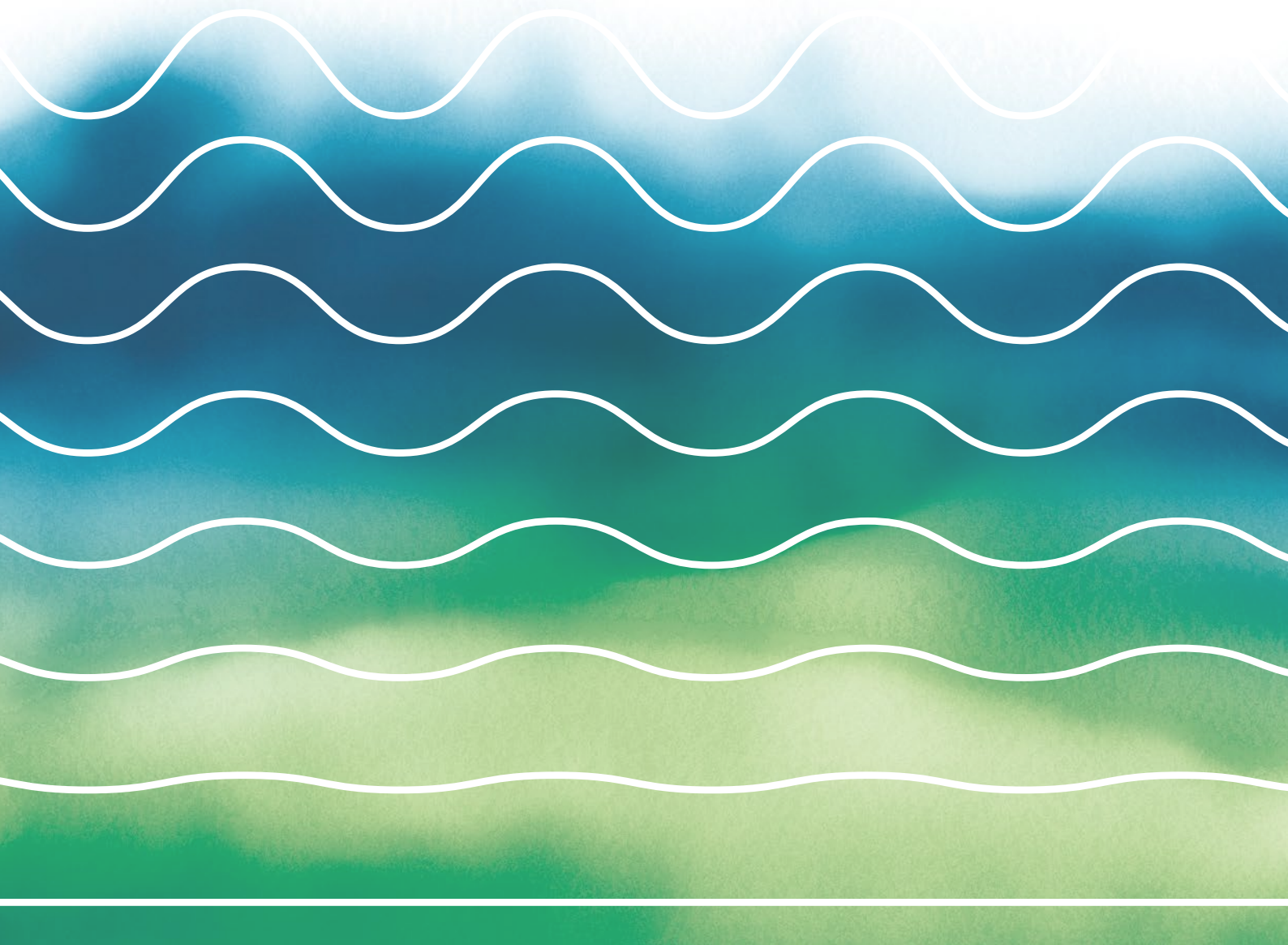


WHO WATER, SANITATION AND HYGIENE

STRATEGY
2018-2025



WHO/CED/PHE/WSH/18.03

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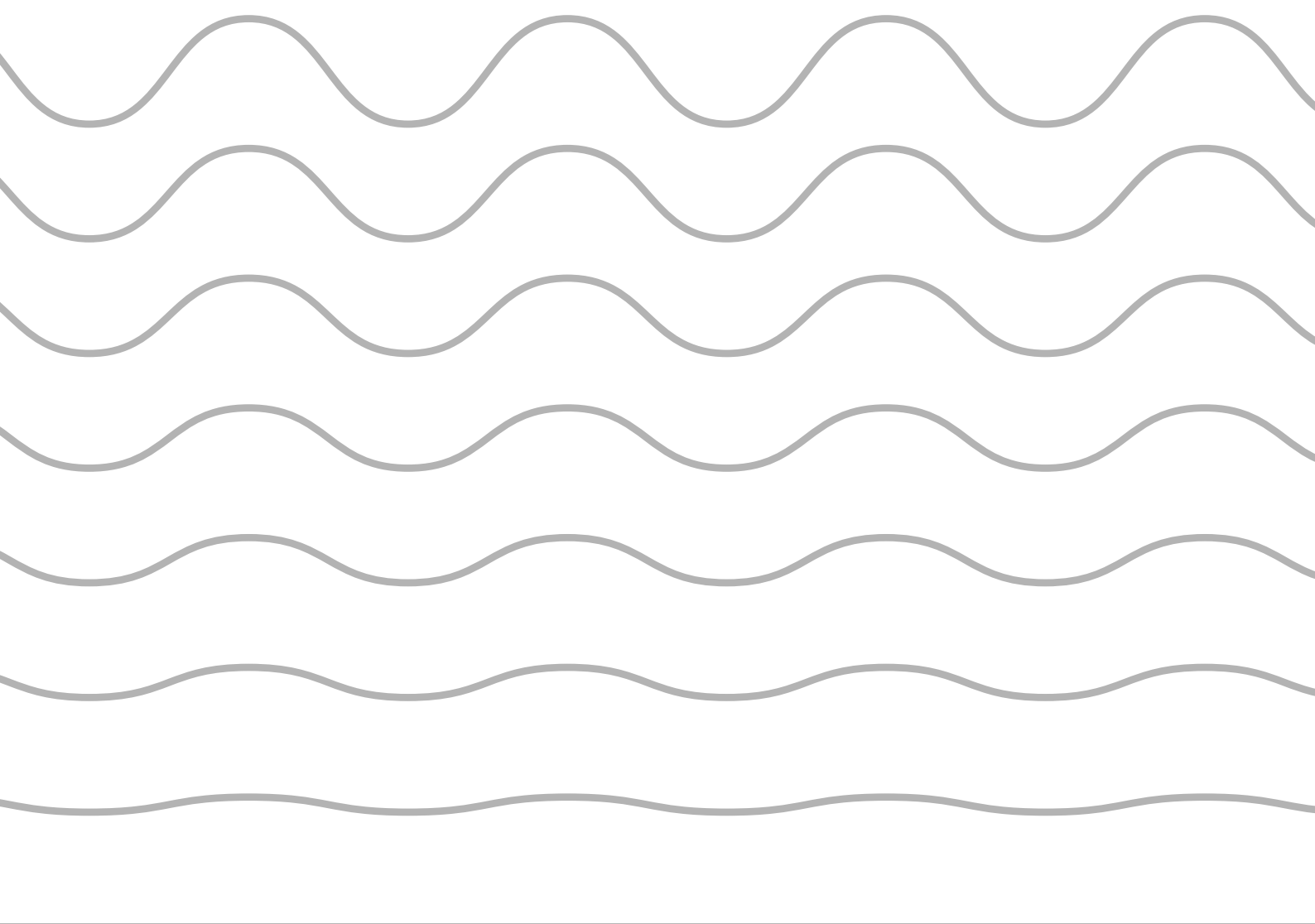
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LIST OF ACRONYMS

AMCOW	African Ministers' Council on Water
AMR	antimicrobial resistance
ESA	external support agency
EVD	Ebola virus disease
GDWQ	WHO 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	WHO General Programme of Work
GTFCC	WHO-led Global Task Force on Cholera Control
IPC	infection prevention and control
HCF	health care facilities
HWTS	household water treatment and safe storage
IWA	International Water Association
JMP	WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene
LMIC	low and middle-income countries
MNCH	maternal, newborn and child health
MDGs	Millennium Development Goals
NGO	non-governmental organization
NTDs	neglected tropical diseases
OCV	oral cholera vaccine
PHE	WHO Department for Public Health, Environment and Social Determinants of Health
SSP	sanitation safety planning
SDGs	Sustainable Development Goals
SWA	Sanitation and Water for All
TB	tuberculosis
TrackFin	methodology for tracking finance in the WASH sector
UHC	universal health coverage
UN	United Nations
UNEP	United Nations Environment Programme
UNICEF	United Nations Children's Fund
WASH	water, sanitation and hygiene
WASHFIT	WASH for Health Facility Improvement Tool
WSP	water safety plan
WHE	WHO Health Emergencies Programme
WHO	World Health Organization

1. RATIONALE AND CONTEXT

1.1 INTRODUCTION

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). A limited number of high profile framework impact indicators, centred around these platforms, have been developed. Two of these indicators reference water and sanitation and would accelerate the Organization's work to increase access to safely managed drinking-water, sanitation and hygiene in households, and additional targets associated with UHC are linked to improving water, sanitation and hygiene (WASH) in health care facilities (HCF). Moreover, seven 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 HCF. Finally, according to an extensive external audit completed in 2017, WHO has a “strong mandate through several World Health Assembly resolutions, global conventions, initiatives and partnerships” to lead and accelerate work on environment and health.

Historically, WHO's work has included drinking-water, sanitation and hygiene components from the inception of the Organization in 1948. Sanitation and hygiene are enshrined in the WHO constitution. WHO has consistently issued health-based guidelines and good practice publications on WASH, which are designed to assist countries in developing national standards, informing regulations and establishing effective surveillance systems. For decades, WHO has monitored global and country access to water and sanitation. While the Organization has had various flagship priorities over the years, technical work on WASH issues has been a constant and is often included in broader initiatives. For example, drinking-water supply and sanitation made up one of the pillars of the 1978 *Health for All* strategy. More recently, in response to the United Nations (UN) declaration of the Water Action Decade 2018–2028¹, the UN Secretary-General has launched a global call to action for WASH in all HCF.

The WHO WASH Strategy has been developed in response to Member State Resolution WHA64.4 and the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs). It also takes on board the need for progressive realization of the human rights to safe drinking-water and sanitation, adopted by the UN General Assembly in July 2010. The 2025 end date of the Strategy is proposed to allow both a reasonably manageable forward-looking time period as well as time to adopt a new WHO strategy in 2025 to enable course corrections in the final five-year period of the SDGs.

The Strategy is based on an organization-wide discussion on WASH priorities and challenges, including experiences and reflections from both regional and country office levels, and also incorporates the inputs of WHO's partners. It considers WHO's comparative advantages in the WASH sector and optimal ways of working considering past experiences and achievements. It aims to reinforce the five leadership priorities of the WHO Director-General Dr Tedros Ghebreyesus, in particular addressing the health impacts of climate and environmental change; the primary health care foundation to achieve health for all; and the WASH

1. *The International Decade for Action: Water for Sustainable Development 2018–2028*

interventions that contribute to health security. It complements and informs an emerging strategy for the WHO Department for Public Health, Environmental and Social Determinants of Health (PHE).

The WHO vision for WASH is:

‘TO SUBSTANTIALLY IMPROVE HEALTH THROUGH THE SAFE MANAGEMENT OF WATER, SANITATION AND HYGIENE SERVICES IN ALL SETTINGS.’

A renewed WHO WASH Strategy offers a timely opportunity to strengthen WHO’s contribution to improving health through WASH actions within and beyond WHO, to reinforce WHO’s influence within WASH partnerships, to mobilize resources, to strengthen alignment with the SDGs and relevant regional policy frameworks, and to build on synergies between the SDGs, health and WASH.

The WHO WASH Strategy is underpinned by the following principles:

- **Prioritize actions with the highest public health benefit** in areas where WHO has or can build comparative advantages;
- **Strengthen health sector capacities in promoting safe WASH** and taking up its public health oversight role in WASH, including effective outbreak response systems;
- **Align with the SDGs**, specifically targets relating to WASH, health, climate change and nutrition, as well as human rights principles;
- **Employ the highest quality science** including through collection, review and use of evidence about WASH impacts on health **and a full range of practical experiences** when developing norms and good practice procedures;
- **Promote a contextual, incremental improvement approach** when supporting countries to set national WASH standards and ambitious but achievable national targets;
- **Capitalize on existing regional policy frameworks** that promote WASH and stipulate national target setting;
- **Stimulate sustainable change** by strengthening government institutions and systems charged with implementation, oversight and regulation of WASH service delivery; and
- **Engage with partners and positively influence partnerships to ensure health issues are considered and addressed by the WASH sector** and to also ensure that WASH issues, notably in health care facilities, are addressed by the health sector as prerequisites to providing quality care.

Key WHO partners and stakeholders for WASH include:

- **Member States:** National and local government agencies with responsibilities for policies and programmes in public health, the planning and regulation of drinking-water supply, sanitation and wastewater management, water resources development and management, environmental protection and management, education, economics and finance, and statistics.
- **Practitioners:** Water suppliers, sanitation service providers, wastewater management entities, managers of water resources, health and education practitioners including health extension workers and midwives, etc.

- **Institutions for research and development:** Scientists organized in expert advisory panels, academia, research groups and WHO Collaborating Centres.
- **Regional platforms and instruments:** For example, the European Environment and Health Process and the Protocol on Water and Health, the Asia Pacific Forum on Health and Environment, the African Ministers' Council on Water (AMCOW), the Inter-American Association of Environmental Health Engineers (AIDIS).
- **WASH sector partners:** For example, the United Nations Children's Fund (UNICEF) and other UN agencies participating in UN-Water, IRC, the International Water Association (IWA), the International Water Management Institute/CGIAR, Sanitation and Water for All (SWA), the Stockholm International Water Institute (SIWI), WaterAid, the Water Supply and Sanitation Collaborative Council (WSSCC), World Vision, and WHO networks of good practice.
- **Health sector partners:** For example, global level partners such as the Global Task Force on Cholera Control (GTFCC), AMR Global Action Plan, neglected tropical diseases (NTDs) networks, infection prevention and control (IPC) practitioners including the Infection Control Africa Network (ICAN).
- **External support agencies (ESAs):** For example, Agence française de développement (AFD, France), the Bill & Melinda Gates Foundation, the Conrad N. Hilton Foundation, the Department for International Development (DFID, United Kingdom), the Department of Foreign Affairs and Trade (DFAT, Australia), the Directorate General for International Cooperation (DGIS, The Netherlands), the German Federal Ministry for Economic Cooperation and Development (BMZ) and International Cooperation Services (GIZ), the Japan International Cooperation Agency (JICA), the Ministry of Health, Labour and Welfare (MHLW, Japan), regional development banks, the Swedish International Development Cooperation Agency (SIDA), the Swiss Agency for Development and Cooperation (SDC), the United States Agency for International Development (USAID), the United States Environmental Protection Agency (USEPA), The World Bank.

1.2 WASH AND HEALTH

Safe drinking-water, sanitation and hygiene are crucial to human health and well-being. Safe WASH is not only a prerequisite to health, but contributes to livelihoods, school attendance and dignity and helps to create resilient communities living in healthy environments. Drinking unsafe water impairs health through illnesses such as diarrhoea, and untreated excreta contaminates groundwaters and surface waters used for drinking-water, irrigation, bathing and household purposes. This creates a heavy burden on communities. Chemical contamination of water continues to pose a health burden, whether natural in origin such as arsenic and fluoride, or anthropogenic such as nitrate. Emerging contaminants to drinking-water such as micropollutants, pharmaceuticals and microplastics may not pose as significant risks to health as pathogens like *Legionella*, but do cause public concern and could potentially divert scarce resources away from more pressing risks. Safe and sufficient WASH plays a key role in preventing numerous NTDs such as trachoma, soil-transmitted helminths and schistosomiasis. Diarrhoeal deaths as a result of inadequate WASH were reduced by half during the Millennium Development Goal (MDG) period (1990–2015), with the significant progress on water and sanitation provision playing a key role. Overall, improvements over the MDG period had a

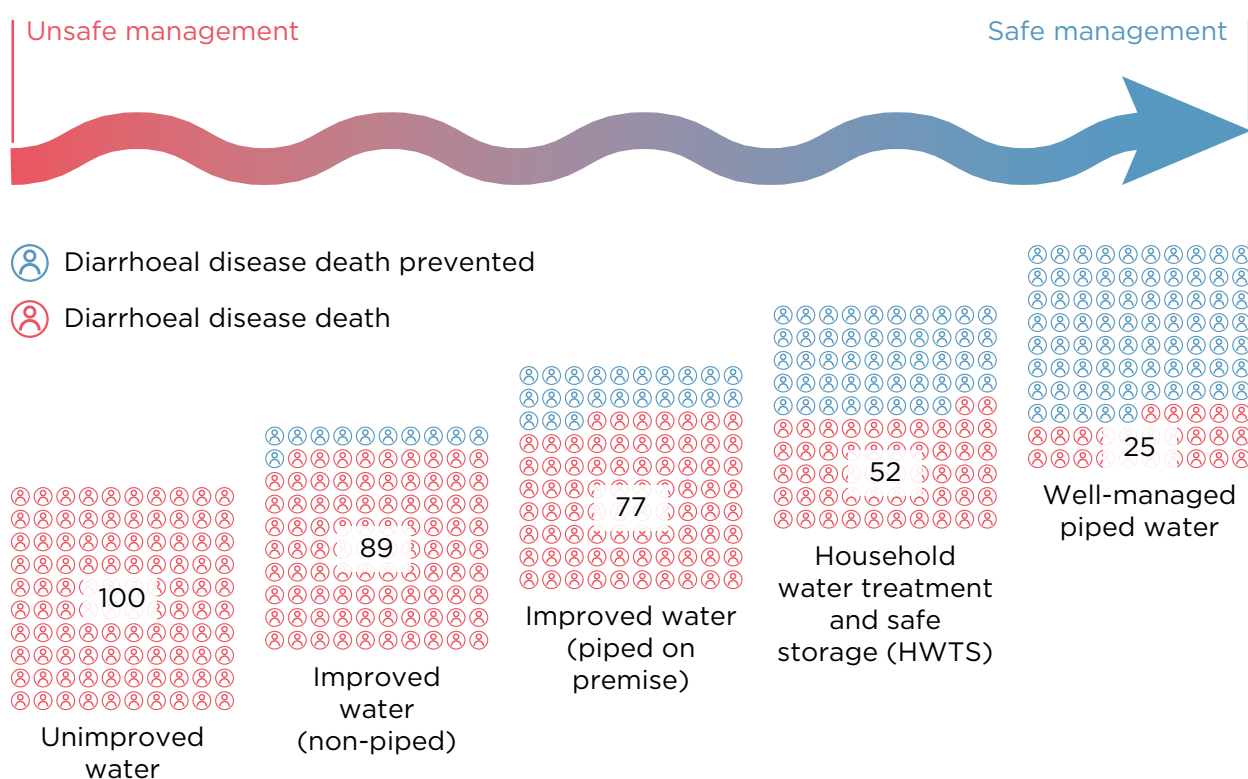
positive impact on the livelihoods of many and reduced the burden of disease related to unsafe WASH.²

However, poor WASH conditions still account for 842,000 diarrhoeal deaths every year³ and constrain effective prevention and management of other diseases including malnutrition, NTDs and cholera. Additionally, the challenge of AMR is looming large over the health sector, and as the arsenal of medical interventions is gradually undermined by this phenomenon, building a resilient foundation through the extension and improvement of drinking-water supply, sanitation and wastewater management infrastructure and services will prevent infections and help save antibiotics and other drugs for future needs. Improved wastewater treatment will also help control discharges of pharmaceuticals and resistant microbes to the environment.

Evidence suggests that improving service levels towards safely managed drinking-water or sanitation (indicators for SDG 6.1 and 6.2) such as regulated piped water or connections to sewers with wastewater treatment can dramatically improve health by reducing diarrhoeal disease deaths.

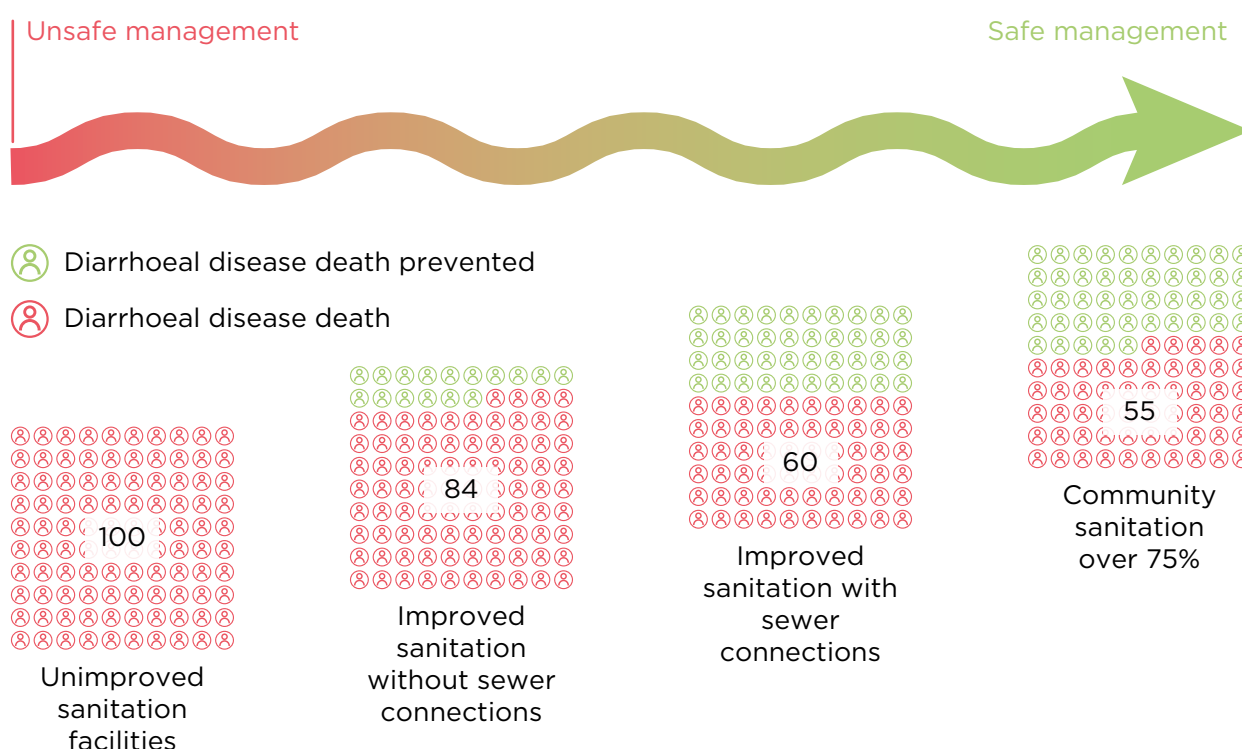
Figure 1 below illustrates the hypothetical example of a population that is drinking unimproved water with 100 diarrhoeal deaths partly due to the risks associated with unimproved water; diarrhoeal deaths would be reduced to 25 with well-managed piped water. Figure 2 below illustrates a similar hypothetical example for sanitation.

Figure 1: Reductions in diarrhoeal disease risk associated with improving drinking-water services



2. *Progress on Drinking Water, Sanitation and Hygiene: 2017 Update and SDG Baselines.* http://www.who.int/water_sanitation_health/publications/jmp-2017/en/
3. *Preventing diarrhoea through better water, sanitation and hygiene: exposures and impacts in low- and middle-income countries.* http://www.who.int/water_sanitation_health/publications/en/

Figure 2: Reductions in diarrhoeal disease risk associated with improving sanitation services



In addition to health impacts, access to sustainable WASH services is a critical aspect of equity, is an essential element of quality UHC, is recognized by the UN as a fundamental human right, and is cost-effective. The economic returns of WASH continue to be high with benefits of nearly five US dollars for every dollar invested.

1.3 WHO AND WASH

WHO has played a longstanding and significant role promoting WASH as 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 has performed the function of global WASH monitoring since its inception, and WHO provides an increasingly reliable and comprehensive evidence base to inform country policy decisions as well as WASH resource allocations by countries, partners and donors. Hygiene and sanitation are recognized in WHO's 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, the Organization focuses on its roles of generating and disseminating standards and guidelines, strengthening 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 also plays a role responding to public concern regarding WASH issues that may have health implications, such as emerging pollutants. WASH issues are increasingly being recognized within other WHO programmes as prerequisites to reaching objectives and achieving health gains. WHO's Department of NTDs is implementing a WASH strategy, acknowledging that WHO's commitment to eliminate or intensify control of NTDs by 2020 can only be achieved with WASH improvements. Similarly, partners within the WHO-led GTFCC have committed to end cholera by 2030 and have positioned WASH as a central platform in that approach. Experts agree that administration of drugs or vaccines for control of NTDs or cholera is necessary but must be complemented by WASH interventions if progress is to be accelerated or sustained.

Recent WHO/UNICEF evidence on lack of access to WASH in health care facilities has alarmed WHO departments dealing with AMR, emergencies, IPC, maternal, newborn and child health (MNCH), quality care and UHC. Understanding that lack of WASH in health centres undermines any efforts to improve quality of care, there is a clear need for input and mainstreaming of WASH into these programme areas. Similarly, WASH interventions in schools and other educational facilities are essential in promoting healthy school environments, as well as positive health and educational outcomes.

Within the PHE Department, substantive cooperation already exists between the climate change and WASH groups at all levels of the Organization. Climate-resilient water supply and sanitation is a key pillar of both the WASH and climate change strategies.

How WHO makes a difference

- WHO can leverage significant changes with its strong focus on health-based norms and guidelines. Ninety-three countries have implemented water safety planning, which was introduced in WHO's Guidelines for water safety planning in 2004. Guidelines on drinking-water quality and wastewater are used by both developing and developed countries as public health benchmarks, consistent with the universality agenda of the SDGs.
- WHO's ability to improve intersectoral planning for WASH and health stems from its ability to convene ministries of health, water and environment, regulators, water and sanitation service providers, rural authorities, external support agencies and other WASH practitioners to cooperatively and sustainably enact change. To facilitate multi-sectoral action on WASH and health, WHO implements multilateral environmental agreements that provide powerful platforms to drive change at regional and national levels.
- WHO has used its leverage, either through coordination with other UN agencies or through the convening power of ministries of health, to influence standards, norms and good practice in other sectors to reduce WASH-related health risks, for example through its guidance on the safe use of wastewater, excreta and grey water in agriculture and aquaculture.
- WHO has consistently targeted research and associated guidance in areas where the state of the evidence is low and health risks are high. Recent examples include management of the Ebola virus in excreta and assessment of WASH coverage in health care facilities.
- WHO, through its global monitoring instruments has shone a spotlight on countries' WASH status, governance, financing and progress towards international goals. The WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) and the WHO-led UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) have influenced numerous governments, external support agencies and other stakeholders to redouble efforts on WASH.

1.4 THE NEED FOR TRANSFORMATION

Rapid and recent changes in the global environment, including the impacts of climate change and unprecedented growth of urban populations, have led to new WASH-related issues and challenges. Moreover, WASH-related diseases still prevail despite years of collective efforts. Significant inequities persist between urban and rural, poor and rich, and general and vulnerable population groups. Widespread use of antibiotics has allowed for control of infections arising from deplorable sanitary and hygiene conditions, yet conversely, has also allowed for neglect of WASH. Now with AMR looming, new and innovative responses and approaches are required.

WASH is a complex, multi-faceted area typically spread across many government ministries and institutions, implicating the health sector's disease prevention and control programmes and quality care initiatives, and an array of non-health sectors. WHO's efforts to integrate WASH into existing health and non-health programmes and to influence actions that will prevent disease target a broad, and often

disconnected group of stakeholders with many competing priorities. To increase the effectiveness of WHO's WASH efforts, we need to more effectively communicate growing evidence of the cost-effectiveness and positive economic and health impacts of WASH in combination with other interventions. More advocacy work and continued efforts to strengthen WASH data and information are needed to bridge gaps in understanding and to increase the profile of WASH with public health ministries and other key stakeholders who set priorities and influence allocation of resources. Highlighting WHO's public health role in regulating and monitoring WASH services and influencing WASH sector policies contributes to the credibility and profile of the WASH sector at country level. Linking WASH to programmes such as AMR, cholera, climate change, emergencies, IPC, MNCH, nutrition and NTDs enables access to resources and demonstrates the central role of WASH in increasing sustainable impacts of these programmes and strengthening their resilience.

Incorporating longer-term climate change considerations into risk assessment for drinking-water quality and supply and particularly for sanitation is often overlooked, but will become increasingly necessary. Strengthening the resilience of water supply and sanitation systems requires systematic risk assessment of short- and long-term impacts of climate change in risk assessments. Where water is scarce, safe reuse of wastewater, particularly in agriculture, not only provides a buffer, thereby increasing resilience to climate change, but also contributes to food production and the nutritional status of local and urban communities. To make reuse a viable alternative, it needs to be safely managed so that it is protective of health and the environment.

External aid and support for WASH tends to be fragmented with numerous donors and non-governmental organizations (NGOs) engaged, and frequently with sub-optimal coordination. Within the UN system, more than 30 organizations work on various elements of water, although fewer focus exclusively on WASH. Better collaboration decreases duplication of efforts, and more importantly, creates unique opportunities to promote sustainable change. Working towards improved coordination and brokering of cross-sectoral approaches is central to WASH success. WHO is a member of UN-Water, the coordinating mechanism for fresh water management in the UN, and is an active member of GEMI, an inter-agency initiative focused on monitoring related to SDG 6. The WHO-led instruments JMP and GLAAS make a major contribution to UN-Water.

1.4.1 The SDGs, WHO and WASH

The SDGs offer unprecedented opportunities to improve health by dramatically increasing the availability and use of WASH services. WHO can contribute by assisting countries to improve policy, governance and monitoring. The SDGs also present increased demands for WHO technical assistance related to formulation of national targets, effective regulation and surveillance systems, risk management and WASH indicators. This work is supported by WHO's traditional role of monitoring, which will encompass establishing robust SDG baselines and tracking progress towards national and international WASH targets.

Beyond the WASH-focused Goal 6, the SDGs highlight the importance of WASH to the inter-sectoral collaboration and synergetic efforts required to achieve ambitious SDG goals across health, education, climate change, nutrition, energy and ending poverty. Achievement of numerous SDGs, including Goal 3 on health and Goal 13 on climate change, cannot be met without meaningful progress on Goal 6.

WHO, through its existing and emerging initiatives, is well-positioned to influence WASH health gains for the following reasons:

- The SDG goal of good health and well-being (Goal 3) explicitly calls for combating water-borne diseases (3.3) and for reducing death and illness from unsafe water, unsafe sanitation, and lack of hygiene (3.9).
- The strong focus of SDG 6 on safely managed WASH services – with “safely” implying an essential health dimension – reinforces the need to manage and monitor drinking-water and sanitation according to internationally-accepted WHO norms and guidance.
- The SDG target language of access to WASH for “all”, implying all settings, along with recent evidence showing challenges in small systems and rural areas, as well as extreme neglect for WASH in health care and educational facilities, has driven interest from countries and partners to take action and seek WHO guidance to improve and monitor these particularly vulnerable settings.
- With recognition of the funding gap to meet the SDGs and the need to spend existing resources more effectively, demand has grown from countries and sector partners to apply methodologies such as WHO’s TrackFin to assist countries in tracking financial flows in the WASH sector and thereby increasing their ability to more effectively raise and allocate resources.
- The emphasis of the 2030 Agenda on integrated and multi-sectoral responses implies an increased need for WHO’s established WASH coordination and leadership within and beyond WHO⁴, including education, urban planning, financing and beyond.
- The SDG emphasis on the lead role of countries and governments in national target-setting and monitoring increases demand for:
 - WHO’s role in regional processes and multilateral agreements that assist Member States in translating and operationalizing WASH-related SDG targets through policy dialogue, intersectoral work and whole-of-government approaches.
 - WHO technical collaboration for strengthening national WASH monitoring systems and annual review mechanisms.

A transformation in approach including targeted advocacy efforts is now needed to meet the more ambitious and comprehensive SDG targets, including universal and equitable access to safely managed WASH services by 2030 and related targets, such as universal health coverage. This also includes increasing the focus on strengthening Member State capacity.

With the SDGs emphasizing a shift to country-driven target-setting, financing, implementation and monitoring, the role of WHO (and other agencies) must change to more effective technical support to national institutions charged with these tasks. Consistent and timely national data provide a reliable evidence base to inform policy decisions and programme design, track progress, and raise the profile of WASH by demonstrating the impact of WASH on health and other outcomes.

The SDGs reinforce the need to expand WHO’s ongoing role of technical cooperation in response to Member State requests and needs around strengthening WASH policies, regulations and monitoring; delivering and supporting uptake of WASH guidance (e.g. water safety plans (WSPs) and sanitation safety planning (SSP));

4. For example: SDG 3.8 – UHC, WASH included as tracer indicator for a package of indicators; 3.9 – Deaths from hazardous chemicals, air, water and soil pollution; 4.a – WASH in schools; and other indicators with links to WASH include 1.4 basic services for poor, 2.2 ending all forms of malnutrition, and 5.5 full and effective participation by women at all levels.

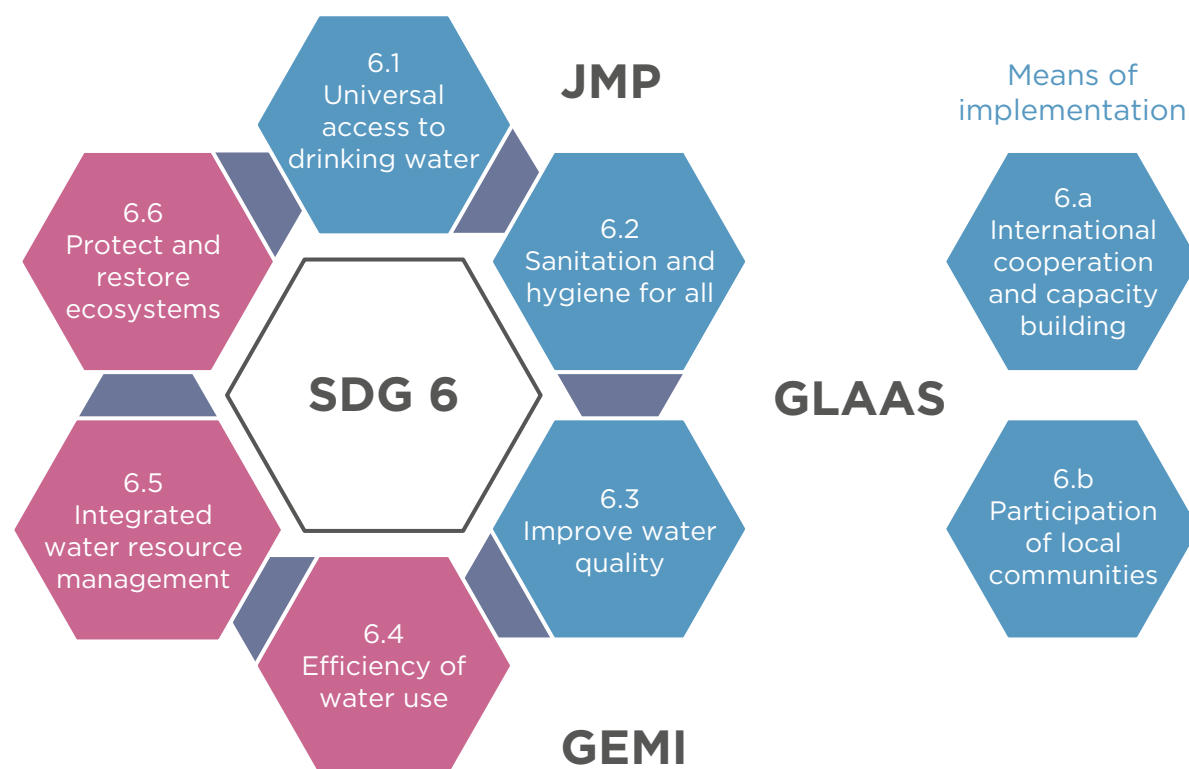
partnering on integration of WASH strategies for relevant programmes; responding to WASH aspects of emerging issues; and supporting emergency response operations relevant to WASH.

WHO provides regional and country support tailored to local contexts. For example, the UN Economic Commission for Europe (UNECE)/WHO Protocol on Water and Health in the European Region assists Member States in translating and operationalizing WASH-related SDG targets in national contexts and provides a platform to facilitate intersectoral work and whole-of-government approaches as enablers for better WASH. The European Environment and Health Process, through the 2017 Ostrava Declaration, stipulates the development of national portfolios of action in seven priority environmental health domains, including in WASH. Similarly, WHO is working with ministries of health and of the environment to implement the Libreville Declaration on Health and Environment in Africa. In its South-East Asia and Western Pacific Regions, WHO, through its Regional Forum on Environment and Health, is working to strengthen the cooperation of the ministries responsible for environment and health by providing a mechanism for sharing knowledge and experiences, improving policy and regulatory frameworks, and promoting the implementation of integrated environmental health strategies and regulations. Indeed, all WHO regions are playing similar roles in promoting intersectoral action on WASH and health, ranging from supporting long-term uptake of WSPs and SSP in policy and practice and facilitating specific initiatives (e.g. climate resilient WSP), to advocacy and technical input into regional sanitation conferences.

WHO's monitoring programmes fully recognize the role played by national regulators not only in providing public health oversight on drinking-water safety, but also as providers of data for the SDGs. The WHO/UNICEF JMP works closely with national authorities to strengthen their capacity to scale up low-cost water quality testing. The WHO-led UN-Water GLAAS has also started monitoring the capacity of national regulators and their roles in countries.

WHO is centrally involved in monitoring WASH-related SDG targets through its role as custodian or co-custodian of SDG 6 targets through GEMI, JMP and GLAAS as depicted in Figure 3 below.

Figure 3: WHO's role in WASH-related SDG monitoring (blue indicates where WHO is lead or co-lead)



1.4.2 Strengthening inter-sectoral and cross programme collaboration

Increasing WASH integration and collaboration across sectors and programmes and at all levels aligns with the broader WHO PHE strategy under development and changes required to achieve SDGs.

While the health sector will remain a primary partner of WHO, a growing focus on whole-of-government approaches means that WHO work on WASH must significantly expand engagement beyond the health sector. Providing evidence and advocating for responsibilities for improving WASH with environment, education, finance and other sectors will multiply WASH impacts and complement health-centred work. WASH participation in and support to multi-sectoral partnerships and platforms will increase our effectiveness in catalysing positive change and promoting informed priority-setting covering both the “leave no one behind agenda” around access to basic services along with “safely managed” interventions that require more intensive efforts.

Current efforts in regions and countries demonstrate the importance of multi-sectoral approaches and more active partner collaboration. For example, the European health policy framework “Health 2020” is based on a whole-of-government approach; the WHO Western Pacific Regional Framework for Action on Health and the Environment on a Changing Planet calls for integrating basic environmental health services such as access to clean air, safe water and basic sanitation, in national health sector development plans; and the Observatory for WASH platform in the WHO Region of the Americas calls for action in WASH towards the achievement of SDG 6. A strong working relationship with implementing

partners at country level such as UNICEF adds value to their service delivery efforts with provision of WHO standards or training specifications. SDG monitoring through JMP, GLAAS, GEMI and other partnerships provides entry points to engage governments on WASH and to provide technical assistance on safely managed water and sanitation.

1.4.3 Increasing WHO impact

Table 1 below describes a list of how WHO plans to increase impact by evolving its approach in traditional areas of work.

Table 1: Increasing WHO impact

TRADITIONAL IMPACT AREAS	TRANSFORMATIONAL APPROACH
WASH work oriented towards WASH sector.	Mainstream WASH within WHO by actively incorporating WASH expertise into disease programmes and partnerships such as cholera, NTDs and nutrition. Work with IPC, MCNH and quality care programmes on WASH in health care facilities. Work with child and adolescent health programmes on WASH in schools. On AMR, work with environmental agencies to monitor AMR bacteria and antibiotic residues in wastewater effluent.
Publish WASH burden of disease figures, focusing on diarrhoeal disease.	Increase communication on the policy relevance of findings, including for national target setting. Address underlying issues associated with weak evidence base on WASH (e.g. intervention studies that do not reach significant levels of WASH coverage).
Focus on drinking-water quality and monitoring. Focus on norms related to water quality risk management.	Significant new attention and dedicated team on sanitation and hygiene. More emphasis on promoting adoption and implementation of WSPs in policy and practice. Broaden risk assessment to address climate resilience and water security and quantity, assess performance of household water treatment technologies and links with risk assessment and management for sanitation systems.
Guidelines are developed using best evidence and science.	Greater end-user engagement in guidelines development and follow-up actions and supporting tools for regulators and practitioners. Work with governments and development partners to promote and support the development of standards and practices that are achievable for the local context, including through promoting the setting of national targets that support incremental improvements over time.

Table 1: Increasing WHO impact (cont.)

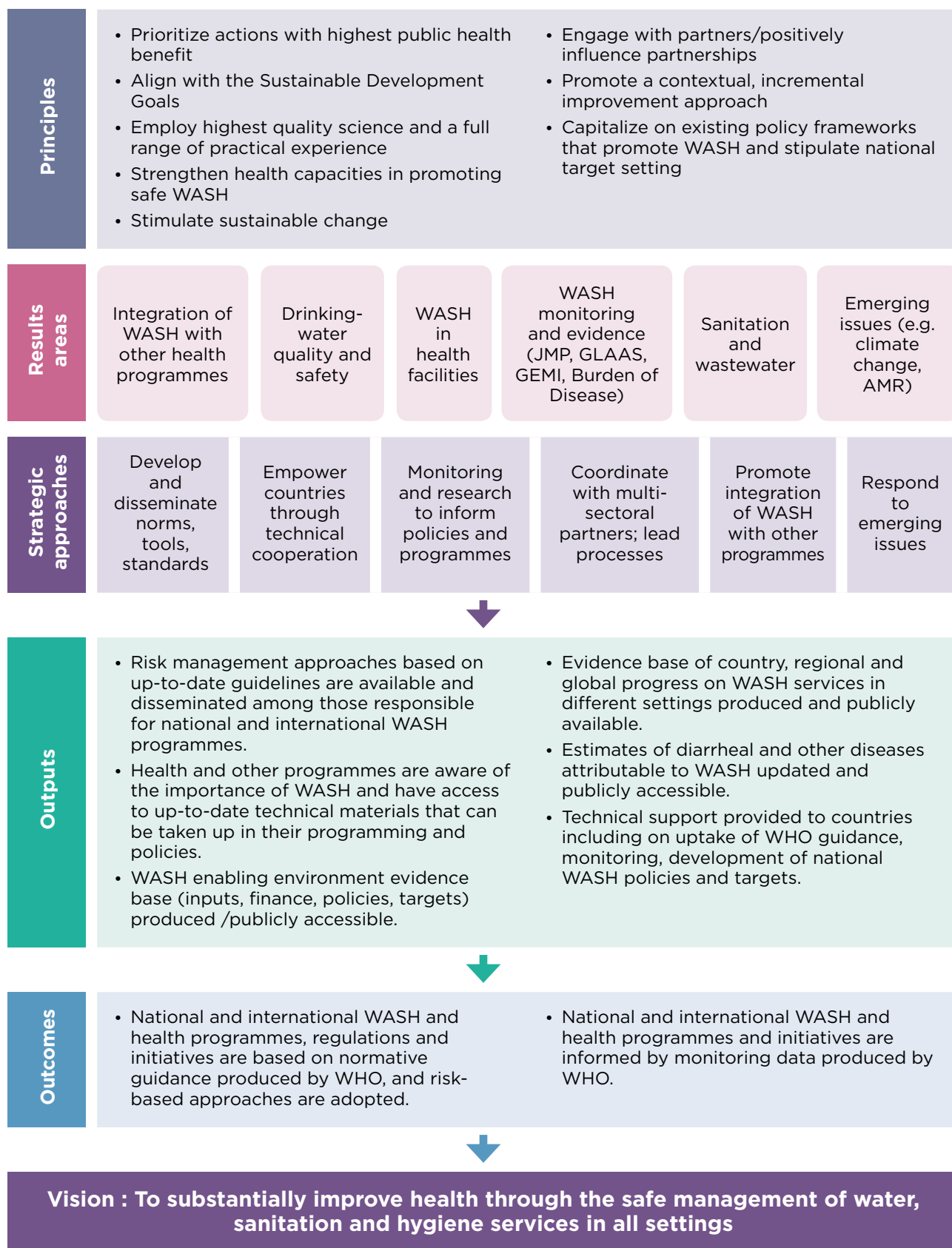
TRADITIONAL IMPACT AREAS	TRANSFORMATIONAL APPROACH
Sanitation addressed through specific Guidelines (e.g. safe use of wastewater, sanitation on ships).	Development and implementation of Sanitation Guidelines: Comprehensive evidence-based guidance on sanitation and health with support for implementation at country level. More emphasis on promoting adoption and implementation of SSP in policy and practice.
Hygiene addressed through specific Guidelines.	New focus on hygiene within JMP monitoring and as part of WASH and health care facility work, including work on hand hygiene and hygienic storage of water in households.
Work with ministries of health, water and environment to enact standards and policies.	Convene multiple sectors that impact and share responsibility in WASH; broaden focus to include health and health-sector voices in WASH governance, policy and practice. Work also with programme implementers and development banks to influence their practices and finance policies.
Provide economic cost-benefit figures of WASH interventions.	Work with countries to implement TrackFin, a robust methodology to track WASH expenditures to empower governments to develop informed WASH financing strategies.
Monitor improved/unimproved water and sanitation using technology proxies. Use household survey data as a basis for JMP safe WASH coverage data.	Monitor water safety, availability and accessibility; monitor safe management of excreta through the sanitation chain. Progressively draw on data from national regulatory agencies and other administrative data; expand data collection in other ways to fill data gaps.
Focus action on households, communities and cities.	Extend to health care facilities, schools and workplaces and other high-risk institutional settings.
Communicate via web-based library and through convening of physical meetings.	Where feasible, use new communication approaches such as webinars, interactive smart phone programmes, social media, short videos and interactive online tools.

2. THE WHO WASH STRATEGY

2.1 WHO STRATEGIC PLAN FOR WASH: 2018-2025

A WASH strategic plan based on an overarching framework will clarify WASH programme priorities, including evolving and new functions. It will also help address the complexity of WASH at each level, improve mutual support, and connect and synchronize actions across regions and countries. The Plan is a global strategic framework, which can be adapted to regions and countries based on their health needs and context. The strategic framework in Fig. 4 below summarizes key elements of the WHO WASH Strategy 2018–2025, including the outputs that will contribute to outcomes and the overarching vision.

Figure 4: WHO strategic framework on WASH



2.1.1 Strategic approaches 2018–2025

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

1. Develop, update and disseminate health-based guidance documents and best practice guides, norms and standards that support standard-setting and regulations at national level, particularly for drinking-water safety, effective surveillance approaches, recreational water quality, sanitation safety, safe wastewater use, WASH in health and educational facilities, and WASH monitoring.

2. Empower countries through multi-sectoral technical cooperation, advice and capacity building to governments, practitioners and partners including on:

- Health and WASH sector capacities with respect to their public health oversight roles,
- National policies and regulatory frameworks,
- National systems for effective water quality and disease surveillance, including outbreak response,
- National systems for WASH monitoring, and
- National WASH target-setting.

3. Monitor, research and report reliable and credible WASH data to inform policies and programmes including on:

- WASH risk factors and burden of disease,
- The status of key output indicators for WASH (through JMP),
- Progress towards relevant WASH-related SDG targets (e.g. SDG 1.4; SDG 3.3 and 3.9; SDG 4a; SDG 6.1, 6.2, 6.3, 6a and 6b; SDG 13 and others),
- The enabling environment (input indicators) for WASH including WASH financing (through GLAAS and TrackFin), and
- Wastewater and SDG 6 interlinkages through GEMI.

WHO's role in monitoring will be expanded in scope by including additional elements on water and sanitation, hygiene, WASH in schools and health care facilities, wastewater, and the SDG 6 means of implementation. Analysis of results will be cross-cutting across the SDGs and within SDG 6 through WHO's participation in GEMI.

4. Coordinate with multi-sectoral partners, lead or engage with global and regional platforms, and advocate for WASH to:

- Influence political will and policy uptake of effective WASH strategies (e.g. for WSPs and risk-based surveillance, SSP),
- Increase focus on effective WASH regulations and policies,
- Expand and strengthen multi-sectoral collaboration at national level,
- Coordinate networks of practitioners and partners and collaborating centres, and
- Support multilateral global- and regional-level instruments, frameworks and protocols in the field of WASH.

5. Promote integration of WASH with other health programmes, for example disease programmes for cholera and NTDs, emergencies programmes, quality care and IPC, especially through WASH in health care facilities, nutrition programmes and AMR programmes.

6. Respond to emerging issues such as climate change and WASH, including the impact of water scarcity on public health, and AMR.

2.1.2 Priority intervention areas 2018-2025

WHO will organize WASH activities in the following priority areas where it has existing activities and partnerships or an emerging critical role:

- **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, maximising health benefits of sanitation interventions and of 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.
- **GLAAS** to provide policy- and decision-makers with a comprehensive global analysis of investments and the enabling environment for WASH.
- **JMP** 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** such as AMR, cholera, climate change, emergencies, IPC, MNCH, NTDs, nutrition, UHC, water security to increase synergies and impacts.
- **Emerging issues on WASH** to address critical new areas including AMR, climate change and emerging contaminants of concern.

For more details on each of these intervention areas, please see descriptions provided in Section 3 and the Theory of Change in Appendix A.

2.1.3 WASH objectives within the WHO Global Programme of Work 2019-2023

The 13th General Programme of Work (GPW 13) sets out WHO's strategic direction, provides a framework to measure progress, and outlines how WHO will implement the GPW 13. The GPW 13 will cover the period 2019–2023. Through GPW 13, WHO will measure its results and detail its contribution, in support of countries and alongside other actors, to outcomes and impact. In response to the challenge to leave no one behind, GPW 13 sets targets of 1 billion people for each of its strategic priorities, placing the impact on the most vulnerable people at the heart of its work. GPW 13 is accompanied by the WHO Impact Framework to measure progress. Within the WHO Impact Framework, WASH targets have been established to be pursued collectively by Member States and partners as presented in Table 2 below. WHO 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.

Table 2: WASH targets in the GPW 13⁵ and in response to the UN Secretary-General's call for action

COLLECTIVE GOAL TO BE PURSUED	WHO'S UNIQUE CONTRIBUTION	MEANS OF VERIFYING WHO'S CONTRIBUTION	NOTES
Provide access to safely managed drinking-water services for 1 billion people	Monitor and report on access to safely managed drinking-water services. Support inclusion of the WHO Guidelines on Water Safety Planning in national policies and programmes. In target countries, support and strengthen drinking-water regulators, surveillance agencies and similar institutions for oversight of drinking-water safety.	WHO's contribution will be assessed by measuring the number of countries with water-safety planning policies using risk-based approaches, and the number of countries with national targets aligned with the SDG criteria for safe management of drinking-water.	In 2015, 71% of the global population (5.2 billion people) used safely managed drinking-water services. By 2023, an additional 1 billion people are to gain access to safe drinking-water.
Provide access to safely managed sanitation services for 800 million people	Monitor and report on access to safely managed sanitation services. Support implementation of the WHO Sanitation Guidelines and sanitation safety planning for sanitation access and safe excreta management through partnerships and implementation in target countries. Support countries in their strategies to end open defecation.	WHO's contribution will be assessed by measuring the number of countries that are implementing WHO Sanitation Guidelines and sanitation safety planning using risk-based approaches, and the number of countries with national targets aligned with the SDG criteria for safe management of excreta along the sanitation chain.	In 2015, 39% of the global population (2.9 billion people) used safely managed sanitation services. By 2023, an additional 800 million people will gain access to safe sanitation. ⁶
The below goal, supporting the GPW, is being highlighted as a high-profile goal in response to the UN Secretary-General's Global Call for Action on WASH in health care facilities.			
Increase the number of health care facilities in low and middle-income countries with basic water, sanitation and hygiene with ultimate goal of 100% coverage by 2030	Implement national WASH in HCF packages (assessments and analyses, targets, standards, budgeted action plans and monitoring and review). Work with partners to improve services, hygiene behaviour and access financing.	WHO's contribution will be assessed by measuring the number of countries that have implemented national packages including setting and monitoring progress on national targets.	Baseline numbers forthcoming in WHO/UNICEF SDG 6 report; approximately 40% of health care facilities lack water. ⁷ Countries will be supported by a global campaign to improve services (basic and/or more advanced) in line with national priorities.

5. Subject to revisions pending Member State feedback on GPW framework and impact indicators.

6. Target estimates take into account projected population growth, along with annual rates of change assumptions. Assumption based on the annual rate of change in 2015–30 would be 25% higher than the rate of change from 2000–2015. Focus on quality of systems, economic and technical development will accelerate progress.

7. Based on figure from 2015 WHO/UNICEF report. Water, sanitation, hygiene in health care facilities: status in low and middle income countries. http://www.who.int/water_sanitation_health/publications/wash-health-care-facilities/en/

2.2 DELIVERING WASH THROUGH THIS STRATEGY

2.2.1 Resourcing the work

Political will, financial resources and sufficient human resources with relevant WASH expertise and experience as well as collaboration and outreach skills will be required at all levels – global, regional, national and sub-national – to deliver the expected results described above. WHO's WASH work is funded almost exclusively by designated funding and has typically faced significant resource constraints at regional and country levels.

Accomplishment of this strategy can be achieved with maintenance or modest growth of a small but effective WASH secretariat at WHO headquarters, coupled with more significant growth in WHO regional offices and especially country offices.

2.2.2 Investment case

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 1 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.

The below table summarises the expected social and economic returns from the planned investments in WASH, AMR and climate resilience for the period 2019 to 2023⁸.

Table 3: Costs and benefits of investing in WASH

	TOTAL INVESTMENT	HEALTH BENEFITS (LIVES SAVED, MILLIONS)	EXPECTED ECONOMIC GAINS (ACCRUED DURING PERIOD)	RETURN ON INVESTMENT
WASH	US\$ 42 billion	0.9	US\$ 126 billion	3.0
AMR	US\$ 20 billion	1.6	US\$ 12- \$436 billion	0.5-21.8
Climate resilience	US\$ 4 billion	0.2	US\$ 126 billion	3.0

8. WHO Investment Case – Version 30 March 2018

2.2.3 Value for money

WHO will ensure that operationalization of the strategy offers good value for money by:

- Documenting WHO's 'value-add' to the WASH sector, for example:
 - WASH monitoring increases awareness and accountability of national governments to set and meet WASH targets thus encouraging greater domestic resource mobilisation for WASH.
 - WHO's work on tracking national financing to the WASH sector (TrackFin) supports more effective use of WASH funds to achieve national WASH targets.
 - WHO's multi-sectoral convening power enables greater efficiency across the many government and non-government actors in WASH.
- Leveraging partners to contribute to WASH work at all three levels of the Organization.
- Leveraging other WHO health programmes to contribute to WASH work at all three levels of the Organization.
- Encouraging secondments from other organizations to expand WASH human resources and technical capacity at all three levels of the Organization.
- Identifying and managing risk (see Appendix C).
- Following a robust competitive process for all procurement of goods, work and services.
- Applying cost savings and documenting as part of annual results monitoring. For example:
 - Cost savings in travel (e.g. identifying local or regional human resources to reduce travel; using economy class travel as appropriate).
 - Reduction in meeting costs through appropriate use of virtual meetings.

2.2.4 Strengthening impacts of the work

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.

Results and impacts of WHO work on WASH at country level would be strengthened by:

- Increasing recognition of WASH work as WHO's core business mandated by WHO Constitution and WHA Resolutions;
- Ensuring resources for WHO National Professional Officers (NPOs) where resources allow, with appropriate technical skills dedicated or partly dedicated to environmental health, including WASH;
- Strengthening country office capacity and technical skills in environmental health and WASH through continuing education; and
- Effective and timely technical backstopping of country offices by regional offices with sufficient capacity and technical expertise.

How WHO will support WASH work at all levels of the Organization

- Continued communications, advocacy and awareness-raising about WASH and health within WHO, and about the work and role of WHO in the WASH sector with partners and stakeholders.
- WASH resource mobilization that is inclusive of required resources and technical support at headquarters, regional and country levels of the Organization.
- A coordinated approach to country technical support across the WASH teams and work areas to increase both effectiveness and cost benefit.
- Collaboration between headquarters, regional and country offices on WASH country activities supported by:
 - A WASH mapping of countries including country level resources (environmental health or WASH staff), relevant WHO networks, other local WASH resources, and planned activities.
 - Routine virtual (and occasional face-to-face) meetings involving headquarters, regional office and country office WASH staff to increase alignment and efficiency of programme delivery at country level.
- Contribute to developing capacities and technical skills across the Organization:
 - Developing a WASH module to inform and align WHO staff from different programmes/departments at all levels on WHO's work on WASH and the importance of WASH to health.
 - Regular information sharing between headquarters, regional and country offices on technical, regional and country-specific aspects of WASH work, potentially through regular webinars on specific WASH topics.

2.2.5 Monitoring and measuring progress

The WHO strategic framework on WASH (Fig. 4) shows expected outputs and outcomes as a result of WHO's strategic work in WASH towards the overarching vision over the next seven years. Details on activities by results area are found in Section 3, and the Theory of Change in Appendix A shows activities, outputs and outcomes. A monitoring logframe will document the related indicators, means of verification, targets and relevant risks and assumptions.

Please see Appendix B for the WHO PHE outputs and indicators for WASH from the 2018/2019 Programme Budget, and a description of the roles identified for the three levels of the organization: country offices, regional offices and WHO headquarters.

In line with the WHO GPW and the increased focus on accountability by WHO, donors and partners, WHO will regularly monitor and document progress against outputs and outcomes through:

- Regular monitoring and reporting on the WHO PHE outputs and indicators for WASH;

- Regular monitoring of outputs and outcomes with WASH staff from all levels of the Organization and WASH partners; and
- Publication of an annual WHO WASH Results Report covering progress and impacts of work as outlined in the strategy, Theory of Change and logframe.

3.

WHO WASH PRIORITY INTERVENTION AREAS

3.1 DRINKING-WATER AND RECREATIONAL WATER QUALITY AND SAFETY

Change objectives

- To support continuous and sustainable improvements in water safety and the achievement of the SDG 6 indicator on safely managed drinking-water services:
 - Regional and national drinking-water quality regulations and standards developed for both large and small systems as well as household water treatment and safe storage (HWTS) based on the principles included in WHO Water Quality Guidelines, considering country priorities, needs and available resources.
 - Application of WHO norms on HWTS through testing product performance.
 - All water supply systems managed based on water safety planning principles. As part of the sustainable scaling up of WSPs, climate change risks will be addressed systematically.
 - Risk-based drinking-water quality surveillance implemented covering both large and small systems, in alignment with country drinking-water quality regulations and standards.
- Public health criteria incorporated in national and regional recreational water quality regulations.
- Coordinated and intersectoral planning and implementation of the above activities.
- Reduction of inequalities in access by targeting endemic areas and vulnerable groups and by tailoring interventions to better interrupt disease transmission.
- WHO recommendations on emerging issues, including micropollutants potentially transmitted through drinking-water, influence actions by health authorities and researchers.

Problem Statement/Opportunity

With 2.1 billion people lacking a safely managed drinking-water supply and more than half of the 842,000 WASH-related deaths attributed to unsafe drinking-water⁹, the SDG ambition for safely managed drinking-water for every household underscores the significant potential health impact of achievement of SDG Target 6.1. The WHO Guidelines for Drinking-water Quality (GDWQ)¹⁰ provide the international reference point to ensure safe drinking-water, and it is expected that demand for normative guidance and best practice resources will increase in the SDG period, particularly as 2.1 billion people are estimated to be without safely managed drinking-water services¹¹. As the scientific evidence base underpinning the

9. Preventing diarrhoea through better water, sanitation and hygiene: exposures and impacts in low- and middle-income countries. http://www.who.int/water_sanitation_health/publications/en/

10. http://www.who.int/water_sanitation_health/publications/drinking-water-quality-guidelines-4-including-1st-addendum/en/

11. Progress on Drinking Water, Sanitation and Hygiene: 2017 Update and SDG Baselines. http://www.who.int/water_sanitation_health/publications/jmp-2017/en/

Guidelines continually evolves, regular updates will be needed to ensure that they remain current, applicable and appropriate. Further experience has demonstrated that increased attention is needed to support countries in implementing the Guidelines, particularly in adapting complex, global drinking-water quality principles to each country's context. With decades of experience and lessons learned from collaboration with countries and partners to improve drinking and recreational water safety, WHO is well positioned to lead global capacity-building efforts.

Unique role and added value of WHO

WHO is uniquely positioned to lead global efforts on water safety through its GDWQ. The influence of these Guidelines is reflected in a WHO report¹² which highlights that nearly 50 countries have policy or regulatory instruments in place that promote or require WSPs. WSPs are the recommended risk management approach in the WHO GDWQ. In addition, Pinto et al (2012) found that in South America, the GDWQ have been influential in setting drinking-water standards in many countries in the region.¹³ The Guidelines also influence the work of NGOs, development banks and other UN agencies, as reflected by the number of agencies promoting and supporting implementation of WSPs¹⁴. WHO also plays a key role in providing normative guidance on water safety at the household level and in certain circumstances, such as in health care facilities and schools, and through the WHO International Scheme to Evaluate Household Water Treatment Technologies¹⁵. In addition to influencing policies and practices, WHO regional and country offices are also able to provide technical support that draws on a wealth of expertise and experience working directly with practitioners to promote effective risk management practices in large and small water supply systems and individual households. Strong and complementary partnerships with IWA and UNICEF also support harmonized actions.

Activities and outputs

- Develop, update and disseminate health-based guidelines, supporting resources and training materials including on:
 - Drinking-water and recreational water quality guidelines, including on small drinking-water supplies.
 - Guidance and tools for the development of risk-based drinking-water regulations and standards and surveillance programmes, complementing the how-to guidance on WSPs.
 - Workshops on WSPs and standard setting to multiply impacts.
 - Updated guidance on WSPs to support systematic assessment and management of climate change risks, to support impact assessment of WSPs, and to address the wealth of experience gained with WSP implementation.
 - Simplified protocols and training materials for evaluating the performance of household water treatment technologies in low-resource settings, and more generally, on microbiological analyses of drinking-water.

12. *Global status report on water safety plans*. http://www.who.int/water_sanitation_health/publications/global-status-report-on-water-safety-plans/en/

13. Pinto et al., 2012. *Drinking water standards in South American countries: convergences and divergences*. 10.2, pages 295-310. *J of Water and Health*.

14. *Including the Asian Development Bank, Sphere and UNICEF*.

15. *WHO Scheme to Evaluate Household Water Treatment Technologies website* http://www.who.int/water_sanitation_health/water-quality/household/scheme-household-water-treatment/en/

- Provide country technical support and capacity building to governments, practitioners and partners on standard setting, HWTS, water safety planning, water quality testing and surveillance.
- Implement and disseminate results from the WHO International Scheme to Evaluate HWTS.
- Lead, engage or coordinate with multi-sectoral partners, platforms and policy processes to catalyse change, multiply impacts and advocate for regulation and management in accordance with the principles included in WHO Guidelines for Drinking-water Quality.
- Monitor the impact of these activities on policies and practice to more effectively inform decision-making. Outputs may include updates to the status reports on WSPs and standard setting.

3.2 SANITATION AND WASTEWATER

Change objectives

- Sanitation and wastewater policy-makers informed by reliable global estimates on burden of disease, sanitation coverage and wastewater treatment and safe reuse.
- Health benefits from sanitation policies and interventions enhanced through application of new WHO sanitation and health guidelines and updated wastewater use guidelines.
- Health risk assessment and management built into national policies and local level service delivery, including through a sanitation safety planning approach.
- Reduction of inequalities in access by targeting endemic areas and vulnerable groups and by tailoring interventions to better interrupt disease transmission.
- A substantial increase of safe reuse of wastewater and climate resilient planning of sanitation systems implemented as climate change adaption measures.
- Emerging risks and priorities characterized through evidence-based reviews and disseminated.

Problem Statement/Opportunity

The WHO health mission cannot be achieved when people continue to live in an unsanitary environment contaminated with human excreta. Poor sanitation and wastewater management is attributed to 280,000 deaths¹⁶ from diarrhoea every year and it hampers progress on many WHO priority areas such as AMR, cholera, food safety, infant mortality, malnutrition, NTDs, polio, typhoid, Zika and even the attainment of UHC. Poor sanitation denies people, especially women and girls, dignity, safety and opportunities in education at work.

The transformational role sanitation and wastewater management has played in improving public health in the last century is clear. Every US dollar invested in

16. From the WASH Burden of Disease report to be published during 2018.

sanitation yields nearly five dollars in economic return¹⁷, yet still 4.5 billion people lack access to a safely managed sanitation service.

While sanitation and wastewater management are now higher on the development agenda, health sector leadership is generally lacking. Recent epidemiological studies have found that sanitation interventions, as currently implemented, are not achieving anticipated health outcomes. The reasons are myriad, but interventions are not adequately preventing human exposure to excreta along the entire sanitation chain. Efforts to improve sanitation are often fragmented among many actors along the chain and there is a lack of coordinated planning and oversight needed to keep excreta out of communities, bathing and drinking-water sources, and food. The voice, influence and standard-setting function of WHO is needed to ensure sanitation and wastewater interventions achieve the improvements in health demonstrated possible (see Fig. 1).

Unique role and added value of WHO

WHO can add value by influencing and complementing the work of other external support agencies, governments and NGOs, and by inserting its health-protective norms into policies and programming. WHO will promote health-based programming that addresses the entire sanitation chain using a combination of technologies and market and behaviour change approaches, combined with strengthening public health oversight and regulation.

WHO will also promote linkages with health programmes to influence investment in sanitation to maximize health outcomes particularly for vulnerable groups.

WHO can also expand on the established global monitoring programmes under JMP and GLAAS to cover the most health relevant aspects of SDG 6 – for example wastewater treatment and use under target 6.3.

Activities and outputs

- Engage in global and regional fora to set and track political commitment and progress on sanitation services delivery and participate in strategic partnerships with donors and partners with an emphasis on urban sanitation.
- Extend SDG global monitoring by JMP and GLAAS to include Target 6.3 covering safely treated wastewater and supplementary data on safe reuse where available.
- Implement the new WHO Sanitation Guidelines and ensure that sanitation policies, programmes and services incorporate health risk assessment and management as well as climate change considerations.
- Provide country support for evidence-based sanitation regulations for safe management of quality sanitation services.
- Promote effective risk assessment, management and regulations along the sanitation chain through the implementation of sanitation safety planning.
- Provide country technical support and capacity-building to governments, practitioners and partners on sanitation safety planning, wastewater treatment and safe reuse, and disposal of wastewater and faecal sludge.
- Prioritize health-based sanitation services to target high disease burden areas in collaboration with disease programmes (e.g. NTDs, cholera, nutrition).

17. *Global costs and benefits of drinking-water supply and sanitation interventions to reach the MDG target and universal coverage.* http://www.who.int/water_sanitation_health/publications/2012/globalcosts.pdf

- Provide WASH technical support to outbreaks and emergency response.
- Pilot and disseminate climate change adaptation models for sanitation.
- Strengthen evidence for behaviour change approaches to end open defecation (in partnership with UNICEF).
- Develop and advance the research agenda and sanitation and wastewater barriers to combat AMR.

3.3 WASH IN HEALTH CARE FACILITIES (HCF)

Change objectives

- WASH and health care waste management in HCF is included in global and national health policies and programmes. This includes priority areas such as AMR, IPC, MNCH and quality UHC. Development and implementation of such plans require that key decision-makers, health facility staff and users champion WASH in HCF.
- By 2023, 40 low- and middle-income countries have implemented a national package on WASH in HCF including setting and tracking national targets.
- Global and national health and WASH monitoring includes harmonized core and expanded indicators to track WASH in HCF.
- Risk-based quality improvement plans (WASH for Health Facility Improvement Tool: WASH FIT) are implemented, monitored and demonstrate service level improvements in 20 countries by 2020 and 30 countries by 2023.
- Operational evidence is generated on the health, economic and social benefits of WASH in HCF and is used to advocate for greater investments.
- WASH in schools advocacy, monitoring and standards strengthening are advanced through regional and country efforts including under the European Protocol for Water and Health.

Problem Statement/Opportunity

In 2015, for the first time, WHO and UNICEF assessed the status of WASH in HCF in low- and middle-income countries.¹⁸ With nearly 40% of facilities lacking improved water, nearly 20% without sanitation, and 35% without hand hygiene materials, WHO, UNICEF and partners committed to address the situation at a global meeting¹⁹ with the aim of *achieving universal access in all facilities, in all settings by 2030*.²⁰ Adequate WASH in health care facilities contributes directly to WHO's GPW target of 3 billion, principally by supporting UHC through essential services and quality care improvements, but also by emergencies, and through multisectoral work to benefit healthier populations. Current internal efforts are underway with colleagues in AMR, emergencies, IPC, MNCH and quality UHC to embed WASH in

18. WHO/UNICEF, 2015, *Water, sanitation, and hygiene in health care facilities: status in low and middle-income countries and way forward*. Report. http://www.who.int/water_sanitation_health/publications/wash-health-carefacilities/en/

19. WHO/UNICEF, 2015. *Water, sanitation and hygiene in health care facilities: urgent needs and actions*. Meeting Report. http://www.who.int/water_sanitation_health/en/

20. WASH in health care facilities goes beyond water, sanitation and hygiene to include safe health care waste management, including segregation, collection, transport, treatment and waste disposal.

HCF technical support and monitoring within focused country efforts and share knowledge and outcomes of these country-focused efforts. WHO will continue to work to mainstream WASH into key health areas, broaden efforts to address financing and economic aspects, and will continue to promote and monitor the status of WASH in HCF within the context of UHC and quality of care initiatives.

More broadly, WHO is working with UNICEF and key partners to develop a global work plan and multi-stakeholder campaign in response to the UN Secretary-General's Call to Action on WASH in HCF. The plan of activities and campaign will build upon existing efforts on advancing advocacy, policies and standards, monitoring²¹, and facility improvements. The plan will include a set of global targets and work with countries to set national targets to better track and report on progress. WHO's WASH in HCF standards and messaging have recently been incorporated into several key global health strategies and standards, including IPC guidelines on core components²², the WHO Global Action Plan on AMR²³, standards for improving quality of maternal and newborn care²⁴ and paediatric care²⁵ and the Handbook for National Quality Policy and Strategy.²⁶ Currently, efforts are underway on supporting and documenting joint WASH-health implementation of these standards in a number of select countries.

Unique role and added value of WHO

Sustainable success on WASH in HCF requires health sector leadership and WHO is uniquely positioned to catalyse action and embed WASH in relevant health strategies, norms and implementation efforts. WHO has strong relationships with a number of key health programmes and also works with partners in climate change, energy, vaccines and injection safety to advance global and national progress in health care waste management. WHO's responsibility for monitoring progress on SDG 6, including WASH in HCF, and its leadership in developing WASH in HCF standards and risk-based facility improvement tools positions WHO to draw on this expertise to technically support national policy, monitoring and standard setting. WHO and UNICEF are jointly leading global activities as well as providing technical backstopping for specific monitoring and facility-based improvement efforts. This strong and productive relationship ensures strengths from all actors are harmonized to sustain progress on this fundamental issue for providing essential health services and achieving quality of care standards.

Activities and outputs

- Raise awareness through advocacy briefs on the links of WASH in HCF with maternal and newborn health and quality UHC and disseminate in key health events, learning platforms (i.e. quality UHC learning laboratory) and newsletters.
- Support monitoring efforts through the JMP to harmonize and report on core indicators across all relevant monitoring mechanisms such as Health Management

21. WHO/UNICEF, 2016. Expert Group Meeting on Monitoring WASH in Health Care Facilities in the Sustainable Development Goals. <https://www.washinhcf.org/documents/WASH-in-Health-Care-Facilities-Expert-Group-Meeting-Final-Report-August-2016.pdf>

22. WHO 2016. Guidelines on core components of infection prevention and control programmes at the national and acute health care facility level. <http://www.who.int/gpsc/ipc-components/en/>

23. WHO, 2015. Global action plan on antimicrobial resistance. <http://www.who.int/antimicrobial-resistance/publications/global-action-plan/en/>

24. WHO 2016. Standards for improving quality of maternal and newborn care in health facilities.

25. WHO 2018. Standards for improving quality of paediatric care.

26. WHO 2018. Handbook for National Quality Policy and Strategy. http://www.who.int/servicedeliverysafety/areas/qhc/nqps_handbook/en/

Information Systems and the health facility assessment (HFA) tool. Report on global baseline figures in 2018.

- Finalize and disseminate the WASH for Health Facility Improvement Tool (WASH FIT) and develop packages to implement the tool in particular settings (i.e. cholera outbreaks, hospitals). As part of wider national quality efforts and in collaboration with health partners, including cholera and health emergencies, IPC, MCNH and midwives, provide updated training materials and technical assistance for the implementation, monitoring and sharing of lessons learned in improving WASH in HCF.
- Through demonstration projects, explore the application of innovative technologies for health care waste that protect human and environmental health alongside strengthening of national health care waste policies and standards.
- Mobilize local, national and global action through documenting and sharing solutions to improving WASH facilities, systems, behaviours, policies, standards and regulation within broader health efforts to achieve quality UHC. Support national efforts to strengthen and implement national standards (including health care waste policies) and align with existing health policies, initiatives and funding streams.
- Support the development of tools to improve WASH in schools and other settings and convene health and education sectors to strategize improvements on WASH in schools.

3.4 UN-WATER GLOBAL ANALYSIS AND ASSESSMENT OF SANITATION AND DRINKING-WATER (GLAAS)

Change objectives

- Robust information on the WASH enabling environment, WASH financial flows, and ESA funding, priorities and activities strengthens evidence-based policy development and programming as well as targeting and absorption of WASH funds, which ultimately increases access to WASH services.
- Government-led national multi-stakeholder monitoring processes in all countries provide reliable, up-to-date data on the WASH enabling environment including WASH financing, governance, monitoring and human resources, which also contribute to monitoring progress towards national WASH targets and relevant SDGs.
- Aggregated and validated data on the WASH enabling environment and progress towards national WASH targets and relevant SDGs are available at global, regional and national levels.
- The burden of national data collection is minimized by improved collaboration across WASH partners and coordination of national monitoring processes and data needs with external data requests.

Problem Statement/Opportunity

Inputs into the WASH sector – including financial inputs – were not monitored in a coherent way at the global level prior to 2008, thus constraining the ability of the WASH sector to address critical gaps in monitoring, WASH policy, weak implementation capacity, and insufficient funding that are symptoms of inadequate institutional strength. GLAAS was created to complement other efforts monitoring WASH outputs and outcomes by monitoring inputs and the WASH enabling environment.

Through the country survey process, GLAAS supports countries to analyse their WASH enabling environment and identify opportunities for capacity building and strengthening institutions, contributing to accountability and transparency. Transparent reporting on the enabling environment supports more effective use of scarce domestic resources and TrackFin, a methodology to track WASH financial flows developed by GLAAS and now used by other stakeholders, will play a key role in expanding transparent financial information.

Currently there is no global mechanism for monitoring progress towards national WASH targets under the SDGs.²⁷ These targets differ depending on specific country contexts, and on the needs and priorities of countries. For example, some countries may focus on increasing basic access while others may work towards the SDG target of safely managed services. There is a need in the WASH sector to track progress on achieving national WASH targets and consistently monitor how the targets relate to the SDGs.

Unique role and added value of WHO

WHO has extensive experience in monitoring and is an objective, credible source to collect, analyse and present data. WHO, through GLAAS, has been monitoring the enabling environment for WASH, including information on national targets, since 2008. GLAAS is now an established process with a wide reach—over 100 countries have participated in GLAAS. GLAAS's focus on finance and the enabling environment complement and provide input to national target-setting processes and will contribute to understanding national targets and their context.

GLAAS fulfils a unique role within a complex global monitoring landscape for WASH. In countries with weak sector-review mechanisms, the GLAAS process of sector analysis and information gathering is often useful in making planning and policy decisions. The evidence that GLAAS provides, which cannot be found elsewhere at the same scale, allows governments and development partners to benchmark and influence the transparency of countries' performance on governance, policy follow-through, human resources, monitoring systems, innovation and sector financing. GLAAS is a co-custodian for the SDG 6 means of implementation indicators: 6a on international cooperation and capacity-building support and 6b on participation of local communities.

GLAAS data contribute to strengthening transparency and accountability, allow the identification of issues and challenges common to many developing countries, and have been instrumental in mobilizing funding for the WASH sector.

27. Although some regional mechanisms exist, for example, the Protocol on Water and Health in the European region.

Activities and outputs

- Work with countries and partners to collect and validate data on the WASH enabling environment through the GLAAS country survey. It is expected that 100 countries will participate in the 2018/2019 cycle with numbers increasing each cycle.
- Support countries to collect data on national WASH financial flows using the TrackFin methodology by providing technical assistance and by developing guidance and tools.
- Strengthen national capacity and national monitoring systems and processes through the GLAAS and TrackFin data collection processes. Contribute to guidelines to support countries with respect to SDG-inspired national target-setting.
- Collect and validate data from ESAs on WASH funding and development cooperation.
- Compile and analyse data on the WASH enabling environment and disseminate results through GLAAS reports, regional and country highlights, SDG reporting, and online databases.
- Track and classify national WASH targets; publish national WASH data and sources.
- Monitor, in collaboration with the Organisation for Economic Cooperation and Development (OECD) and the United Nations Environment Programme (UNEP), the means of implementation targets for SDG 6.a and 6.b.
- Undertake studies on topics central to the WASH enabling environment and the SDGs means of implementation and disseminate results for better decision-making.
- Support the use of GLAAS data and evidence for policy development and programme decisions through the sharing of results, regional and country partnerships and collaboration with SWA, AMCOW and other organizations.

3.5 THE WHO/UNICEF JOINT MONITORING PROGRAMME (JMP)

Change objectives

- The indicators and definitions used to monitor accessibility, availability, quality and affordability of WASH services are progressively harmonized and standardized, with increased uptake of JMP recommended indicators in relevant national data collection mechanisms.
- The JMP database is expanded and updated to produce robust baselines and trends for existing and new WASH indicators. The JMP remains the global custodian of WASH data and a trusted source of official estimates of progress towards the SDGs and other international WASH targets.
- Government, donor and civil society organizations have easy access to and use JMP databases.
- JMP estimates are integrated with other water and sanitation data to inform decision-making at global and national levels, and JMP estimates feature in global thematic reports relating to other areas of sustainable development.

Problem Statement/Opportunity

During the MDG period, the JMP was instrumental in establishing global benchmarks which have enabled comparison of progress across countries. With the advent of the 2030 Agenda for Sustainable Development, the JMP updated its methods and database to allow tracking of the new WASH targets set within the SDGs. The new indicators used for tracking the SDGs build on the MDG indicators, but add elements which were previously missing, including the availability, accessibility and quality of drinking-water services; the management of excreta in sanitation systems; and the availability of handwashing facilities in the home. New indicators of basic WASH services in schools and health care facilities have also been developed and will be the subject of future JMP reports.

JMP reports will continue to focus on inequalities and progress towards their elimination.

The new indicators, their definitions, and the methods the JMP uses to produce estimates will be unfamiliar at the beginning of the SDG period, and may cause confusion when compared to the MDG indicators and methods. There is also a risk that information on the new indicators is lacking, at least for part of the systems, at the outset of the SDG period and that the new demands of SDG monitoring could overwhelm the capacity of national statistical offices and sector partners. However, there is high interest in the new indicators, and strong agreement that generating this additional data is a first crucial step towards improvement of global monitoring, which should increasingly consider quality of services. WHO and UNICEF, as managers of the JMP, are well positioned to facilitate the transition to the new indicators and monitoring methods.

Unique role and added value of WHO

Monitoring of progress in the WASH sector should to the extent possible reflect normative WASH goals. As the producer of guidelines on drinking-water, sanitation and health, WHO has unparalleled credibility in setting the agenda for what should be monitored in the WASH sector, including but not limited to the specific targets set within the SDGs. When monitoring reveals unsafely managed drinking-water and sanitation services, tools developed by WHO such as WSPs and SSP will be in high demand.

Activities and outputs

- Streamline and improve methods for WASH monitoring: implement the water quality testing module in at least 12 countries and refine and standardize modules for monitoring of safely managed sanitation services, WASH in schools and WASH in health care facilities.
- Build on the 2017 SDG baseline report and produce an update report in 2019, increasing the data coverage on safely managed drinking-water and sanitation services from approximately 35% to 50% of the global population.
- Develop guidelines to support countries with respect to SDG-inspired national target-setting.
- Consolidate and strengthen existing mechanisms for country engagement through development of guidelines and tools to support data collection, e.g. Rapid Assessment of Drinking-water Quality (RADWQ), including for small systems, and integrated analysis of different sources of data at country level, and engagement with regional initiatives (AMCOW, the Latin American Sanitation

Conference (LATINOSAN), Protocol on Water and Health, MDG+) to align national and global monitoring systems.

- Integrated monitoring to promote analysis of interlinkages between WASH and related SDG targets: contribute to UN-Water SDG 6 synthesis report, updates to the estimates of the burden of disease posed by inadequate WASH and other cross-disciplinary reports.

3.6 ESTIMATION OF BURDEN OF DISEASE FROM INADEQUATE WASH

Change objectives

- Informed policy choices supported by estimates of the burden of disease caused by WASH.
- Adequate consideration of this major risk to health based on the magnitude of the disease burden at higher policy level, and preventive action taken accordingly.
- Synthesis of the most up-to-date evidence on WASH infrastructure and hygiene practices and diarrhoea to highlight interventions with the largest health impacts.

Problem Statement/Opportunity

Inadequate water, sanitation and hygiene have caused 842,000 diarrhoea deaths in 2012, and deaths from several other diseases. The estimation of these health impacts should (a) help identify populations at greatest health risks from WASH, (b) contribute to adequate priority setting of WASH activities at country and international levels, and (c) provide insight about the achievable health gains for interventions provided to the populations at different risk. Mortality from WASH is furthermore an SDG indicator (3.9.2.) to monitor progress towards the SDG on health. In summary, the estimated burden of disease is an important ingredient to the rational selection of strategies for disease prevention and should be increasingly used in policy choices.

Unique role and added value of WHO

The estimation of burden of disease from WASH requires the collection of exposure data, and a method for relating the exposure indicators with disease outcomes. WHO is in the key position of both having access to the exposure data as the reporting agency for the WASH SDG indicators, and having the convening power of experts to develop the complex methods required for estimating disease burden. WHO is also planning to develop country tools for estimating the disease burden at national level, and the potential health gains from implementing WASH strategies. The benefits of higher level services or higher community coverage achievements could be highlighted if supported by the available evidence.

Activities and outputs

- Estimated disease burden from water, sanitation and hygiene, by country.
- Updated meta-regression relating diarrhoea to water, sanitation and hygiene.
- Tools for countries to estimate their burden of disease and health gains from WASH strategies.

3.7 WASH AND HEALTH PROGRAMME LINKAGES

3.7.1 WASH and cholera

Change objectives

- WASH resources and programming prioritized in cholera hotspots in all endemic countries.
- Coordinated implementation of WASH and cholera vaccines with hygiene and prevention messaging accompanying all vaccination efforts.
- Intersectoral planning and collaboration facilitated at all levels.
- Effective transition between emergency and development WASH, including through water and sanitation safety planning, and sufficient and sustainable supplies of WASH in health care facilities.

Problem Statement/Opportunity

Cholera remains endemic in more than 47 countries, with an estimated 40–80 million people in Africa living in cholera hotspots, and globally an estimated 2.9 million cases every year and up to 95,000 deaths.²⁸ While adequate WASH is recognized as fundamental to preventing cholera, WASH is often perceived as being a long-term and expensive intervention that cannot be implemented quickly in poor countries. The introduction of the Oral Cholera Vaccine (OCV) presents attractive opportunities for rapid disease control, but has been implemented with inadequate coordination with WASH stakeholders and may divert attention away from WASH—the only sustainable solution to cholera prevention. Ignoring WASH would preclude elimination and its accompanying benefits from accruing where they are most needed. Member States agreed through a 2011 WHA Resolution to reinvigorate the work of the Global Task Force on Cholera Control (GTFCC) using a holistic and intersectoral approach. More recently, in October 2017, over 50 partners committed to the WHO Global Cholera Elimination Plan which aims to reduce cholera deaths by 90% by 2030. Prevention through WASH is a key pillar of this plan and work is underway to operationalize the plan components at the country level.

28. WHO, 2017. Ending cholera, a roadmap to 2030. <http://www.who.int/cholera/publications/global-roadmap.pdf?ua=1>

Unique role and added value of WHO

WHO is uniquely positioned at the interface of the WASH and health sectors to support the WASH Working Group of the GTFCC and collaborative activities more generally, and to integrate cholera into its work on water quality, including household water treatment, monitoring and health care facilities. WHO draws on a history of water quality and sanitation management normative work through a network of expert practitioners and WHO's authority and convening power ensures normative work is widely accessible. Central to this work is WHO's ongoing efforts to support countries to achieve SDG 3 and SDG 6 and the GTFCC roadmap to end cholera epidemics by 2030, including through promotion of intersectoral prevention and control.

Activities and outputs

- Published factsheets on elements of water quality testing, treatment, sanitation and WASH in health care facilities specific to cholera settings and training materials on WASH and cholera.
- Technical support to WASH Working Group of the GTFCC including review and support for implementation of country operational plans in select, targeted endemic countries.
- Accelerated monitoring and improvement of WASH conditions in health care facilities (including cholera treatment centres, where applicable) as part of global outbreak monitoring and improved case management.
- Intersectoral WASH and cholera planning processes supported and facilitated at country level.
- Technical guidance and intersectoral facilitation to ensure WASH integration into OCV rollout as well as other vaccines for waterborne diseases such as rotavirus and typhoid.
- Minimum package for WASH in hotspots developed, including handwashing and WHO 'prequalified' household water treatment technologies.

3.7.2 WASH and emergencies

Change objectives

- WASH included as a core element of health emergency preparedness, response and recovery and reflected in key trainings, guidance and national budgets.
- Operational evidence base strengthened on key value-added WASH practices in emergencies (i.e. effective disinfection practices in emergencies at both household and central levels, and broader issues related to safe disposal of human waste in emergencies).
- Intersectoral planning and collaboration facilitated between WASH and health clusters and between ministries at country level.

Problem Statement/Opportunity

Emergencies are increasingly becoming more complex and affecting more populations than ever before. Climate change, natural disasters, growing inequities and urbanization all contribute to the record 65 million people who have been forced from their homes. WHO is coordinating a global response to events in 27 countries, with dozens more dealt with at regional level. Whether a natural disaster (i.e. hurricane), a conflict, migration/refugee-related or a disease outbreak, and in many cases a combination of the above, WASH is an important element in both provision of health care and reducing health risks during an emergency and in the future preparedness planning.

An example of the importance of WASH was highlighted during the West Africa Ebola Virus Disease (EVD) outbreak. WASH, which had been lacking and in many cases ignored in the affected countries, quickly elevated in importance, especially given the highly virulent nature of the disease and the strict IPC protocols. Hand hygiene became the norm, everywhere, and there was a cascade effect of addressing the immediate need of WASH in health care facilities, establishing national drinking-water quality standards (in Liberia), and more resilient and quality health systems across the affected countries.

Unique role and added value of WHO

WHO is working with countries to respond to crises and emergencies by ensuring effective and timely action to address public health priorities as well as reducing the vulnerability of communities to hazards and increasing their ability to withstand disruption and to recover rapidly. In emergencies, WHO has the mandate to work with ministries of health to ensure water quality, minimize water-related health risks, and support provision of WASH in health care facilities. WHO's expertise in developing international standards and normative information that build on experience responding to WASH-related emergencies, authoritative technical guidance on water quality management, sanitation and wastewater, and WASH policies makes them ideally placed to provide technical support in emergencies. WHO's WASH programme will work closely with WHO's new Health Emergencies (WHE) programme, global and national WASH and health clusters, and other sector partners.

Activities and outputs

- Active dissemination of normative guidance and updated emergency factsheets that reflect the latest evidence and technologies for water quality testing and water treatment. These will be included in the Health Cluster Knowledge Bank and shared widely at the regional and national level.
- Technical support to other teams within WHO providing emergency preparedness response and recovery inputs, for example health systems strengthening, IPC, nutrition, WHE.
- Provide country technical support and capacity building to governments, practitioners and partners to build capacities to respond to water-related outbreaks and emergencies.
- Advocate for increased investment in and strengthening of WASH services at global and national level and particularly for emergency-prone areas.
- Update and inclusion of WASH in emergencies and health care facilities training in the Open WHO training platform.

- Accelerated monitoring of WASH conditions in health care facilities as part of global outbreak monitoring.
- Country support and missions to select countries with protracted emergencies (i.e. Chad, Mali, South Sudan) to address WASH as part of the humanitarian-development-peace continuum and specifically looking at issues on water quality and WASH in HCF.
- Intersectoral WASH and emergency planning processes supported and facilitated at country level.

3.7.3 WASH and neglected tropical diseases (NTDs)

Change objectives

- Improved targeting of WASH investments to areas of high endemicity for NTDs.
- Strengthened evidence base on linkages between WASH and NTDs and effective coordination mechanisms, and guidance developed.
- Intersectoral planning and collaboration facilitated at all levels.

Problem Statement/Opportunity

WASH is critical in the prevention and management of NTDs scheduled for intensified control or elimination by 2020. Provision of safe water, sanitation and hygiene is one of the five key interventions within the global NTD roadmap. Yet to date, the WASH component of the strategy has received little attention and the potential to link efforts on WASH and NTDs has been largely untapped. Focused efforts on WASH are urgently needed if the global NTD roadmap targets are to be met, especially for diseases where transmission is most closely linked to poor WASH conditions such as soil-transmitted helminthiasis, schistosomiasis, trachoma and guinea-worm disease. The WASH sector is focused on the SDG target of universal access to basic WASH in communities, schools and health care facilities by 2030. Achieving universal access requires a focus on the poorest and hardest to reach. These are often the same groups most affected by NTDs. The target date for the NTD roadmap is 2020, adding impetus to the need for WASH progress for the most vulnerable. Progress or lack of progress on certain NTDs can therefore serve as a proxy for equity and effective targeting of WASH programmes. The strategy also contributes to global efforts to strengthen health systems, achieve UHC, address the social determinants of health and ensure equitable access to resources and services that underpin human development.

Unique role and added value of WHO

The implementation of the WASH and NTD Strategy involves close collaboration between the Department of Control of Neglected Tropical Diseases, and Department of Public Health, Environmental and Social Determinants of Health in consultation with WASH and NTD focal points in WHO Regional and Country Offices and external experts from NGOs, donor agencies, NTD networks and academic institutions. The strategy informs action by WHO at all levels as well as by ministries of health and ministries responsible for the delivery of WASH programmes, and NTD and WASH programme managers at all levels. It also informs the actions of development

agencies addressing WASH and NTDs, including donors, NGOs and other UN agencies.

Activities and outputs

- Disseminate the WASH and NTD Strategy within WHO through key events.
- Document and share lessons from improved practice across WASH and NTD forums, emphasising issues of governance and behaviour change promotion.
- Provide technical and normative guidance on developing WASH and NTDs monitoring systems and indicators.
- Contribute to the development of a WASH and NTD operational research agenda.
- Develop operational and normative guidance on integrated WASH and NTD implementation.
- Support joint cross-NTD and WASH coordination processes at regional and country levels.

3.8 WASH AND EMERGING ISSUES

3.8.1 WASH and antimicrobial resistance (AMR)

Change objectives

- Environmental drivers of resistance through WASH and wastewater characterized and risk management strategies reflected in AMR National Action Plans and antimicrobial stewardship framework.
- Co-benefits of increased access to WASH and wastewater treatment in communities and health facilities contributing to a reduction in resistant infections.

Problem Statement/Opportunity

The role the environment plays, and WASH in particular, in contributing to antimicrobial resistance is likely high, but largely uncharacterized. It is difficult to develop monitoring programmes, meaningful risk assessments, or propose guidance on environmental standards in relation to wastewater from hospitals, pharmaceutical manufacturing, or animal raising/processing facilities since the impact of AMR on public health though clear, has not yet been quantified. Moreover, WASH's contributions to AMR will become increasingly important in relation to its basic role in preventing infections in health facilities or basic sanitation infrastructure in communities and cities.

Unique role and added value of WHO

WASH directly contributes to WHO's Global Plan of Action (as one of its priority objectives) and IPC-related activities under the Global Health Security Agenda (GHSA) framework through its relationship with sector experts, strong network of

researchers, links with practitioners, and dialogue with both ministries of health and WASH, bringing much needed environmental expertise to AMR.

Activities and outputs

- Publish factsheets, guidance, normative and training materials on WASH and AMR.
- Publish policy guidance for Member States summarizing evidence and no regrets WASH investments for combating AMR.
- Support integration of specific WASH monitoring, investments and policy strengthening elements in AMR national action plans, and antimicrobial stewardship framework.
- Develop environmental surveillance of AMR alongside human and animal surveillance (One Health AMR surveillance).
- Reflect WASH in annual World Antibiotic Awareness Campaign materials and messages.
- Advance the research agenda to develop risk assessment frameworks and management strategies for resistant bacteria in sewage and residues in manufacturing.

3.8.2 WASH and climate change

Change objectives²⁹

- Strengthened evidence base on linkages between the impacts posed by climate change to health via WASH and effective coordination mechanisms, and guidance developed.
- Intersectoral planning and collaboration facilitated at all levels.
- Climate variability and change considerations included in relevant WASH risk assessment and management approaches.
- Climate change considerations included in relevant WASH monitoring systems at all levels.

Problem Statement/Opportunity

An increasing number of water and sanitation systems will become vulnerable to climate change. However, WASH managers and planners are frequently unable to effectively use climate information to inform practical risk-management processes, including selection of technologies.

Unique role and added value of WHO

The implementation of the WHO WASH Strategy will strengthen integration of climate change considerations into WASH risk assessment and programming. The Strategy informs action by WHO at all levels as well as by ministries of health and ministries responsible for the delivery of WASH programmes, meteorological

29. See also sections 3.1 and 3.2 for drinking-water quality and sanitation objectives related to climate change and climate resilience.

services, and climate change and WASH programme managers at all levels. It also informs the actions of development agencies addressing WASH and climate change, including donors, NGOs and other UN agencies.

Activities and outputs

- Provide technical and normative guidance on developing WASH and climate variability and change monitoring systems and indicators.
- Contribute to the development of a WASH and climate change operational research agenda.
- Develop operational and normative guidance on integrated WASH and climate change implementation.
- Support joint climate change and WASH coordination processes at regional and country levels.

3.8.3 Water resources and health³⁰

Problem Statement/Opportunity

Water-associated vector-borne diseases continue to be a major public health problem in many countries. They include malaria and many of the NTDs (schistosomiasis, filariasis, and several arbovirus diseases such as dengue/dengue haemorrhagic fever, Chikungunya, Zika, Japanese encephalitis and West-Nile virus). Significant, and sometimes spectacular, progress has been made in the prevention and control of some of these diseases, mainly through strengthening of case detection and treatment (schistosomiasis, filariasis), a combination of drug treatment and vector control (malaria) and the development and delivery of vaccines (Japanese encephalitis).

The broadened scope on water in the SDG framework creates an opportunity for WHO's WASH programme to revitalize efforts to deal with water-associated vector-borne diseases in a sustainable manner. This will require the strengthening of intersectoral links with the main water user groups (energy, agriculture, flood control) and promote the incorporation of environmental management for vector control into the planning, design and management of water resources development projects.

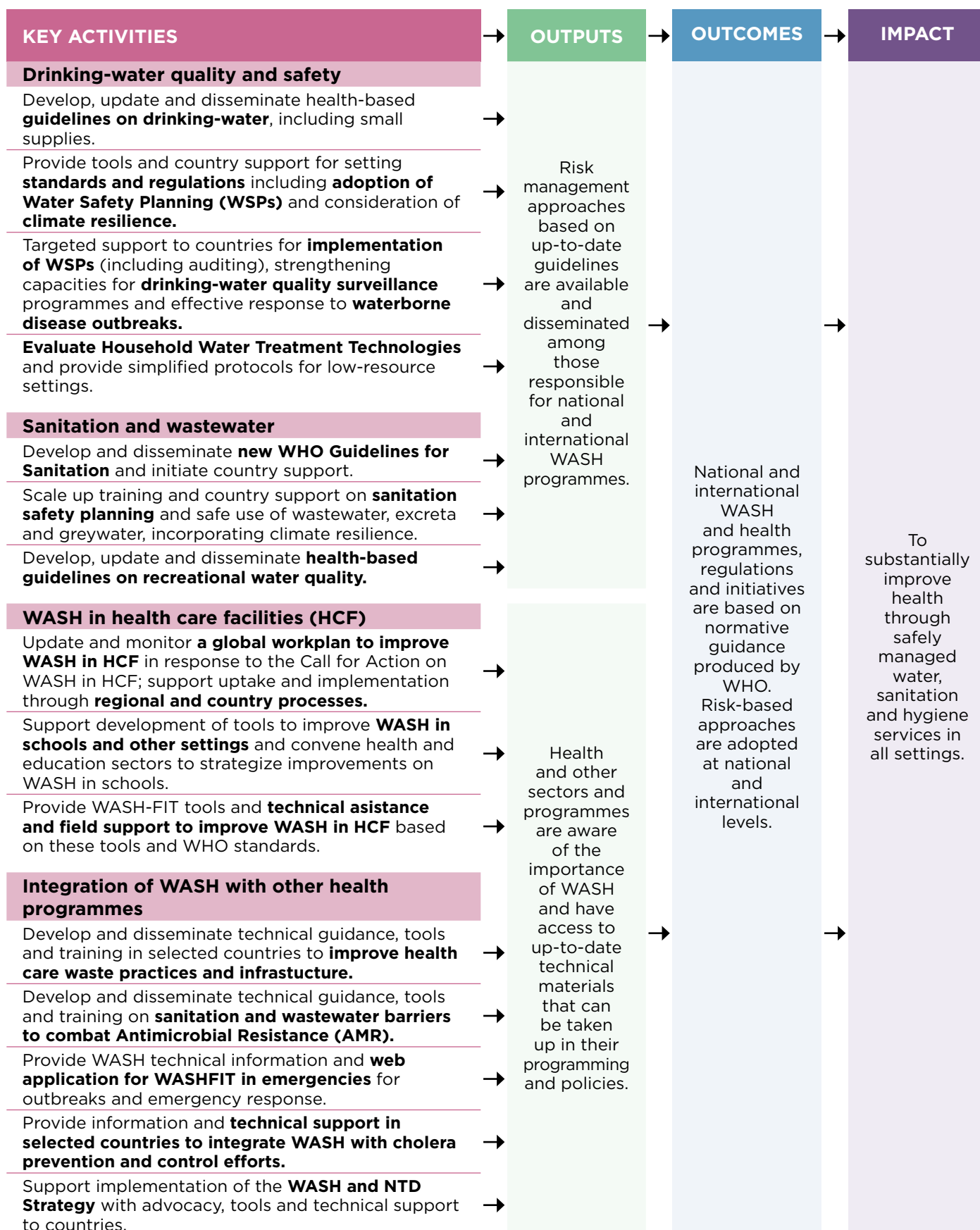
The diversity in the ecology and biology of disease vectors requires evidence-based assessments of local situations where water resources development is taking place. This is important under conditions of rapid change in hydrology and aquatic ecosystems (such as in the case of dam construction or irrigation development), but also in conservation areas of wetlands and other aquatic ecosystems, where local communities may depend on ecosystem products and services, but also be exposed to the risks of vector-borne disease transmission.

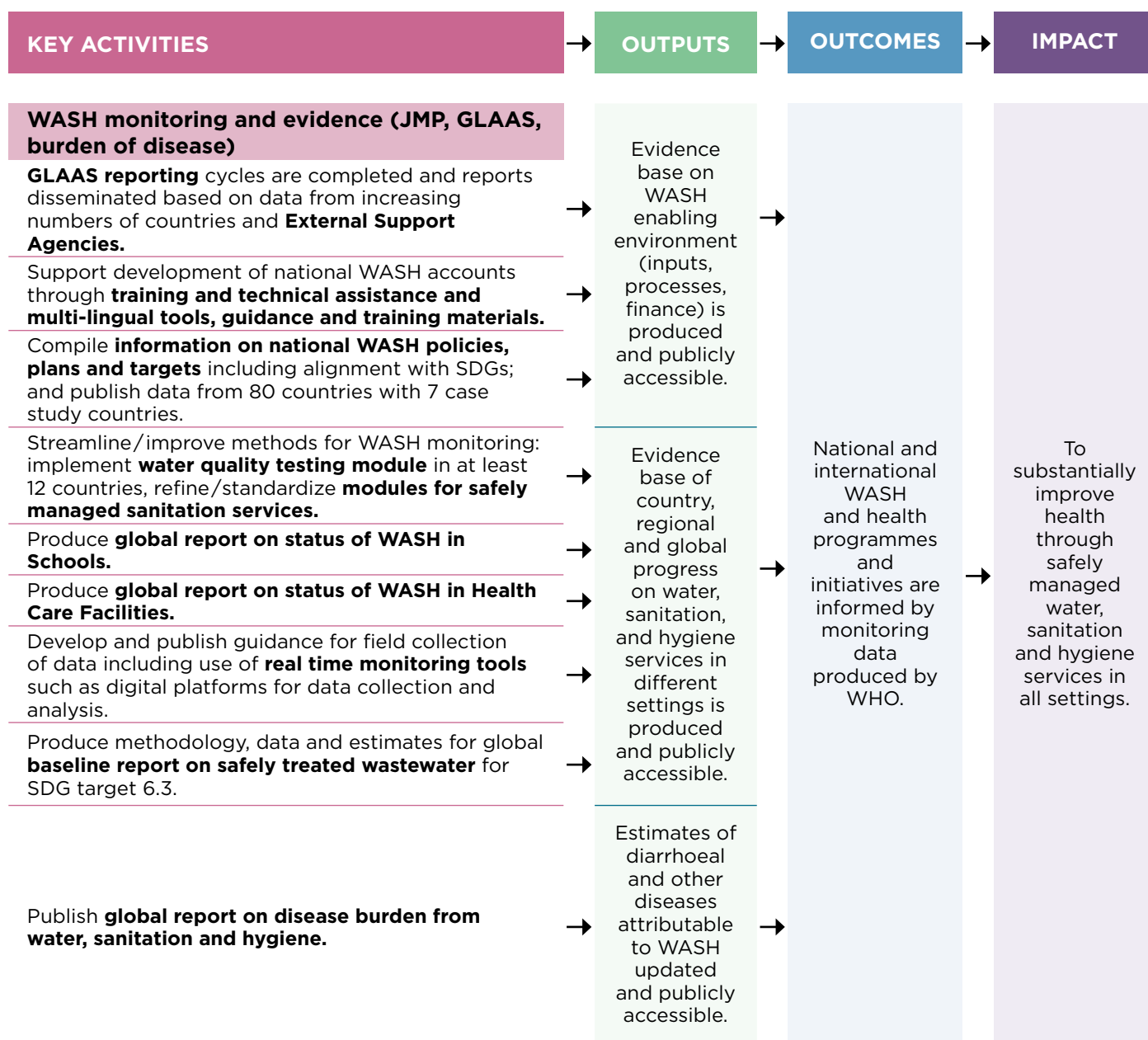
30. This workstream is on hold pending availability of resources.

4. APPENDICES

APPENDIX A.

WHO THEORY OF CHANGE FOR WASH





APPENDIX B.

PHE OUTPUTS AND INDICATORS FOR WASH FROM THE 2018/2019 PROGRAMME BUDGET

Output 3.5.1. Country capacity enhanced to assess health risks and to develop and implement policies, strategies or regulations for the prevention, mitigation and management of the health impacts of environmental and occupational risks.

Indicator for WASH: *Number of countries that have undertaken a national assessment or status review of water and sanitation drawing on WHO data, analysis or technical support.*

Country office deliverables (WASH aspects only)

- Strengthen national and subnational capacity for preparedness and response to environmental emergencies, such as the provision of adequate water and sanitation in the preparedness and response to all health emergencies.

Regional office deliverables (WASH aspects only)

- Provide WHO leadership to support the development and implementation of regional strategies/action plans on environmental health, including on water, sanitation, waste.
- Provide technical support to country offices as needed to support the development and implementation of policies and regulations related to WASH, including in emergencies.
- Establish, support and strengthen partnerships and intersectoral policy platforms among Member States and regional partners to address health risks related to WASH.

Headquarters deliverables (WASH aspects only)

- Develop methodologies and tools and generate evidence to support the development of policies, strategies and regulations for prevention and management of WASH risks, including in sectors of the economy other than health.
- Provide WHO leadership and support for the development and implementation of global strategies/action plans on WASH and health issues and for the strengthening of global cooperation and partnerships to address WASH-related health risks.
- Provide technical support to Regional Offices as needed for highly specialized technical areas related to WASH, including in emergencies.
- Develop guidelines, standard operating procedures, policies, tools and training materials for addressing provision of adequate water and sanitation in the preparedness and response to all health emergencies.

Output 3.5.2. Norms and standards established and guidelines developed for environmental and occupational health risks and benefits associated with, for example, air and noise pollution, chemicals, waste, water and sanitation, radiation, and climate change and technical support provided at the regional and country levels for their implementation.

Indicators for WASH:

- *Number of WHO norms, standards and guidelines on WASH and health risks developed or updated within the biennium.*
- *Number of countries that have developed new or revised existing policies or national standards (for WASH) based on WHO guidelines.*

Country office deliverables

Provide WHO support for country- and city-level implementation of WHO guidelines, tools, and methodologies for preventing health impacts of lack of access to water and sanitation.

Regional office deliverables

Provide WHO technical support for country- and city-level implementation and adaptation of WHO norms, standards and guidelines on WASH as needed, and for the regional application of such norms, standards and guidelines, and their development where relevant and necessary, in agreement and coordination with headquarters.

Headquarters deliverables

Develop and update norms, standards and guidelines relating to WASH and health, and provide support to regional and country offices as relevant for their implementation, taking into account the evidence generated by regions and countries.

APPENDIX C.

PROGRAMMATIC RISKS AND MITIGATION

RISK	IMPACT	PROBABILITY	MITIGATION
Insufficient government engagement and support to specific WASH activities at country level (e.g. WASH in HCF, WSPs, GLAAS, TrackFin) due to competing priorities and/or dispersed WASH responsibilities across multiple ministries.	High	Medium	• Develop and then communicate impacts and benefits of activities for governments as part of advocacy efforts. • Increase focus on establishing or strengthening inter-sectoral relationships across multiple national ministries.
Insufficient human capacity (technical and time) in WHO regions and countries to participate in and support WASH work including HCF work.	High	Medium	• Hire additional support through NPOs, professional staff or consultants as possible. • Leverage partners to second staff to regions and countries. • Leverage WHO regional and country staff from other programmes or mobilize WHO headquarter staff. • Include relevant country staff and consultants in technical assistance and training workshops.
Insufficient partner engagement and support to specific WASH activities at country level (e.g. WASH in HCF, WSPs, GLAAS, TrackFin) (due to competing priorities).	Medium	Medium	• Develop and then communicate impacts and benefits of effective partnering, particularly at the national level. • Communicate and advocate with key partners around specific work areas and objectives. • Budget resources for advocacy and transaction time related to partnerships.

RISK	IMPACT	PROBABILITY	MITIGATION
Limited engagement from other WHO programmes to implement integration of WASH with key programmes (NTDs, IPC, MCH, nutrition, etc.)	High	Low	• Joint funding proposals. • Engage political commitment of leadership. • Dedicated staff time to integration. • Regular meetings with WHO staff leading cross-departmental work.
Insufficient regional and country capacity to effectively manage disbursed funds to support WASH activities.	High	Medium	• Prior agreement on joint activities and costs. • Address human resource capacity needs as part of funding allocation. • Regular joint monitoring of activities and spending.
Unable to document and demonstrate impacts of key areas of work (e.g. tools and guidelines, WSPs) because of complexity of showing attribution.	Low	High	• Learn from other programmes that will also be documenting impacts as part of reforms. • Assign as a focus area to experienced staff. • Disseminate guidance on impact monitoring. • Systematic evaluation as part of annual results reporting.

This image shows a full page of a handwriting practice sheet. It consists of approximately 20 horizontal rows. Each row is defined by two parallel dotted lines, creating a series of uniform gaps for writing. The lines are evenly spaced and extend across the entire width of the page, providing a guide for letter height and placement. There is no text or other markings on the page.

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