortality, and antimicrobial resistance (AMR), will require improving water, sanitation and energy, especially in health care facilities.

WASH STRATEGY/ACTIVITIES

The WHO water, sanitation and hygiene strategy (2018–2025) sets out the direction and role of WHO within the context of the SDGs and WHO's 13th Programme of Work. WHO will organize WASH activities in the following priority areas:

- Drinking-water quality and safety to provide authoritative and objective information on human health risks associated with water quality contaminants in national contexts, working with partners to promote effective risk management and independent surveillance.
- Improving safety of sanitation and wastewater management, maximizing health benefits of sanitation interventions, making wastewater management part of the circular economy, and improving recreational water quality.
- WASH in health care facilities (including health care waste management) to support development of country standards and policies, monitoring, facility-based improvements, and, together with UNICEF, a global campaign including a response to the UN-Secretary General's call for action on this subject.
- UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) to provide policy- and decision-makers with a comprehensive global analysis of investments and the enabling environment for WASH.
- WHO/UNICEF Joint Monitoring Programme (JMP) for water supply, sanitation and hygiene to support national, regional and global monitoring and reporting of progress towards universal access to safely managed drinking-water, sanitation and hygiene.
- Integration of WASH with health and other programmes and emerging issues such as AMR, cholera, climate change, infection prevention and control (IPC), emergencies, neglected tropical diseases (NTDs), nutrition, UHC, and water security to increase synergies and impact.

ADDITIONAL INFORMATION

WHO water, sanitation and hygiene strategy 2018–2025

https://www.who.int/water_sanitation_health/publications/wash-strategy-2018-2025/en/

GLOBAL BUDGET

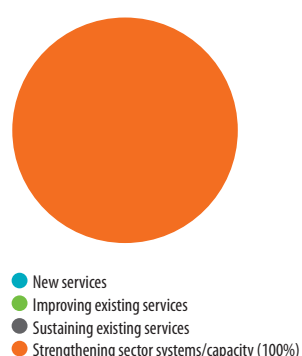
US\$ 9 million annually

TIME PERIOD

2018–2025

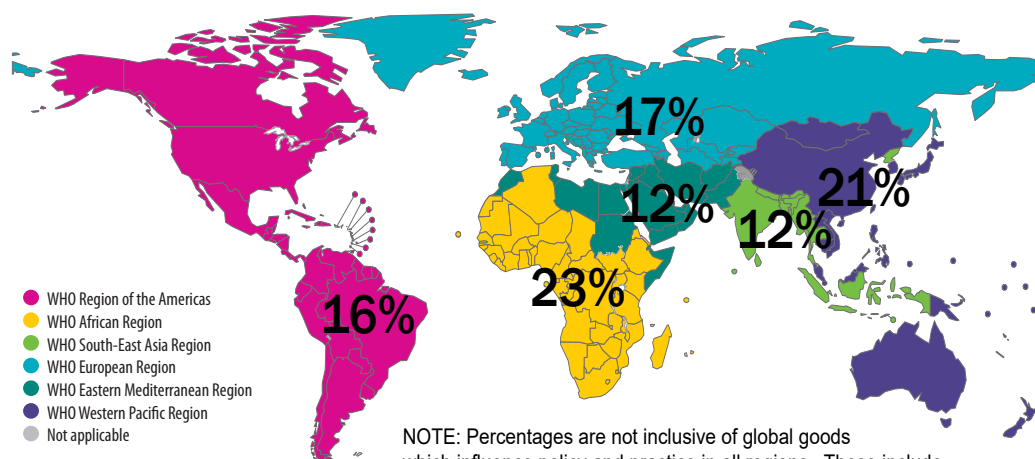
WASH AID PRIORITIES: DISTRIBUTION OF AID DISBURSEMENTS

By activity type in 2017



Source: GLAAS 2018/2019 ESA Survey

By region in 2017

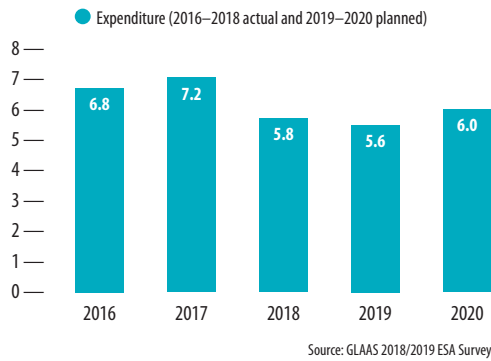


NOTE: Percentages are not inclusive of global goods which influence policy and practice in all regions. These include the development and support of guidelines, standards, technical assistance, and monitoring activities.

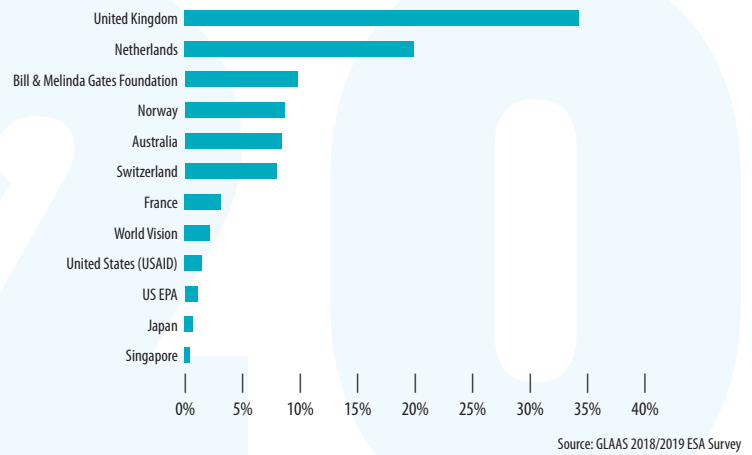
Source: GLAAS 2018/2019 ESA Survey

WASH AID EXPENDITURE (2017–2020)

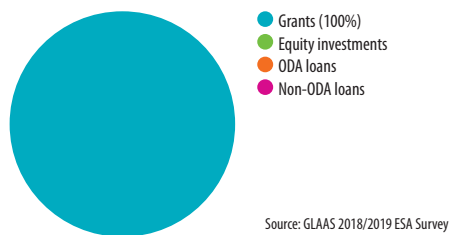
US\$ millions



TOP DONORS

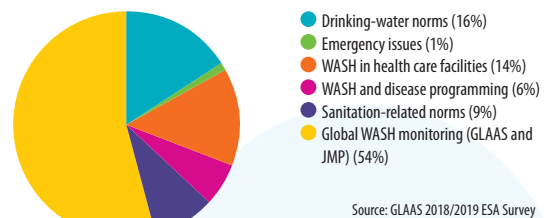


WASH SECTOR AID FLOW TYPES



FUNDING ACTIVITIES

A breakdown of expenditures for 2018 is provided below:



LESSONS/IMPACTS

WHO is uniquely positioned to achieve impact through the following strategic approaches, building on its existing work and established credibility and expertise:

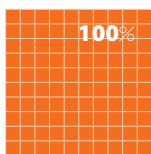
- Empower countries through multi-sectoral technical cooperation, advice and capacity building to governments, practitioners and partners;
- Monitor, research and report reliable and credible WASH data to inform policies and programmes; and
- Coordinate with multi-sectoral partners, lead or engage with global and regional platforms, and advocate for WASH.

The overall impact of WHO's work can be increased by WASH activities within health and non-health programmes through a strong integration agenda. WHO's overall reform efforts, as reflected in the GPW, the framework impact indicators and the investment case, together with the internal transformation to strengthen WHO's impact at country level, are complementing and strengthening the objectives of the WASH strategy.

COLLABORATIVE BEHAVIOURS FOR MORE EFFECTIVE DEVELOPMENT COOPERATION

Enhance government leadership of sector planning processes

Proportion of water and sanitation aid allocated to water and sanitation policy and administration and education and training (%)



The median for all donors is 9%.

Source: GLAAS 2018/2019 ESA Survey

Strengthen and use country systems

Percentage of WASH spending using country procurement systems (%)

Not applicable

WHO uses UN procurement systems.

Source: GLAAS 2018/2019 ESA Survey

Use one information and mutual accountability platform

Active participation in mutual assessment exercises/reviews (% of countries)

WHO participates at a coordinating or supporting level for assessment exercises such as GLAAS, TrackFin, and JMP country consultations in all countries that participate in these exercises.

Source: GLAAS 2018/2019 ESA Survey

Build sustainable WASH sector financing strategies

Percentage of WASH funding published/information shared with Ministry of Finance (%)

Not applicable

Source: GLAAS 2018/2019 ESA Survey

FUTURE OUTLOOK

Within the WHO Impact Framework, WASH targets have been established to be pursued collectively by Member States and partners. WHO's work on WASH will also contribute to GPW targets related to AMR (deaths from sepsis related to AMR organisms), health emergencies (number of persons in fragile settings with access to essential health services), UHC (reduction of maternal mortality and newborns and children) through its cross-cutting WASH and health programme linkages work.

The WHO Investment Case highlights that investments in WASH – both within and beyond the health sector – will provide returns of three times the investment, and directly save nearly one million lives between 2019 and 2023. In addition, the integration of WASH in other health programmes such as AMR and climate resilience is an important contribution to the significant health and economic gains of these programmes. Investments in WASH and health are also investments in equity, security, and reducing poverty and extreme inequality.

Developed and coordinated by the Water, Sanitation, Hygiene and Health (WSH) Unit of the World Health Organization (WHO). Results contained in the ESA Highlights have been compiled by the ESA and GLAAS using data from the Organisation for Economic Development and Cooperation (OECD) Creditor Reporting System (CRS), estimates and text provided in the responses to the GLAAS 2018/2019 ESA Survey.

WHO/CED/PHE/WSH/19.29

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8 http://www.who.int/water_sanitation_health/glaas/en/

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