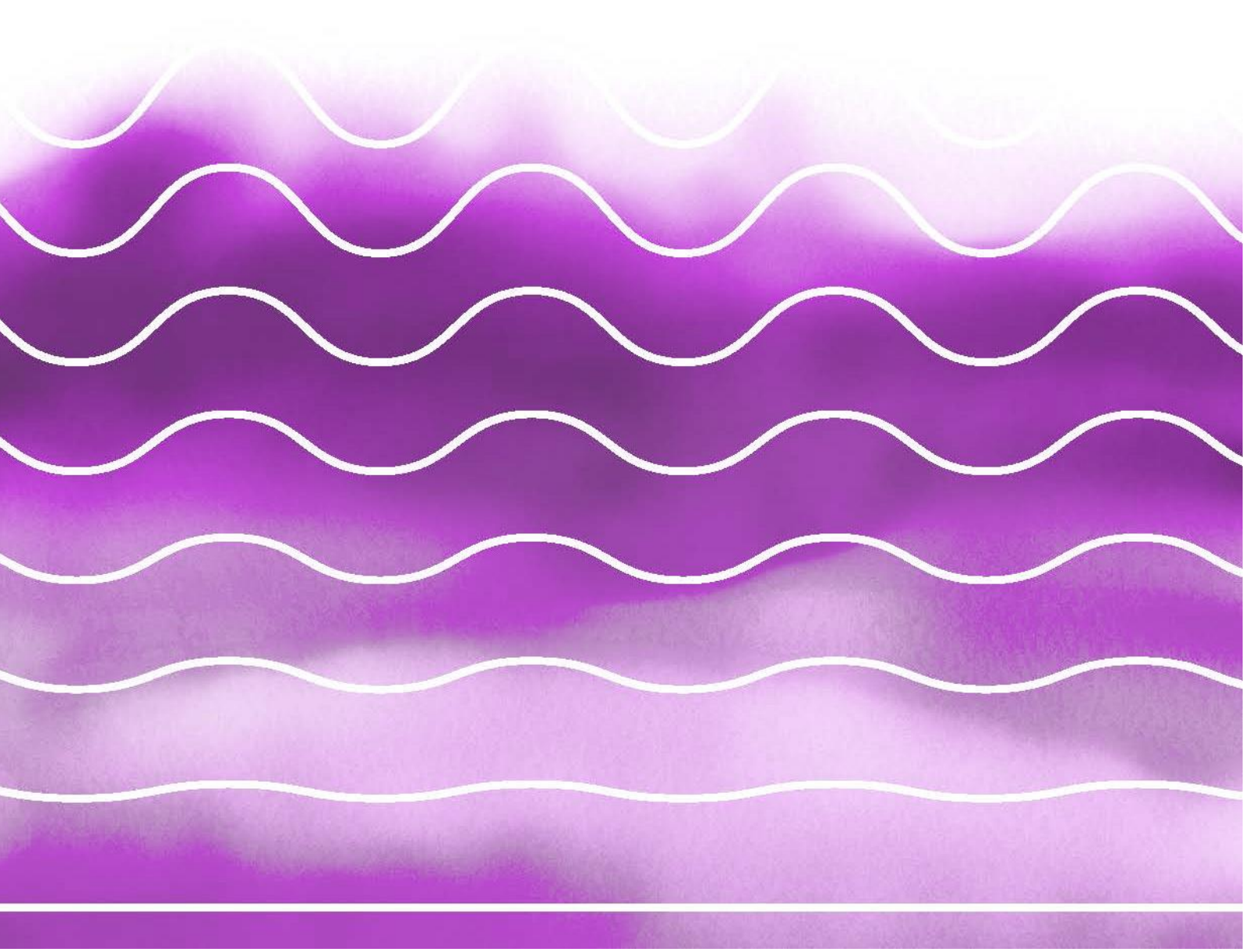




WHO Global Water, Sanitation and Hygiene

Annual report 2020



WHO Global Water, Sanitation and Hygiene Annual Report 2020

WHO global water, sanitation and hygiene: annual report 2020

ISBN 978-92-4-003308-5 (electronic version)

ISBN 978-92-4-003309-2 (print version)

© World Health Organization 2022

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: “This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition”.

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization. (<http://www.wipo.int/amc/en/mediation/rules/>)

Suggested citation. WHO global water, sanitation and hygiene: annual report 2020. Geneva: World Health Organization; 2022. Licence: [CC BY-NC-SA 3.0 IGO](https://creativecommons.org/licenses/by-nc-sa/3.0/igo).

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

Sales, rights and licensing. To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

Contents

Acronyms and abbreviations	ii
Executive summary	iv
Highlights of 2020 results	iv
Strategic context 2020	1
COVID-19 pandemic and WHO response.....	1
Monitoring results and impacts.....	2
WHO organization-level monitoring: GPW 13 and the output scorecard	3
Achieving impact: keys to success and lessons learned 2020	4
Key accomplishments against the strategic plan.....	7
Results on programmatic outcomes	7
Results area: drinking-water quality and safety	9
Evaluation of Household Water Treatment Technologies.....	11
Examples of 2020 impacts of WHO work on drinking-water quality and safety	11
Results area: sanitation and wastewater.....	13
Regulation	15
Examples of 2020 impacts of WHO work on sanitation.....	16
Results area: WASH in health care facilities	17
Regional initiatives and activities.....	19
Selected country activities	19
Advocacy for WASH in health care facilities	21
Results area: integration of WASH with other health programmes.....	22
WASH and antimicrobial resistance (AMR)	23
Hand Hygiene.....	23
Results area: WASH evidence and monitoring	26
WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP)	26
UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS).....	28
Burden of disease from WASH.....	31
Risk management, operations and value for money	31
Expression of thanks	32
Annex 1 – WHO 2020 WASH publications	41
Annex 2 – Strategic framework and Theory of change.....	46
Annex 3 – Overview of WHO WASH expenditure.....	49

Acronyms and abbreviations

ADB	Asian Development Bank
AFD	Agence Française de Développement
AMCOW	African Ministers' Council on Water
AMR	antimicrobial resistance
COVID-19	coronavirus disease 2019
CR-WSP	climate resilient water safety planning
DFAT	Department of Foreign Affairs and Trade, Australia
DGIS	Directorate General for International Cooperation, The Netherlands
ECH	WHO department of Environment, Climate Change and Health
ESA	external support agency
ESAWAS	Eastern and Southern Africa Water and Sanitation
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FCDO	Foreign Commonwealth & Development Office, United Kingdom of Great Britain and Northern Ireland
GAF	Global Acceleration Framework (for SDG6)
GDWQ	Guidelines for Drinking-Water Quality
GLAAS	UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water
GPW 13	WHO Thirteenth General Programme of Work 2019–2023
HCWM	health care waste management
HWT	household water treatment
ILO	International Labour Organization
IPC	infection prevention and control
IWA	International Water Association
JICA	Japan International Cooperation Agency
JMP	WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene
MNCH	maternal, newborn and child health
NGO	nongovernmental organization
NNN	Neglected Tropical Disease NGO Network
NTD	neglected tropical disease
OIE	World Organisation for Animal Health
PMAT	Policy Monitoring and Assessment Tool
RegNet	International Network of Drinking-Water Regulators
SARS-CoV-2	severe acute respiratory syndrome coronavirus 2
SDGs	Sustainable Development Goals
SEARO	WHO Regional Office for South-East Asia
SHF	Sanitation and Hygiene Fund (formerly the Water Supply and Sanitation Collaborative Council)

Sida	Swedish International Development Cooperation Agency
SIWI	Stockholm International Water Institute
SMOSS	safely managed on site sanitation
SOPs	standard operating procedures
SSP	sanitation safety planning
SWA	Sanitation and Water for All
TrackFin	methodology for tracking expenditures in the WASH sector
UHC	universal health coverage
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNICEF	United Nations Children’s Fund
US CDC	United States of America Centers for Disease Control and Prevention
USAID	United States Agency for International Development
WAPT	WASH Accounts Production Tool
WASH	water, sanitation and hygiene
WASH FIT	WASH for Health Facility Improvement Tool
WHO	World Health Organization
WPRO	WHO Regional office for the Western Pacific
WSH	WHO water, sanitation, hygiene and health unit
WSP	water safety plan (planning)
WSSCC	Water Supply and Sanitation Collaborative Council (as of January 2021, Sanitation and Hygiene Fund)

Executive summary

This report summarizes the World Health Organization's (WHO) global work on water, sanitation and hygiene (WASH) during 2020. It describes WHO's WASH response to COVID-19 and, despite the pandemic, how the Organization continued to deliver its essential WASH programming as elaborated in its 2018–2025 strategy. This includes publication and dissemination of its work monitoring access to WASH and WASH systems through the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) and the UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS), continued development and implementation of its norms on drinking-water and sanitation, and overall advocacy including on hand hygiene. All of WHO's WASH work was augmented through the strength of its partnerships.

Investing in water, sanitation and hygiene is critical both to preventing and recovering from pandemics and local outbreaks. Its absence leaves us exposed. You already know the basics: water, sanitation and hygiene is a first line of defence against COVID-19 and so many other diseases, such as diarrhoea, cholera, typhoid, malnutrition, influenza and pneumonia. It is also critical to preventing the spread of antimicrobial resistance, which is one of our biggest global threats. Without water, sanitation and hygiene, we are vulnerable.

Globally, we are alarmingly off-track to deliver on our commitments to Sustainable Development Goal 6 for water and sanitation. To achieve the 2030 goals, the rate of progress for sanitation needs to quadruple.

The COVID-19 pandemic is reminding us that health and economics are deeply intertwined, and that investments in health – including water, sanitation and hygiene – are the necessary foundation for productive, resilient and stable economies.

Investments in water, sanitation and hygiene are what we call a “no-regrets” investment, paying a rich dividend in health, human rights and inclusive economic growth.

- from Dr Tedros' speeches to Ministers of Finance at the Sanitation and Water for All (SWA) Finance Minister's Meeting for Africa, 4 Nov 2020, and for the Asia Pacific, 2 Dec 2020 (1) (2).

Highlights of 2020 results

- **Rapid publication by WHO WASH of data and technical guidance to support COVID-19 response** including:
 - *Water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19* in multiple languages (3),
 - *Status of environmental surveillance for SARS-CoV-2 virus* (4),
 - *Hygiene: UN-Water GLAAS findings on national policies, plans, targets and finance* (5),
 - Regional snapshots pulling together available data on hand hygiene in households, health care facilities, and schools from the most recent JMP reports (6), and
 - guidance on monitoring hygiene (7).
- **Development and launch of the Sustainable Development Goal 6 (SDG 6) Global Acceleration Framework (GAF) (8) with other UN partners** to accelerate progress on WASH to improve health status, including as measured through SDG indicator 3.9.2. The GAF is modelled on, and contributes to, determinants under the SDG3 Global Action Plan (9).
- **Launch of the Hand Hygiene for All Initiative by WHO and UNICEF** to implement WHO's global recommendations on hand hygiene to prevent and control the COVID-19 pandemic, and work

to ensure lasting infrastructure and behaviour change. The first progress report was published in December (10).

- Publication of ***State of the World's Sanitation: An urgent call to transform sanitation for better health, environments, economies and societies*** (11), bringing together data on sanitation coverage and investment for the first time. The report calls for strong government leadership and investment in resilient sanitation services.
- **An expansion of WHO advocacy, leadership and activities at all levels of the organization on improving WASH in health care facilities.** All WHO regional offices took actions to implement the World Health Assembly Resolution 72.7 on WASH in health care facilities (12) and support countries in conducting assessments and trainings, strengthening standards, integrating with health programmes, engaging partners and increasing investments. This work was supported by new materials including a Simplified WASH for Health Facility Improvement Tool (WASH FIT) Assessment Tool (13) and *WHO guidance for climate resilient and environmentally sustainable health care facilities* (14).
- Publication of key public health goods in collaboration with UNICEF: ***Global progress report on water, sanitation and hygiene in health care facilities: Fundamentals first*** (15) and JMP's ***Progress on drinking water, sanitation and hygiene in schools: Special focus on COVID-19*** (16).
- **Completion of the new road map on neglected tropical diseases (NTDs)**, which sets targets and milestones for control, elimination and eradication of 20 NTDs by 2030. The road map emphasizes the importance of cross-sectoral action for NTD control and includes a strengthened cross-cutting target on WASH.
- **Publication of updated or new technical information on drinking-water quality and safety**, including ten *chemical background documents*¹ (17) to be used for the development of two guidelines to be published in 2021 and *Domestic water quantity, service level and health, second edition* (18).
- Publication of the ***Technical briefing on WASH and wastewater management to prevent infections and reduce the spread of antimicrobial resistance (AMR)*** with the Food and Agriculture Organization of the United Nations (FAO) and World Organisation for Animal Health (OIE), and in consultation with United Nations Environment Programme (UNEP) (19). The briefing, in five languages, has raised the profile of environmental dimensions within the AMR agenda and guides better inclusion of WASH and wastewater management in AMR national action plans.
- **At the end of 2020, the European Commission revised its Drinking Water Directive, introducing water safety planning (WSP)-type requirements for all European Union (EU) Member States** and providing updated standard values, generally based on WHO guideline values. This is significant as it promotes the development of WSP policies by EU countries once the Directive requirements are transposed at national level.
- Despite technical, organizational and financial COVID-19 challenges during 2020, **WHO achieved or surpassed 24 of 26 (92%) of the 2020 output milestones**, and partially achieved the remaining two output milestones.

¹ Covering anatoxin-a (cyanotoxin), bentazone, chromium, cylindrospermopsin (cyanotoxin), iodine, microcystin (cyanotoxin), organotins, saxitoxin (cyanotoxin), tetrachloroethene and trichloroethene).

References

1. Sanitation for All (SWA) Finance Ministers' Meetings: Asia and the Pacific SWA, UNICEF, World Bank Global Practice and the Asian Development Bank. WHO Director-General's opening remarks [speech]. In: WHO [website]. 2020. ([https://www.who.int/director-general/speeches/detail/sanitation-for-all-\(swa\)-finance-ministers-meetings-asia-and-the-pacific-swa-unicef-world-bank-global-practice-and-the-asian-development-bank](https://www.who.int/director-general/speeches/detail/sanitation-for-all-(swa)-finance-ministers-meetings-asia-and-the-pacific-swa-unicef-world-bank-global-practice-and-the-asian-development-bank), accessed 26 May 2021).
2. WHO Director-General's opening remarks at the Sanitation for All (SWA) Finance Ministers' Meetings – Africa [speech]. In: WHO [website]. 2020. ([https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-sanitation-for-all-\(swa\)-finance-ministers-meetings---africa](https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-sanitation-for-all-(swa)-finance-ministers-meetings---africa), accessed 26 May 2021).
3. Water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19. Geneva: World Health Organization; 29 July 2020. (<https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC-WASH-2020.4>, accessed 25 April 2021).
4. Status of environmental surveillance for SARS-CoV-2 virus. Geneva: World Health Organization; 2020. (<https://www.who.int/publications/i/item/WHO-2019-nCoV-sci-brief-environmentalSampling-2020-1>, accessed 25 April 2021).
5. Hygiene: UN-Water GLAAS findings on national policies, plans, targets and finance. Geneva: World Health Organization; 2020. (https://www.who.int/water_sanitation_health/publications/hygiene-glaas-findings/en/, accessed 25 April 2021).
6. Hygiene Baselines pre-COVID-19. Global Snapshot. WHO and UNICEF JMP; 2020. (<https://washdata.org/sites/default/files/documents/reports/2020-05/JMP-2020-COVID-global-hygiene-snapshot.pdf>, accessed 25 April 2021).
7. COVID-19 update on the monitoring page for hygiene. In: WHO and UNICEF JMP [website]. (<https://washdata.org/monitoring/hygiene>, accessed 27 April 2021).
8. The Sustainable Development Goal 6 Global Acceleration Framework. Geneva: UN-Water; 2020. (<https://www.unwater.org/publications/the-sdg-6-global-acceleration-framework/>, accessed 25 April 2021).
9. Global Action Plan for Healthy Lives and Well-being for All. In: WHO [website]. 2020. (<https://www.who.int/initiatives/sdg3-global-action-plan>, accessed 26 May 2021).
10. Hand Hygiene for All 2020. Progress Report. World Health Organization and United Nations Children's Fund (UNICEF); 2020. (https://globalhandwashing.org/wp-content/uploads/2021/01/HH4A-progress-report-final_en.pdf, accessed 25 April 2021).
11. State of the World's Sanitation: An urgent call to transform sanitation for better health, environments, economies and societies. New York: United Nations Children's Fund (UNICEF) and the World Health Organization; 2020. (<https://www.who.int/publications/i/item/9789240014473>, accessed 25 April 2021).
12. https://apps.who.int/gb/ebwha/pdf_files/WHA72/A72_R7-en.pdf
13. Simplified WASH FIT Assessment Tool [online version]. 2020. (<https://ee.kobotoolbox.org/x/egDN1mUO>, accessed 25 April 2021).
14. WHO guidance for climate-resilient and environmentally sustainable health care facilities. Geneva: World Health Organization; 2020. (<https://www.who.int/publications/i/item/9789240012226>, accessed 25 April 2021).

-
15. Global progress report on water, sanitation and hygiene in health care facilities: fundamentals first. Geneva: World Health Organization; 2020. (<https://www.unicef.org/media/89201/file/Water-sanitation-and-hygiene-in-health-care-facilities-fundamentals-first-2020.pdf>, accessed 25 April 2021).
16. Progress on drinking water, sanitation and hygiene in schools: Special focus on COVID-19. New York: United Nations Children’s Fund (UNICEF) and World Health Organization (WHO), 2020. (<https://washdata.org/sites/default/files/2020-09/JMP-2020-WASH-schools.pdf>, accessed 25 April 2021).
17. Background documents for development of WHO Guidelines for drinking-water quality and Guidelines for safe recreational water environments. Geneva: World Health Organization; 2020. (<https://www.who.int/publications/m/item/background-documents-for-development-of-who-guidelines-for-drinking-water-quality-and-guidelines-for-safe-recreational-water-environments>, accessed 25 April 2021).
18. Howard G, Bartam J, Williams A, Overbo A, Fuente D, Geere JA. Domestic water quantity, service level and health, second edition. Geneva: World Health Organization; 2020. (<https://www.who.int/publications/i/item/9789240015241>, accessed 25 April 2021).
19. Technical brief on water, sanitation, hygiene (WASH) and wastewater management to prevent infections and reduce the spread of antimicrobial resistance (AMR). World Health Organization, Food and Agriculture Organization, World Organization for Animal Health; 2020. (<https://www.who.int/publications/i/item/9789240006416> accessed 27 May 2021)

Strategic context 2020

In 2020, the WHO WASH team worked more than ever with colleagues in the WHO health emergency programme, and in departments dealing with quality of care; patient safety; health financing; data, analytics and delivery for impact; maternal, newborn and child health (MNCH); IPC; AMR; NTDs; nutrition; food safety and tropical disease research and training.

WHO's WASH work is a pillar of the Environment, Climate and Health (ECH) Department within the Healthier Populations Division, and achievement of WASH outcome indicators on drinking-water and sanitation are essential to WHO meeting its triple billion target from the *WHO Thirteenth General Programme of Work 2019–2023* (GPW 13) (1).

COVID-19 pandemic and WHO response

In 2020, COVID-19 put WHO front-and-centre of a global pandemic response and tested the Organization like never before. WHO leadership and technical advice were much in demand and heavily scrutinized. WHO staff worked long and often stressful days and, like colleagues around the world, had to adapt to working in different ways. Whether it was embracing virtual work or taking on reassignments or new types of work, it usually involved a creative approach to collaboration or in delivery of technical assistance to countries.

Despite the spread of the virus in 2020, the year will be remembered by unprecedented partnerships within and beyond the UN family. Partnerships focused on addressing COVID-19, and also on strengthening efforts to progress towards SDG 3, including through the Global Action Plan (2), and towards SDG 6 through the GAF (3).

Box 1. Accelerating Progress on SDG 3 and 6

Progress on the health-related SDG, already off track before COVID-19, is now further threatened as COVID-19 disrupts essential health services in many countries and threatens recent health and development gains, with disproportionate impact on already vulnerable populations.

In 2020, WHO, as Secretariat of the Global Action Plan on Health and Well-Being for All, shared lessons learned with a group of agencies led by UN Water to inform the SDG 6 Acceleration Framework (3). The Framework aims to improve collaboration among multilateral agencies to support countries in accelerating progress in the areas of WASH, and improving health status, including as measured through SDG indicator 3.9.2.

The Framework adopts the Global Action Plan for Healthy Lives and Well-being for All model of four commitments to Engage, Accelerate, Align and Account, together with a set of accelerators for focusing action. As part of the implementation of the framework and linked to the work of the GAP determinants of health accelerator, UNICEF and WHO, working with the World Bank and ILO and other partners, have launched the Hand Hygiene for All Initiative.

WHO's WASH response to COVID-19 initially focused on rapidly assessing whether SARS-CoV-2 was transmissible through water or wastewater, and providing comprehensive technical guidance (4) to assist WASH practitioners with preventing and controlling infections. This guidance was one of more than 800 products published by WHO related to COVID-19 covering topics ranging from surveillance to laboratory testing to best practices.

Promotion of hand hygiene was immediately recognized as the most significant WASH-related contribution to disease control efforts. The lack of hand hygiene exposed in the 2019 JMP report (5),

was again brought to the world's attention even more persuasively through JMP communications updates (6). WHO's GLAAS issued a special analysis of hygiene policies, targets and financing (7) highlighting inadequate investments in and poor data on hygiene.

WHO's Director-General Dr Tedros launched the #SafeHands Challenge (8) to promote awareness and proper technique for handwashing. WHO also issued a directive (9) to Member States recommending the obligatory installation of handwashing facilities at access points to public buildings, including offices, grocery stores, and train and bus stations.

To further build on this point and mobilize partners, WHO and UNICEF jointly launched the Hand Hygiene for All Initiative (10) to accelerate progress towards hand hygiene for all by 2030 and to support the most vulnerable communities to protect their health, including against COVID-19.

WHO issued and subsequently updated operational guidance (11) to countries to assist in developing or revising COVID-19 Strategic Preparedness and Response Plans. The guidance includes numerous recommendations to strengthen WASH services in the context of the pillars dealing with infection prevention and control (IPC) and with risk communication and community engagement.

WHO's concern about inadequate WASH in health care facilities was reinforced by COVID-19, with WHO's Director-General remarking that "Working in a healthcare facility without water, sanitation and hygiene is akin to sending nurses and doctors to work without personal protective equipment," (12) at the launch of the *Global progress report on water, sanitation, and hygiene in health care facilities: fundamentals first* (13).

Another important WASH-related aspect of the COVID-19 pandemic is that SARS-CoV-2 in wastewater can provide an early warning function for the emergence of the virus circulating in communities, the identification of hot spots and tracking back of first occurrences of the virus by investigating conserved wastewater samples for SARS-CoV-2 RNA. To support SARS-CoV-2 surveillance WHO released a scientific brief (14) as well as 'question and answer' environmental surveillance guidance in all UN languages (15).

To inform recovery planning, WHO issued a *Manifesto for a healthy recovery from COVID-19* (16) with six prescriptions, including for WASH and energy in health care facilities, and a comprehensive set of 'actionables' – practical steps for implementing the prescriptions of the Manifesto. The Partnership for Maternal, Newborn and Child Health (MNCH) also included improving WASH as one of the seven key prescriptions in their COVID-19 Call to Action (17).

Monitoring results and impacts

WHO's work on WASH is consistent with WHO's vision of its transformation to a more effective and efficient organization, delivering results at country level, and promoting healthier populations by addressing the determinants of health. 2020 was the third year of implementation of WHO's 2018–2025 WASH strategy (18), outlining WHO WASH's vision "**to substantially improve health through the safe management of water, sanitation and hygiene services in all settings**".

The WHO WASH strategy discusses the positioning of WHO WASH work within the SDG framework and the objectives presented in the GPW 13 (1), as well as WHO's comparative advantages in WASH. The strategy is summarized in a strategic framework complemented by a theory of change (see Annex 3). The strategy and a logframe provide a robust basis for monitoring both outputs and outcomes. Annual progress and results are summarized in a completed logframe and report,

including WHO WASH annual reports for 2018 (19) and 2019 (20). This document covers 2020, with achievements in each of the WHO WASH results areas presented through a technical narrative and quantitative results against the logframe milestones. Even with the exceptional challenges and context of the COVID-19 pandemic, WHO achieved or surpassed 24 of 26 (92%) of the 2020 output milestones, and partially achieved the remaining two.

WHO organization-level monitoring: GPW 13 and the output scorecard

WHO WASH results and impacts are tracked and measured at the organization level by the WHO GPW 13 and its results framework covering 2019–2023 (1). The framework targets track the measurable impact of WHO on people's health at the country level, and include three components: impact measurement, the output scorecard and qualitative country case studies.

Impact measurement is based on the SDGs and measures progress through outcome indicators, Healthy Life Expectancy and the Triple Billion indices. Triple billion targets are, by 2023 [extended to 2025]:

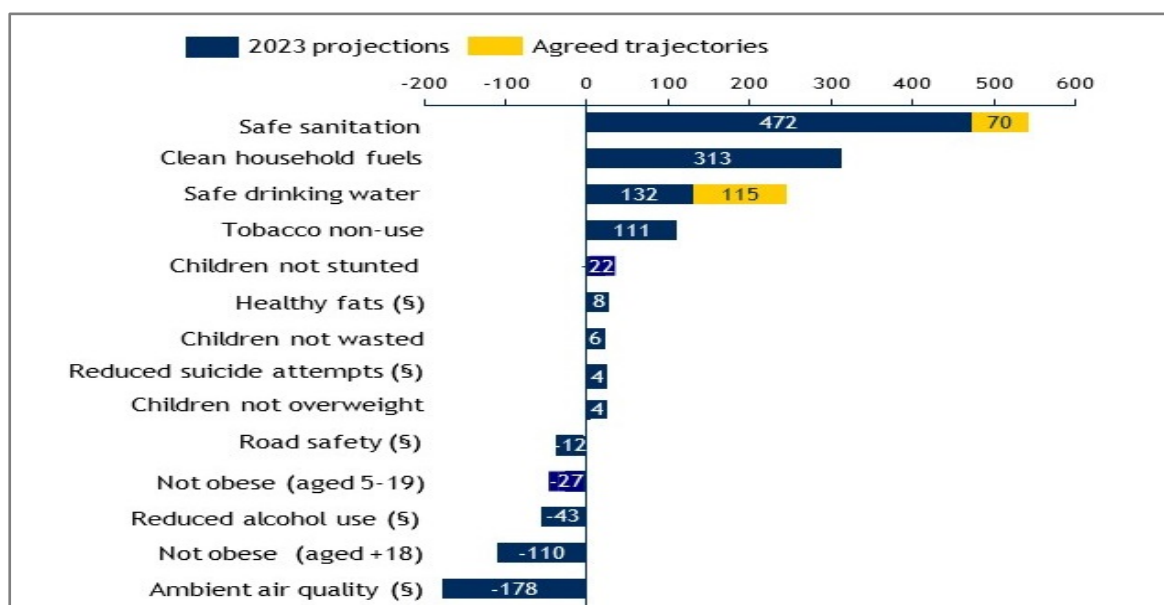
- One billion more people benefitting from universal health coverage (UHC).
- One billion more people better protected from health emergencies.
- One billion more people enjoying better health and well-being (the 'healthier population billion').

Safely managed sanitation and safely managed drinking-water are critical contributors to the healthier population billion, and basic sanitation contributes towards the UHC billion. WHO's work on WASH, through its cross-cutting WASH and health programme linkages work, also contributes to GPW 13 targets related to AMR (deaths from sepsis caused by resistant organisms), health emergencies (number of persons in fragile settings with access to essential health services) and UHC (basic sanitation services as well as maternal and child mortality are components of the indicator used to track UHC progress). **The integration of WASH indicators into GPW 13 indicators helps drive prioritization of WASH in regional and country workplans.**

Figure 1 below highlights the critical importance of safely managed sanitation, and to a lesser extent safely managed drinking-water services, to country progress on the healthier population billion.

The blue bars show projected progress if historical rates of progress are maintained, and show over 600 million people having healthier lives by 2023 due to improvements in water and sanitation services. The yellow bars show an estimate of what an ambitious but achievable acceleration could be – with an additional 185 million people enjoying healthier lives by 2023 if progress on water and sanitation is accelerated. (Acceleration scenarios are under development for other indicators.) Existing WHO WASH implementation tools such as sanitation safety planning (SSP) (21) and water safety planning (WSP) (22) can support this type of acceleration, along with tools such as the SDG 6 Acceleration Framework (3).

Fig 1. Projected country progress with trajectories for indicators (in millions of lives)



Source: Internal WHO presentation on the first delivery stocktake on healthier populations held in October 2020.

A new scorecard approach for output measurement has been adopted by WHO to improve the WHO's accountability for results. The scorecard assesses both technical and enabling outputs, capturing six assessment parameters or dimensions related to the following outputs:

1. leadership function at all levels;
2. delivery of the priority global public health goods that are critical to achieving outputs;
3. delivery of technical support to achieve impacts in countries;
4. value for money based on considerations of ethics, effectiveness, efficiency, equity and economy;
5. integration of gender, equity and human rights; and
6. achievement of early indications of success (leading indicators, which for WASH is the number of countries with policies on WSP) in ways that influence impacts.

The WHO WASH team at WHO headquarters – the water, sanitation, hygiene and health (WSH) unit – completed the required self-assessment based on a list of criteria for attributes identified for each of the dimensions in February 2021 as part of reflections on 2020 results and opportunities for improvements. The results are aggregated under the output 3.1.2 “Countries enabled to address environmental determinants of health, including climate change” in WHO's Mid-term results report for 2020 (23). Results for WHO headquarters and the Regions, together with narrative explanations, can be accessed through the report or directly through this link.²

Achieving impact: keys to success and lessons learned 2020

Effective partnerships and collaboration continue to be central to achieving and sustaining health impacts. During 2020, including as part of COVID-19 response, WHO WASH invested in and capitalized on work through alliances and partnerships, and strengthened working relationships at global, regional and country levels with WASH sector partners and donors. At the country and regional levels, WHO WASH teams have strengthened links with key government actors from across

² <https://www.who.int/about/accountability/results/who-results-report-2020-mtr/output/2020/3.1.2-countries-enabled-to-address-environmental-determinants-of-health-including-climate-change>

the many ministries responsible for WASH including ministries of health, education, social welfare, environment and infrastructure.

As a norms-setting organization, **strategic partnerships with organizations with strong country programmes and capacity for scaling through regional mechanisms help WHO promote quality implementation of its norms and guidance.** Examples of these partnerships can be found throughout this report.

Partnerships within WHO are equally critical to WHO WASH impact. Prioritizing investments in integrating WASH into the work of other WHO departments – and normalizing WASH as a critical component of health – has enabled the small global WHO WASH team to realize results well beyond its size and resources. **Collaborations between WHO WASH and WHO health programmes have amplified impacts for both WASH and other programmes** such as IPC, AMR, quality of care, MNCH and climate change. Many concrete examples of impacts of WASH and health work within WHO are provided throughout this report. The WHO WASH team will continue efforts to strengthen the visibility of WASH and environmental health within WHO, and provide resources and build capacity for expanding WASH and health partnerships at regional and country levels.

Regular exchanges and support between WHO WASH teams at headquarters, regional offices and country offices have enriched and facilitated WASH work at all levels. During 2020, monthly meetings between regional advisors responsible for WASH and the headquarter-based WASH team reinforced collaboration, sharing of experience and information, and capacity building across the three levels as well as between regions. This not only optimized efforts as regions and countries could build on and learn from their colleagues' work, but it also contributed to identifying new ideas and approaches to address common challenges, such as increased technical capacity related to sanitation.

Box 2. Need for increased capacity for implementing *WHO Guidelines on Sanitation and Health (24)*, SSP and sanitary inspection

Sanitation has been increasingly recognized for its critical impacts on health, including as the most important contributor to achieving the WHO GWP target for 'one billion more people enjoying better health and well-being'. Over the last few years, the sanitation team at WHO headquarters has built up a robust package of technical and capacity-building resources and strengthened partner engagement to support regional and country-level implementation of the *Guidelines on sanitation and health (24)*, SSP and sanitary inspection packages for sanitation systems (25).

However, unlike longstanding and familiar topics such as drinking-water quality, much of the sanitation content may be new or unfamiliar to WHO regional and country office staff. In addition, capacity to take on aspects of sanitation amid heavy workloads is limited.

A priority in 2021 and beyond needs to be building regional and country capacity and funding to support sanitation implementation with Member States with a focus on key acceleration actions identified in the *State of the World's Sanitation report (26)* strengthening service quality and public health aspects of national regulations and standards as described in the *Guidelines on sanitation and health*, and local level implementation of risk-based approaches through SSP and simplified inspection packages.

Technical assistance to countries is a critical element of WHO WASH work at all levels, and is directly linked to impact. While restrictions related to the pandemic could have hindered technical assistance, WHO WASH successfully adapted with new (virtual) approaches to trainings, meetings and technical assistance that have saved travel costs and expanded reach and access. WHO WASH

will continue to strengthen use of training platforms and virtual technology, and evolve innovative models for meetings and trainings, complemented by face-to-face exchanges when possible.

During 2020 and in the context of the COVID-19 pandemic, WHO WASH recognized and capitalized on heightened attention to COVID-19-related waste and health care waste management (HCWM) to move forward work on policies and guidelines as described in Box 3 below.

Box 3. Development of HCWM policies and guidelines

WHO WASH has taken the lead in supporting countries in the development of national HCWM policies and guidelines. For example, WHO provided technical assistance to the Philippines Department of Health to update the *Health Care Waste Management Manual, 4th Edition* (27) and in Nigeria, WHO contributed to development of standard operating procedures (SOPs) and improvement plans in 36 states, based on a rapid national assessment on HCWM.

A focus on the best environmental practices and techniques helps ensure that these policies and guidelines provide a structure and accountability for how each country will meet national targets and also save money in the long-term and help reduce the health sector's impact on climate.

As part of a collaborative effort with UNDP and Health Care Without Harm, WHO supported the governments of Ghana, Madagascar, Tanzania and Zambia to revise and implement their HCWM policies. In Ghana, the revised National HCWM Policy (28) and National Guidelines on HCWM (29) are now being enforced, resulting in the following outcomes:

- project hospitals following the National Guidelines with SOPs to implement them;
- waste segregating has increased using the three-bin system, and
- waste is picked up and autoclaved off-site by a private contractor 1-2 times per week with significant reductions in harmful air pollutants that result from burning waste.

"Our COVID-19 support builds on the results of the partnership that we have been enjoying with the Ministry of Health, Ghana Health Service and WHO for the past four years, focusing on improving health care waste management in the country. We remain committed to this strong collaboration especially at these COVID-19 trying times for Ghanaians" - Ms. Gita Welch, acting Resident Representative of UNDP Ghana (30).

Access to relevant and timely WASH data, and use of these data to inform policy and planning and/or raise attention to critical issues, is what drives ultimate impact from WHO data and information. The compilation and publication of hygiene data by both JMP and GLAAS during 2020 (6, 7) provided timely support to countries. For example, JMP statistics on hand hygiene were heavily cited by countries and other WASH and health stakeholders during the COVID-19 response, and informed actions to increase access to hand hygiene materials in households, schools and health care facilities. A review of media coverage after the release of the report on WASH in schools (*Progress on drinking water, sanitation and hygiene in schools: special focus on COVID-19* (31)) confirmed excellent global coverage of the report content and key messages across the globe³. Headlines emphasized the lack of WASH, and in particular handwashing facilities, in schools and the impacts on fighting COVID-19.

³ Major news outlets carrying articles in English included The Telegraph, Associated Press, Associated Press Pakistan, Washington Times Herald, Dhaka Tribune, UN News. Articles also appeared in web media in English, French and Spanish.

Key accomplishments against the strategic plan

Results on programmatic outcomes

The below tables present the two programmatic outcomes for WASH and related indicators, baselines, milestones and results. Given the longer timeframe needed to monitor and document results of impacts (outcome indicators), most programmatic outcome milestones are monitored every two years. **For the most recent comprehensive outcome results, please see the WHO WASH Annual Report 2019 pages 7-9 (20).**

Programmatic OUTCOME 1: National and international WASH and health programmes, regulations and initiatives are based on normative guidance produced by WHO. Risk-based approaches are adopted at national level.			
Outcome 1 indicators	Baseline 2019	Milestone 2020	Results 2020
1.1 Number of countries with WSP policies (using risk-based approaches).	61 countries	No target 2020 (2021 target is 65)	NA
1.2 Number of countries that have or are implementing WHO sanitation guidelines and/or SSP (using risk-based approaches).	40 countries	No target 2020 (2021 target is 47)	NA
1.3 Evidence of international partners integrating WHO guidelines/information in their programming approaches.	Examples in 2019 annual report	Examples	Examples documented

Outcome indicators 1.1 and 1.2 are aligned with internal WHO targets, including the GPW (1). Underlying the achievement of outcome indicators 1.1 and 1.2 are the WHO guidance documents that support implementation of WSP, SSP and the sanitation guidelines as well as direct technical support to countries provided by WHO and partners. **During 2020, WHO WASH published and disseminated over 45 new technical products including training videos⁴** and 23 countries received training or direct technical support to implement WSP and SSP and/or to translate WHO WSP guidance or WHO sanitation guidelines into standards, regulations and policies. Selected WHO 2020 WASH publications are listed in Annex 1.

Examples of countries implementing SSP during 2020 and how WSP and WHO drinking-water guidelines are supporting changes in country policies and standards can be found in the relevant results area section on drinking-water quality and safety or sanitation and wastewater under the subsection 'Examples of 2020 impacts'.

Since WHO is not itself an implementing agency, international partners implementing programmes using WHO guidelines and technical materials is essential to achieving – and increasing – health impacts. The WHO Sanitation and health guidelines present a good example of how WHO guidelines provide a strong basis for partner work. **The WHO Guidelines on sanitation and health (24) are now well established as a foundational normative reference for a host of global and regional strategies and initiatives** including: the UNICEF Urban Sanitation Strategy, the forthcoming African Sanitation Policy Guidelines developed by the African Ministers' Council on Water (AMCOW), the GLAAS Sanitation Policy Monitoring and Assessment Tool (PMAT), European Protocol on Water and Health, the Eastern and Southern Africa Water and Sanitation (ESAWAS) guidance on sanitation regulation,

⁴ Not all WASH-related publications by WHO regional and country offices are included in this report, although selected examples are provided throughout the report and listed in Annex 1.

the safely managed on site sanitation (SMOSS) monitoring project, and the implementation strategy for the new Sanitation and Hygiene Fund (SHF) (formerly Water Supply and Sanitation Collaborative Council (WSSCC)). Additional examples of WHO guidelines in programming approaches of partners and countries are provided in the results area sections of this report.

Programmatic OUTCOME 2: National and international WASH and health programmes and initiatives are informed by monitoring data produced by WHO.			
Outcome 2 indicators	Baseline 2019	Milestone 2020	Results 2020
2.1 Number of countries implementing national standards and other elements of the World Health Assembly resolution on WASH in health care facilities.	30 countries	60 countries	Partially achieved: 47 countries documented + additional countries.
2.2 Number of countries with national targets in alignment with SDG criteria for safe management of excreta along the sanitation chain.	29 countries	No target 2020 (2021 target is 34)	NA
2.3 Number of countries with national targets in alignment with SDG criteria for safe management of drinking-water.	61 countries	No target 2020 (2021 target is 70)	NA
2.4 WASH partner publications, informational materials and websites use WHO-generated WASH data.	Examples in 2019 annual report	Examples	Selected examples documented

Implementation of the ambitious workplan resulting from the World Health Assembly Resolution 72.7 on WASH in health care facilities (32) has shown incremental progress during 2020: Of the 47 countries who submitted a progress update in 2020, 86% have developed and are implementing standards for WASH in health care facilities, 70% have conducted situation analyses, and 60% are working to incrementally improve infrastructure and operations and maintenance of WASH services. Because of limited country capacity for reporting due to demands of the COVID-19 response, some countries known to be addressing elements of the Resolution are not yet included in 2020 results. While progress on improving WASH in health care facilities is encouraging, efforts remain under-financed and often poorly integrated with health systems at the country level.

The value of WHO WASH data to the sector is reflected in the number of WASH partner publications, informational materials and websites using WHO-generated WASH data. Recent examples include:

- Use by the FAO of JMP figures and graphs from *Progress on household drinking water, sanitation and hygiene 2000-2017: Special focus on inequalities* (5) for the section on improving access to safe drinking-water in rural areas in *The State of Food and Agriculture* (33).
- The World Bank used the JMP data on hygiene in health care facilities and schools in the 3rd edition of the SDG Atlas under Goal 6 (34).
- The new United States Agency for International Development (USAID) sanitation brief uses JMP data and graphics (35).
- A new report, *Referee!: Responsibilities, regulations and regulating for urban sanitation* (36) published by Water & Sanitation for the Urban Poor and ESAWAS Regulators Association, draws on WHO data and information from the WHO-hosted RegNet meetings and uses JMP's regulatory framework and ladder.
- Data compiled by GLAAS and JMP also support country SDG reporting, in particular on targets for which WHO is a custodian agency: SDG targets 6.1, 6.2, 6.3, 6.a and 6.b.

Results area: drinking-water quality and safety

OUTPUT 1 – DRINKING-WATER: Risk management approaches based on up-to-date guidelines for drinking-water are available and disseminated to national and international WASH partners			
Output 1 indicators	Baseline 2019	Milestone 2020	Results 2020
1.1 Health-based guidelines that respond to Member State needs and emerging issues published and disseminated.	Draft supporting publications to the GDWQ; updated draft of small systems guidelines.	At least 20 supporting publications to the GDWQ finalized	Achieved: 10 chemical background documents published, 9 microbial fact sheets finalized; four sanitary inspection packages finalized.
1.2 Supporting resources and/or training materials on water quality management including WSP developed and disseminated to facilitate implementation of the Guidelines for Drinking-water quality (GDWQ).	5 publications initiated. 3 publications fully drafted.	1 document published and disseminated.	Surpassed: Domestic water quantity, service level and health, second edition published; Second edition of Toxic cyanobacteria in water finalized.
1.3 Results from WHO International Scheme to Evaluate household water treatment (HWT) documented and disseminated.	Round I report published in 2016; Round II in 2019.	10 product results reports published	Surpassed: 11 product reports developed and published on WHO website.
1.4 Number of countries receiving technical support for implementation of the GDWQ.	14 countries	Continued technical support to 7 countries. Support to 4 additional countries.	Surpassed: Continued technical support to 7 countries; new support to 13 countries.

During 2020, all output results related to providing technical information on drinking-water quality and safety and support to countries were achieved or surpassed. Additional 2020 results included:

- progress on strengthening policy and regulatory drivers for drinking-water quality surveillance through the WHO-hosted RegNet (37);
- webinars (WHO-convened) with partners on water safety and climate resilience;
- contributions to partner-convened webinars and conference events on topical water quality issues including COVID-19 preparedness, WSP auditing, climate resilience, microplastics and radionuclides; and
- synergies and benefits from coordination of inter-country/multi-regional collaboration.

Ongoing RegNet activities, expansion and sustainability linked to drinking-water regulation were reinforced with new funding during 2020⁵. Areas of focus during 2020 included strengthened engagement with regional regulators' networks and partners working on regulation who can leverage their member countries to accelerate progress and have greater impact in regulatory systems strengthening.

Moving forward, RegNet will evolve its mandate as both a network and a cross-cutting area of work that is integral to water and sanitation programming in countries, with a critical role in strengthening quality of services and accountability in WASH systems. *More information on RegNet's sanitation-*

⁵ from Health Canada

related activities during 2020 can be found in the next section focussed on sanitation and wastewater.

WHO headquarters and regional offices provided ongoing support to countries and the global WASH community by publishing updated or new technical information on drinking-water quality and safety, including:

- Ten *chemical background documents*⁶ (38) to be used for development of two guidelines to be published in 2021 (an update of the WHO GDWQ (39) and Guidelines for safe recreational water environments);
- *Domestic water quantity, service level and health, second edition* (40);
- *Costing and financing of small-scale water supply and sanitation services* (WHO regional office for Europe) (41);
- Four draft sanitary inspection packages (42); and
- a chapter on water quality for the WHO document *Policies, regulations & legislation promoting healthy housing: a review* (43).

In addition to publishing the above resources, WHO made significant progress on new guidelines and resources during 2020, including finalizing Toxic cyanobacteria in water and nine bacteria fact sheets in collaboration with the sanitation team and developing eLearning modules on climate resilient water safety planning in collaboration with the WHO regional office for South-East Asia (SEARO). Other resources include a compendium on water treatment technologies, WSP resources (including to support integration of climate change risks), technical briefs on lead and disinfection-by-products and input to a WHO report on the human health impacts of microplastics in the environment. Further, substantive updates were made to the small systems guidelines including the above listed four sanitary inspection packages and an end user consultation on guidance around water quality monitoring. The development of the sanitary inspection packages was informed by research commissioned and supported by WHO (44).

Despite travel restrictions and COVID-19-related priorities and activities, WHO supported a total of 20 countries⁷ with WSP and water quality and safety training and technical support including:

- Virtual training events for 15 countries on WSP Principles and Steps (29 October 2020) and on WSP Auditing (9-13 November 2020), developed and designed in collaboration with the WHO South-East Asia regional office. The trainings are recorded and available on line (45) (46) (47) (48) (49) (50). Focal points responsible for national implementation of drinking-water quality surveillance in urban and rural areas participated in the event.
- Technical support on WSPs to Bangladesh, Ethiopia, Ghana, Indonesia, Liberia, Mali and Nepal including review of/inputs to national WSP guidance materials and plans for WSP scale-up and support for WSP development and implementation.
- Technical support to strengthen drinking-water quality surveillance systems including WSP auditing in Bhutan, Indonesia, Philippines, Sri Lanka and Viet Nam.
- Technical input and facilitation of peer-to-peer exchanges with ESAWAS to update Ghana's national water policy and reform regulatory institutions for water services.

⁶ Covering anatoxin-a (cyanotoxin), bentazone, chromium, cylindrospermopsin (cyanotoxin), iodine, microcystin (cyanotoxin), organotins, saxitoxin (cyanotoxin), tetrachloroethene and trichloroethene).

⁷ Bangladesh, Bhutan, Cambodia, Ethiopia, Ghana, India, Indonesia, Lao People's Democratic Republic, Liberia, Madagascar, Maldives, Mali, Mongolia, Myanmar, Nepal, Philippines, Sri Lanka, Thailand, Timor Leste, Viet Nam.

- Support to continue development of a national water quality strategy in Madagascar. This was informed by the publication of a national drinking-water quality situation analysis report, which WHO also supported.
- Collaboration between the WHO country office and the Ministry of Health on testing a new tool to assess drinking-water quality surveillance in Indonesia (51).

Evaluation of Household Water Treatment Technologies

The WHO International Scheme to Evaluate Household Water Treatment Technologies (the Scheme) (52) added to its health-based evidence to inform procurement of HWT products by completing 11 additional evaluations (53), bringing the total products evaluated to 41 products.

These products include a range of treatment technologies: membrane and ceramic filtration, ultraviolet (UV) disinfection and flocculation-disinfection. Several of the products that have been evaluated under the Scheme and found to meet WHO performance criteria are now included in the supply lists of major HWT procurers, including UNICEF. The Scheme testing protocols are also being used by HWT manufacturers to guide research and development, as well as by partners such as the United States Centers for Disease Control and Prevention (US CDC).

Performance testing of HWT technologies is complex, due in part to the variable nature of microorganisms and to multi-stage and/or new technologies that require development of new testing protocols. Looking ahead, the focus will shift more to simplified protocols for application in developing countries as part of wider investment in improving water quality surveillance, laboratory capacity and regulation.

Examples of 2020 impacts of WHO work on drinking-water quality and safety

Improvements to water quality surveillance systems (including WSP auditing)

- In the Philippines, national WSP audit training materials and tools were developed and applied, drawing directly from the global WSP audit training package published by WHO in 2019. Also, policies on monitoring and auditing WSPs were finalized.
- In Viet Nam, WHO's WSP auditing guide (2016) was adapted and translated for national application.
- In Bhutan, the scope of surveillance activity was expanded from water quality testing only to also include sanitary inspection (using WHO's sanitary inspection forms) and review of water supplier testing records, in accordance with WHO's GDWQ.
- The WHO SEARO completed an assessment of the status of water quality surveillance in the region covering evolving, current and future opportunities for surveillance, based largely on WHO sources⁸.
- In response to surveillance programme needs assessments supported by WHO, national surveillance data management systems in Bhutan and the Philippines were strengthened to support the meaningful use of data to drive improvements.
- In Indonesia, WHO's recently revised sanitary inspection forms for assessment and management of risks within drinking-water supply systems were adapted and adopted for use as a surveillance tool.
- In the Philippines, water laboratory accreditation guidelines were issued, and a national policy on surveillance (based on the WHO GDWQ and the Philippines National Standards for

⁸ UN-Water GLAAS data; a Regional Water Quality Surveillance Meeting (2019) materials and outputs; Regional WASH accounts materials and outputs; and WaterCaRD results from Bhutan and Indonesia.

Drinking Water 2017 which WHO supported) and an accompanying operations manual were finalized.

Uptake of WSP

- In Viet Nam, national guidelines on WSPs for urban and rural settings were developed and applied based on WHO WSP resources.
- In the Philippines, a national policy on accrediting WSP training providers was finalized to support sustained WSP scale-up.
- The WSP approach was included in the *British Standards Institute's code of practice for water quality in buildings* (54).
- The revised European Union (EU) Drinking-Water Directive (55) includes explicit WSP requirements for 27 countries in and beyond the EU and includes multiple references to the WHO GDWQ (39) and the WSP manual (56).

Box 4. A major achievement: the EU Drinking-Water Directive featuring WHO recommendations and principles

On 23 December 2020 the new EU Directive on the quality of water intended for human consumption (Drinking-Water Directive) was published in the Official Journal of the European Union following the adoption by the European Parliament on 16 December. The 27 EU Member States have two years to transpose the Directive into national legislation. The Directive impacts additional countries beyond member states who align themselves with the provisions of the Directive.

The WHO regional office for Europe has been closely advising the European Commission on the recast of the Directive, now featuring WHO recommendations and principles in line with the WHO GDWQ, adapted to the EU context.

Based on WHO advice, among others, the Directive now:

- follows a risk-based approach for managing and monitoring drinking-water from catchment to consumer (as per WHO's WSP principles);
- provides updated standard values, generally based on WHO guideline values; and
- includes new provisions for Legionella prevention (with legionellosis the water-related disease across EURO with the highest health burden).

It also features a new requirement related to access to water in order to strengthen human rights provisions – in response to the first-ever successful European Citizens' Initiative "Right2Water".

The Directive's recitals strongly refer to WHO as a basis for the recast of the Directive. For the first time ever, it also refers to the Protocol on Water and Health.

Read more here:

<https://www.europarl.europa.eu/news/en/press-room/20201211IPR93619/parliament-adopts-deal-to-improve-quality-of-tap-water-and-reduce-plastic-litter>

https://ec.europa.eu/commission/presscorner/detail/en/IP_20_2417

https://ec.europa.eu/environment/water/water-drink/review_en.html

Results area: sanitation and wastewater

OUTPUT 2 – SANITATION AND WASTEWATER: Risk management approaches based on up-to-date guidelines for sanitation, safe use of wastewater, excreta and greywater, and recreational water are available with tools to support implementation and disseminated to national and international WASH partners			
Output 2 indicators	Baseline 2019	Milestone 2020	Results 2020
2.1 Publication of the State of the World's Sanitation Report (linked to the SDG6 GAF)	NA	Publish report	Achieved: Available on WHO website; launched 19 Nov: World Toilet Day
2.2 Global guidance documents and training materials to support country level implementation of WHO Sanitation and Health Guidelines and SSP.	2 documents	Digitized inspection forms published	Achieved: Published on mWater platform and tested.
2.3 Number of countries receiving technical support for implementation of WHO sanitation guidelines and SSP (through technical cooperation, regional trainings, RegNet)	NA	No milestone for 2020	Strong progress towards 2021 milestone: Three countries for SSP (Ethiopia, Nepal, Nigeria)
2.4 Publication of the WHO Guidelines for safe recreational water quality	NA	No milestone for 2020	Strong progress towards 2021 milestone: Edit and end-user consultation completed.

WHO collaboration, activities and publications during 2020 contributed to increasing global attention to sanitation and its critical impacts on health, economies and the environment.

On World Toilet Day 2020, WHO and UNICEF launched the flagship *State of the World's Sanitation: An urgent call to transform sanitation for better health, environments, economies and societies* (26). The report brings together data on sanitation coverage and investment for the first time including from the WHO burden of disease work, JMP data on coverage and trends and GLAAS data on policy and investments. Citing evidence on what works from successful countries and global guidelines, WHO and UNICEF call for strong government leadership and investment in resilient sanitation services. The report charts an ambitious way forward following the *SDG6 Global Acceleration Framework* (3) themes of governance, financing, capacity development, data and information, and innovation to achieve universal access to safe sanitation.

WHO also released two blogs supporting the *State of the World's Sanitation* publication: *Learning from history: sanitation for prosperity* (57) and *Regulating sanitation as a public good* (58). (See Box 5 on page 14 for an excerpt from this blog.) To celebrate World Toilet Day, the WHO regional office for Europe developed and published a short video (59).

A key focus for WHO's work in sanitation has been supporting and expanding country implementation of the *Guidelines on sanitation and health* (24) and SSP through the development of guidance and training materials – including online and digitized versions, along with expanding and strengthening partnerships. During 2020, WHO completed digitized versions of the sanitation inspection forms – now available for testing on the mWater platform (60) – and worked with mWater to test the digitized forms in the United Republic of Tanzania, reaching 800 households.

WHO also updated the SSP package and developed an online SSP training platform (61)⁹ that was tested with Nepal and Nigeria in November in advance of wider application in Latin America, the Sahel and Ethiopia in 2021.

Significant progress was made on several deliverables for 2021 including the second edition of the SSP manual for publication in August 2021 (incorporating climate resilience and the sanitation and health guidelines), pathogen factsheets, sanitation guidelines training, including new modules on regulatory aspects aimed at RegNet members, and a guidance document for setting national standards for treatment of wastewater and sludge. WHO SEARO launched work on a report on climate resilient sanitation to be published in mid 2021.

WHO also responded to needs for updated guidance on environmental surveillance related to the COVID-19 pandemic. See Box 5 below for information on work on environmental surveillance during 2020.

Box 5. Environmental surveillance of SARS-CoV-2 in wastewater

Environmental surveillance of pathogens in wastewater is a proven concept in public health surveillance (for example for polio). In the context of the COVID-19 pandemic, an increasing number of countries, particularly from the WHO European Region and other predominantly high-income countries, have adopted sewage surveillance programmes for detecting SARS-CoV-2 RNA in wastewater and sludge.

To inform public health surveillance actors and WASH practitioners during 2020, WHO convened an online expert and practitioner consultation in May and published a scientific brief on *the Status of environmental surveillance for SARS-CoV-2* (14) in August, and guidance on Coronavirus disease (COVID-19): Environmental Surveillance on the WHO website (15) at the end of the year in all UN languages. The guidance covers potential use cases, to complement testing in humans including: providing an early warning function for the emergence of SARS-CoV-2 circulation in communities, the identification of hot spots and retrospective identification of first occurrences of the virus. WHO remains engaged in several coordination platforms including the European Commission (EC) sentinels for sewers project, the Global Water Research Coalition (GWRC) surveillance network and the University of Michigan-led SARS-COV-2 wastewater surveillance data centre with the objective of monitoring the development of use cases and connecting environmental actors with the wider public health surveillance efforts.

The WHO European Centre for Environment and Health organized two virtual expert consultations on environmental surveillance of SARS CoV 2 in wastewater in July and November 2020. The first consultation facilitated a rapid exchange of current knowledge, experience and practices among countries at the forefront of research and environmental surveillance of SARS CoV 2 in wastewater, with summary findings published in a WHO report (62).

The second consultation built on the outcomes and recommendations of the first consultation and the considerations presented in WHO's scientific brief, and was organized jointly with the EC. A report of the meeting (63) summarizes information on the use, usefulness and limitations of SARS-CoV-2 surveillance in wastewater from a public health perspective, based on practices and experiences emerging in countries.

The WHO Region of the Americas supported SARS-CoV-2 surveillance in wastewater by developing a network of specialized centres and a protocol for laboratory analysis and surveillance.

⁹ Login and explore with User: whoguest Password: 2021whoguest2021.

Regulation

Along with SSP and local level sanitary inspection forms, a strengthened RegNet has emerged as a key mechanism for supporting implementation of the *Guidelines on sanitation and health (24)* and translation of these guidelines into appropriate national regulations and standards for sanitation services. RegNet has expanded its mandate to include wastewater and sanitation regulators, and strengthened its scope of activities with new funding to support public health regulation of sanitation¹⁰. In addition to supporting countries in strengthening regulatory frameworks, RegNet now serves on the advisory committees of the International Water Association (IWA) initiative on regulating city-wide inclusive sanitation, and the programme to improve public policies and the regulation of water and sanitation services in Latin America and the Caribbean.

In 2020, WHO initiated efforts to develop formal workplans on regulating sanitation with ESAWAS and with the Regulators Association and the Association of Water and Sanitation Regulators of the Americas (ADERASA) and to expand membership in the Asia-Pacific region. In addition, WHO chaired or co-convened conference events and webinars on regulating sanitation services targeting regulators, governments and practitioners including an October 2020 webinar on Regulating Citywide Inclusive Sanitation with the IWA (64) and a session on water and sanitation regulation in the climate change era¹¹ during Stockholm International Water Institute (SIWI) World Water Week in August.

Box 6. Regulating sanitation services as a public good

The below text is an excerpt from a WHO blog on regulating sanitation services as a public good (58).

For too long, sanitation, specifically on-site sanitation systems such as septic tanks and pit latrines have been left in the realm of household responsibility. The scant investments available for urban sanitation gravitate towards sewered infrastructure, reaching small proportions of large urban areas, primarily wealthier populations. Urban populations continue to grow rapidly, often in dense settlements with limited basic public services or infrastructure. Particularly for sanitation, households are forced to make do, covering the costs of basic access for themselves. The very nature of safe sanitation, however, means that the decisions and priorities of individuals are largely decoupled from what would be required to protect public health, the environment, and reach the poorest.

Services for safely containing, emptying, transporting and treating human waste, and preventing pits and septic tanks from contaminating groundwater and open drains are needed, but without regulation, investments will not prioritize public health outcomes. This situation is both unfair to the households and ineffective in achieving a primary purpose of sanitation: protecting public health. Sanitation is fundamentally a public good.

Investments in sanitation need to be planned, regulated and financed to align the priorities of individual households with those of service providers. This alignment is required to address the broader social goals of public health protection, cleaner environments and stronger economies. Among the countries that have made extraordinary gains in a generation, a common factor among them has been strong political leadership that clarified public goals, gave clear mandates to the responsible authorities to achieve those goals, regulated authorities' delivery of services, and mobilized the corresponding investments needed.

Robust regulatory systems can address the market failures of urban sanitation to protect public health and incentivize delivery of safe, inclusive and viable services.

¹⁰ from the Bill & Melinda Gates Foundation (BMGF)

¹¹ With ESAWAS, SIWI and UNICEF.

Examples of 2020 impacts of WHO work on sanitation

The strong health and economic case for sanitation presented in the *State of the World's Sanitation* (26) sparked increased awareness and commitments from members at the UN permanent missions in New York, and will serve as a resource for making the case for sanitation for years to come.

WHO sanitation and health guidelines are supporting national and regional policies, frameworks, systems and tools as detailed in the above section on programmatic outcome 1.

Uptake of SSP

- In Tajikistan, SSPs were piloted in Oxfam community sites.
- In the WHO Region of the Americas, nine countries¹² implemented SSPs with support from the Regional Office and training back-up support from WHO headquarters.
- Nigeria, Nepal and Ethiopia implemented SSPs with direct technical support from WHO.
- The Asian Development Bank (ADB) supported SSP in West Bengal, India, and produced a guide on scaling-up SSP to other ADB countries.

Focused initiatives – sanitation workers

Building on momentum generated by the 2019 publication *Health, Safety and Dignity of Sanitation Workers* (65), the partnership for the Sanitation Workers Initiative¹³ has flourished during 2020 with new workstreams documented in a three-year activity workplan with WaterAid, World Bank, ILO and SNV (Netherlands Development Organisation). Within this partnership WHO will develop a research agenda to inform research grants, update the health evidence for sanitation workers and develop monitoring tools embedded in GLAAS and specific programmatic checklists.

¹² Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama

¹³ WHO, WaterAid, World Bank and ILO

Results area: WASH in health care facilities

OUTPUT 3 - WASH IN HEALTH PROGRAMMES: Health and other programmes are aware of the importance of WASH with access to up-to-date technical materials for programming and policies.			
Output indicators for WASH in health care facilities	Baseline 2019	Milestone 2020	Results 2020
3.1 Publication of global progress report on WASH in health care facilities; up-to-date tracking and country information on country progress on WASH in health care facilities available on the website; delivery of virtual global and regional leadership events.	NA	Global progress report on WASH in health care facilities; "think tank series" to strategize on report findings	Achieved: Document published, global webinar + 2 invitation-only think tanks
3.2 Publication and dissemination of updated and new technical guidance materials to support improving WASH in health care facilities.	WASH FIT 1.0	Draft WASH FIT 2.0; 3 country case studies	Achieved: WASH-FIT draft in process, WASH-IPC-AMR brief; country briefs published
3.3 Number of countries receiving technical support to implement WASH in health care facilities (using technical guidance and materials) and number of partners engaged.	20 countries and 3 partners	10 additional countries; 5 additional partners	Surpassed: 6 additional partners ¹⁴ ; 7 additional target countries ¹⁵ + 10 countries SEARO/ WPRO trainings ¹⁶

WHO and UNICEF published *Global progress report on water, sanitation and hygiene in health care facilities: fundamentals first (13)*, with involvement from seven WHO departments, special content by the World Bank and WaterAid, and over 60 reviewers. The report confirmed major gaps in WASH services: one third of health care facilities do not have what is needed to clean hands where care is provided; one in four facilities have no water services, and 10% have no sanitation services. Across the world's 47 least-developed countries, the problem is even greater: half of health care facilities lack basic water services and 60% have no sanitation services. The report includes four recommendations to all countries and partners, particularly health and community leaders, to accelerate investments and improvements in WASH services in health care facilities:

1. Implement costed national roadmaps with appropriate financing;
2. Monitor progress in improving WASH services, practices and the enabling environment;
3. Develop capacities of the health workforce to sustain WASH services and promote and practice good hygiene; and
4. Integrate WASH into regular health sector planning, budgeting and programming to deliver quality services, including COVID-19 response and recovery efforts.

The scope of the challenge requires a broad and coordinated global response with strong engagement from partners and donors. The WASH in health care facilities website (66), documents **increased commitments for contributing to WASH in health care facilities, with 187 commitments for contributing to WASH in health care facilities made by governments, organizations and individuals**. Active mobilization by WHO at all levels has garnered significant international and

¹⁴ Plan International, Action contre la Faim, Food for the Hungry, Engineers without Borders, Oxfam, Hilfswerk der Evangelischen Kirchen Schweiz (HEKS) in Bangladesh, Transform International Malawi.

¹⁵ Burundi, Ecuador, Indonesia, Kenya, Mozambique, Myanmar and Nicaragua.

¹⁶ Bangladesh, Cambodia, India, Lao People's Democratic Republic, Maldives, Mongolia, Nepal, Papua New Guinea, Philippines, Viet Nam.

regional donors for support to technical support and advocacy¹⁷. Regional partnerships on WASH in health care facilities have also increased substantially during 2020¹⁸.

Country-level activities to improve WASH in health care facilities are supported by a wide range of partners – for example WaterAid, World Vision, Terre des hommes, Oxfam, Plan International, SNV and IRC for installing infrastructure improvements and engaging community actors to manage and maintain systems; US CDC for implementation and evaluation of WASH FIT; and the United Nations Development Programme (UNDP) and Health Care Without Harm to procure green health care waste technologies and improve overall safe HCWM in line with WHO standards.

WHO advocacy, leadership and activities on WASH in health care facilities at country, regional and headquarter levels expanded exponentially during 2020 in response to increasing awareness of urgent need, intensified by the COVID-19 pandemic. WHO collaborated with partners (Food for the Hungry and Engineers without Borders) to develop a simplified and multilingual version of the WASH FIT assessment tool on Kobo Toolbox (67) for rapid deployment in COVID-19 affected areas, and published a two-page overview (68). In April, WHO and UNICEF hosted a webinar on different aspects of WASH in health care facilities as they relate to COVID-19, publishing presentations on water (69), sanitation (70), HCWM (71), hand hygiene (72) and environmental cleaning in English (73) and French (74); recordings of the webinars (75) and answers to questions asked during the webinar series (76). The WASH FIT training package was updated with emphasis on COVID-19/IPC, climate resilience and gender and inclusion (77). **WHO delivered virtual trainings during 2020 to over 300 persons based on the WASH and COVID-19 Interim Guidance document (4)**, including a multi-day, cross-region training in collaboration with regional offices for South-East Asia and the Western Pacific.

WASH FIT has been rolled out and documented in over 35 countries since its inception in 2015. Countries and partners are adapting and using the tool independently, including developing their own online data collection tools and visualisations. While the majority of these efforts have been WHO-led, partners have also used and adapted the tool independently in a range of regions and settings (for example in Timor-Leste, Iraq and Malawi).

WHO WASH staff at all levels of the organization have continued to work closely with WHO health programmes including AMR, IPC, health systems/quality of care, UHC and MNCH. Health programmes have integrated WASH in health care facilities into global standards, strategies and training packages. During 2020, the WASH team at headquarters provided inputs to publications by health teams, highlighting the important synergies between WASH in health care facilities and quality of care/health systems, IPC and climate change:

- *Achieving quality health services for all, through better water, sanitation and hygiene: Lessons from three African countries (78)* (WASH and health systems/quality teams) documents insights and learnings from improving WASH in health care facilities as a means to advance quality health services in Ethiopia, Ghana and Rwanda.

¹⁷ Including Agence Française de Développement (AFD), Department of Foreign Affairs and Trade, Australia (DFAT), Foreign Commonwealth & Development Office, United Kingdom of Great Britain and Northern Ireland (FCDO), Directorate-General for International Cooperation, Netherlands (DGIS), Health Canada, Hilton Foundation, Japan International Cooperation Agency (JICA), Luxembourg, New Venture Fund, Swedish International Development Cooperation Agency (Sida), UNICEF, USAID, UNDP, World Bank.

¹⁸ For example, in the region of the Americas, Dicastery for the Promotion of Integral Human Development (Holy See), GLOBAL 2020, Oswaldo Cruz Foundation (FIOCRUZ), Interamerican association of sanitary and environmental engineering (AIDIS), Interamerican Development Bank (IDB), United Nations Educational, Scientific and Cultural Organization, UNICEF and World Bank support WASH in health care facilities.

- *Core competencies for infection prevention and control professionals (79)* (WASH and IPC).
- *WHO guidance for climate resilient and environmentally sustainable health care facilities (80)*, with a section on water, sanitation and health care waste interventions and highlighting WASH FIT, aims to enhance the capacity of health care facilities to protect and improve the health of their communities in an unstable and changing climate, and to empower health care facilities to be environmentally sustainable (WASH and climate change and health).

Regional initiatives and activities

All WHO regional offices took actions to implement the WHO Resolution on WASH in health care facilities and support countries in conducting assessments and trainings, strengthening standards, integrating with health programmes and engaging partners.

Region	Selected activities/actions
South-East Asia	“Fit for Service” dashboard with real-time information on WASH services and other quality of care indicators for health care facilities; a WASH in health care facilities advocacy toolkit to help countries influence policies and investments.
Western Pacific	WASH in health care facilities named a top priority; during 2020, Cambodia, Lao PDR, Mongolia, Philippines, and Viet Nam conducted assessments and developed improvement plans in over 52 health care facilities using WASH FIT.
Eastern Mediterranean	Monitoring system for WASH services in health care facilities and regional support to improve services in pilot countries (jointly with health programmes).
Africa	Campaign for improving access to WASH services in health care facilities including collecting costing data to inform guidance and value proposition; 21 countries implementing joint WASH and national IPC programmes.
Europe	Five countries conducted in-depth policy and situational analyses that led to the integration of WASH aspects in the relevant policies, standards and regulations.
Americas	Forum on WASH in health care facilities with leadership from a regional coalition of First Ladies strengthened positioning of WASH in both the health and WASH sectors; 10 countries trained on developing roadmaps to improve WASH in health care facilities; seven countries conducted situational analyses of WASH in health care facilities.

Selected country activities

WHO WASH country focal points/country offices have driven progress in many countries with self-motivation, commitment and strong technical and communication skills. Continued support to country offices/country focal points is critical to maintain momentum and expand impacts.

- In Tajikistan, WHO collaborated with the national government and partners on the WASH in health care facilities nationally representative survey¹⁹ and the ongoing revision of national guidelines on HCWM²⁰ with support from UNDP.
- In Madagascar, WHO supported development and roll out of new HCWM guidelines and implementation of climate friendly technologies.
- In Kenya, WHO engaged Oxfam to adapt WASH FIT with an IPC focus and rolled out the tool to over 55 facilities.

¹⁹ Supported by JICA with engagement by UNICEF, the World Bank and Oxfam.

²⁰ With support from UNDP.

- In the Philippines, WHO provided technical assistance to develop national tools adapted from global tools: a green and safe health care facilities manual and rating system, and a WASH FIT operations manual with an assessment and scoring system.
- In the Lao People’s Democratic Republic, WHO helped the Ministry of Health integrate WASH FIT in a national programme for safe, climate resilient facilities.

Box 7: The ‘Safe, Clean and Climate Resilient/Green Health Facility’ initiative

WHO is assisting the Ministry of Health in Lao People’s Democratic Republic to upgrade hygiene at 50 provincial and district hospitals through the World Bank Pandemic Emergency Fund.

In July 2020, the Ministry of Health, supported by WHO, launched the “Safe, Clean and Climate Resilient/Green Health Facility” Initiative to improve health facility hygiene, infection control and waste management, raising over US\$ 2 million in local investments. The initiative covers 46 districts prone to climate-related extreme weather events and COVID-19 designated hospitals.

In each hospital, an in-hospital team is trained to identify critical gaps and develop and implement an action plan, using an adapted version of WHO/UNICEF’s WASH FIT.

The Ministry and WHO are also engaging with district and provincial health departments to monitor and accelerate progress on this and other aspects of COVID-19 preparedness, with a longer-term goal of making all health facilities “safe, clean and green” within the next three years. This comprehensive package of interventions is implemented along with Climate-resilient WSP in urban water supplies, in collaboration with the Ministry of Public Works and Transport. A WHO Western Pacific region news release (81) provides more details on this initiative.

- In November, the three levels of WHO (country, regional and global offices) collaborated to convene a virtual WASH FIT training of trainers in Indonesia with participants from government, academia, UN agencies, nongovernmental organizations (NGOs) and professional organizations (82). The five-session training event, held over three weeks, focused on the WASH FIT process and its benefits; linkages with national and global standards; identifying gender, equity and human rights and climate issues; and conducting future WASH FIT trainings. Following this training, 181 primary health centres in five provinces were trained and assessed in collaboration with the Ministry of Health, UNICEF and local NGOs.
- In Yemen, WHO supported activities in collaboration with WHO health programmes and partners including WASH FIT implementation, developing a WASH in health care facilities dashboard (83), rehabilitation and maintenance of WASH services in 91 health care facilities, provision of water, supplies and equipment to 217 health facilities and diarrhoea treatment centres, and capacity building training for 1 850 healthcare workers on IPC measures.
- In Liberia, WHO continued efforts to improve WASH in health care facilities.

“Do what you can with what you have. In Liberia, mentoring has led to meaningful changes in our health care facilities, in terms of enhanced capacity and a shift towards quality service delivery. To us, in the absence of abundance, the only thing we need is dedicated staff, transportation to visit facilities and daily sustenance. With this approach, a lot can be achieved with a little.”

– Quincy Goll, Liberia WHO Country Office



Advocacy for WASH in health care facilities

Capitalizing on the publication of the *Global progress report on water, sanitation and hygiene in health care facilities: fundamentals first* (13) WHO and UNICEF organized a global webinar (84) with two think-tanks to discuss the findings and implications. The webinar featured an overview presentation: *Fundamentals first: key data, findings and recommendations* (85).

Understanding the costs of improvements to WASH in health care facilities provides a concrete basis for planning and engagement by funders, partners and countries. During 2020, WHO and UNICEF undertook a global exercise to determine costs for meeting basic WASH standards in health care facilities, summarizing findings in a presentation (86). The annual cost of providing universal basic WASH in health care facilities in the 47 least-developed countries from 2021 to 2030 is \$US 6.5–9.6 billion or about US\$0.60 per capita, per year. These are modest costs compared to overall health and WASH resources flows. Momentum behind a healthy, green recovery from the COVID-19 pandemic presents an opportunity for leveraging investment in health care facilities.

During the May 2020 World Health Assembly event on WASH in health care facilities, health leaders spoke passionately about the need to address WASH in health care facilities not only to fight COVID-19, but to address fundamental issues of health, health security and health equity.

Box 8: Global health leaders speak out on WASH in health care facilities (87)

Safe, quality care for all has as its baseline, water and hygiene. WASH in health care facilities is the basic prerequisite of quality health care. [...] It is what lies beneath an equitable and accessible health system. – Mike Ryan, Executive director of Health Emergencies, WHO,

During these unprecedented times, it's even more clear how fundamental WASH is for prevention of infections and improving health outcomes as part of UHC. Now we must work even closer together to ensure that WASH is included in all interventions and at scale. COVID-19 provides a new entry point to build on. – Muhammed Pate, Global Director of Health, Nutrition and Population, World Bank,

Do high income countries still need to worry about WASH in health care facilities? [...] Having centralized water and supply sewerage gives health care professionals a false sense of security. They may be unaware of the risks that still apply, for example health care facilities are still at risk of opportunistic pathogens and accessibility and inequity remains a challenge. The message to everyone is that we can all improve, regardless of where we start from. – Marta Vargha, Ministry of Health, Hungary.

Safe WASH is particularly important for improving health outcomes linked to maternal, newborn and child health. At the health facility level, lack of WASH is a major factor contributing to poor quality of care. [...] and between 5.5 and 8.5 million deaths in low- and middle-income countries. Our goal that by 2030, every health care facility, in every setting, should have safely managed reliable WASH services and practices is therefore an imperative. Not achieving it will be unacceptable and will undermine the achievement of the SDGs for all, especially for women and children. – Anshu Banerjee, Senior Advisor, Department of Reproductive Health and Research, WHO.

Results area: integration of WASH with other health programmes

OUTPUT 3 - WASH IN HEALTH PROGRAMMES: Health and other programmes are aware of the importance of WASH and have access to up-to-date technical materials for their programming and policies.			
Output indicator	Baseline 2019	Milestone 2020	Results 2020
3.4 Published outbreak and health emergency documents integrating WHO WASH guidance and evidence.	NA	WASH and waste technical guidance for COVID-19 published	Achieved: Technical guidance published in April and updated in July
3.5 Publication of WASH and NTD strategy 2021–2030 to action WASH elements of the NTD roadmap to 2030 completed and used by countries for implementation of the strategy.	NA	WASH and NTD strategy published	Partially achieved: Draft ready but deferred to align with NTD roadmap in 2021
3.6 Number of countries receiving technical support to integrate WASH with cholera prevention and control efforts.	NA	5 countries	Partially achieved: 3 countries
3.7 Publication of WHO/FAO/ OIE technical brief on WASH and wastewater management to combat AMR.	NA	Technical Brief published in 5 languages	Achieved: Published in 5 languages
3.8 Publication of the global framework and targets for the Hand Hygiene for All Initiative and country case studies on hand hygiene to feed into a global report on the State of the World's Hygiene in 2021.	None - launched June 2020	Global framework and targets for initiative published	Achieved: Framework and targets published June 2020

Integration of WASH in other health programmes – and promoting ‘WASH and health’ – is critical to achieving SDGs, WHO targets and the WHO WASH overarching vision. **Partnering with WHO programmes across all areas of WASH work is integral to our strategic approach.**

Previous sections of the report have provided numerous examples of the integration of WASH work and guidance with other WHO programmes including climate change and health, emergencies, IPC, MNCH, quality of care/health systems and UHC. This section will focus on WASH collaboration in the specific areas covered by the indicators listed above: cholera prevention and control, NTDs, AMR and the Hand Hygiene for All Initiative4A. (Achievements related to output indicator 3.4 – COVID-19 guidance integrating WASH information and evidence – is presented in the first section of this report on the 2020 strategic context.)

Although some technical support activities were delayed due to the COVID-19 pandemic, many countries where WHO is already engaged strongly with health actors, especially in health care facilities, noted a sharp drop in cholera including Bangladesh, Ethiopia and Ghana. During 2020, **WHO WASH continued ongoing collaboration with cholera prevention and control, providing direct support to three countries: Ethiopia, Ghana and Yemen.** The cholera prevention and control approach is also evolving based on experience with COVID-19 and other infectious diseases such as Ebola as WHO considers the need to move away from vertical 'one disease' approaches. A broader approach covers actions that are fundamental to all infectious disease prevention and control efforts including hygiene behaviour; ensuring that health care facilities, schools and communities have WASH services; and regular monitoring and human resources to support sustained services.

The WASH and NTD Strategy 2021-2030 drafting and consultation was completed during 2020, and the publication was launched in March 2021 (88). The Strategy is an update of the 2015 Global Strategy on WASH and NTDs. It aims to support the recent NTD roadmap *Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030* (89) which encourages a shift from disease-specific programming to comprehensive approaches that involve multiple sectors in NTD control and elimination (90). During 2020, WHO contributed to a regional workshop on the WASH-NTD toolkit for 10 East African countries²¹ and continued to support implementation of the toolkit, which has now been used in more than 15 countries. Sessions were organized at global events including the Neglected Tropical Disease NGO Network (NNN) annual event in September, and at the University of North Carolina (UNC) Water and Health conference in October to review evidence gaps on WASH and NTDs and initiate efforts on the development of a research agenda. In 2020, WHO WASH also started a joint project with the WHO's Special Programme for Research and Training in Tropical Diseases (TDR) to strengthen research and build capacity on multisectoral actions to prevent and control vector-borne diseases, with a focus on WASH.

WASH and antimicrobial resistance (AMR)

In June 2020, WHO, FAO and OIE jointly published the *Technical Brief on WASH and wastewater management to prevent infections and reduce the spread of AMR* (in English, French, Spanish, Russian, Portuguese) (91), and launched the publication with briefings for WHO regional offices. This new technical brief summarizes evidence and presents WASH and wastewater actions to strengthen AMR National Action Plans and WASH sector policy.

The drafting process significantly strengthened relationships between WHO, FAO, OIE and UNEP, resulting in a successful AMR multi-partner trust fund proposal to conduct awareness raising and capacity building as well as political advocacy on the Technical Brief. The partnership continued to flourish during 2020 thanks to clearer interagency roles and mandate.

In September, WHO, UNICEF and WaterAid jointly published a technical brief on *Combating antimicrobial resistance through WASH and IPC and control in health care* (92). This brief presents the latest burden from poor WASH and IPC in health care, the role WASH and IPC serve in preventing AMR, and the benefits of joint action and investments. It also provides examples of effective action at the global, national and facility level. WHO continues to mainstream AMR in the WASH in health care facilities initiative and the new Hand Hygiene for All global initiative.

Hand Hygiene

In June 2020, WHO and UNICEF launched the *Hand Hygiene for All Global initiative* (10) aimed at ensuring implementation of WHO global recommendations on hand hygiene in the context of the COVID-19 pandemic and as a mainstay of wider IPC and WASH efforts. While the initial objective was supporting country response to COVID-19, the longer-term strategy is to ensure a transition to sustainable funding for hand hygiene as part of a building back better agenda.

²¹ The workshop was led by Accelerating the Sustainable Control and Elimination of Neglected Tropical Diseases (ASCEND) in collaboration with the Neglected Tropical Disease NGO Network (NNN) WASH working group.

Box 9. Spotlight on the Hand Hygiene for All Initiative

Current access levels to hand hygiene are critically low. Three billion people – 40 per cent of the world’s population – do not have a place in their homes to wash their hands with water and soap, and access is lacking in institutional settings and public spaces too (10). Persistent lack of political prioritisation and chronic under-investment go hand in hand with insufficient global access.

The Hand Hygiene for All initiative sets out to change this by accelerating progress towards hand hygiene for all by 2030 and supporting the most vulnerable communities to protect their health, including against COVID-19. Launched in June 2020, it is jointly led by UNICEF and WHO in partnership with international partners, national governments, public and private sectors, and civil society, across multiple settings.

The Hand Hygiene for All initiative brings partners around a shared vision and a joint plan to achieve it. The partnership agrees that effective hand hygiene scale-up requires four key ingredients: robust access to supplies and innovative behaviour change strategies, a strong enabling environment, and the political will and leadership to drive this. The results framework places country action at its heart and aligns global support behind this. This support is coordinated around five key ‘accelerator’ themes, as identified under the UN-Water SDG 6 Global Acceleration: governance and advocacy, financing, capacity development, data and information, and innovation.

Fig 2 below provides an overview of the main partners and approaches for the Hand Hygiene for All Initiative.

Figure 2. Overview of the Hand Hygiene for All Global Initiative 2020



The Hand Hygiene for All partnership had a positive and productive start during 2020, with outputs across all areas of work. Results are summarized in the first progress report published in December (93).

Outputs during 2020 include WHO's development of a **technical brief *Hand hygiene for all initiative: improving access and behaviour in health care facilities*** (94). This document details existing standards, tools, advocacy and monitoring efforts aimed to improve IPC and WASH in health care facilities. It focuses on the hand hygiene element, what can be done, and how current efforts contribute to the broader aims of the UNICEF/WHO global initiative on Hand Hygiene for All.

The global community has demonstrated an unprecedented appetite for collaboration, coordination and investment to support national progress on hand hygiene. **Core partners have affirmed 104 commitments across the five accelerators. Global Handwashing Day on 15 October was a springboard for advocacy and action.** For example, to push the agenda for Hand Hygiene for All in sub-Saharan Africa and commemorate Global Handwashing Day, WHO's Regional Office for Africa and UNICEF's regional offices in West and Central Africa and East and Southern Africa hosted a virtual panel discussion to raise awareness, showcase the contribution of diverse stakeholders to hand hygiene and discuss opportunities to advance hand hygiene in sub-Saharan Africa.

The WHO Nigeria country office coordinated the development of a National hand hygiene road map and reached 50,250 persons with Hand Hygiene for All messages through 1000 metallic hand hygiene notices. The WHO Regional Office for the Eastern Mediterranean WASH team noted **the importance of the Hand Hygiene for All Initiative in strengthening coordination of work across other WHO departments and programmes, as well as with other UN agencies.**

Results area: WASH evidence and monitoring

WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP)

OUTPUT 4 – JMP: Robust and up-to-date evidence base of country, regional and global progress on WASH and wastewater services in different settings is produced and publicly accessible			
Output indicator	Baseline 2019	Milestone 2020	Results 2020
4.1 Global, regional and national progress on household WASH services is documented and publicly available.	2019 report	Country consultation started (report for 2021)	Achieved
4.2 Global, regional and national progress on access to basic WASH services in health care facilities and in schools is documented and publicly available.	2018 report schools; 2019 report WASH in health care facilities	Schools report and WASH in health care facilities report published	Achieved: Both reports published
4.3 Number of countries receiving WHO technical support on monitoring of WASH services.	NA	4 countries	Surpassed: 9 countries ²²
4.4 Report(s) on global, regional and national progress on safe treatment and reuse of wastewater published and disseminated.	NA	Country consultation started (report for 2021)	Achieved

2020 was an extremely active year for the JMP as the team co-authored three reports, updated the JMP website and global databases for WASH in households, health care facilities and schools (95), continued activities to enhance global WASH monitoring, and responded to the need for hygiene data to support response to the COVID-19 epidemic. The JMP team contributed a chapter to the *State of the World's Sanitation: An urgent call to transform sanitation for better health, environments, economies and societies* (26) described in the results area section on sanitation.

The WHO/UNICEF JMP team prepared a series of snapshots pulling together available data on hand hygiene in households, health care facilities, and schools from the most recent JMP reports. These snapshots reflect hygiene baselines shortly before the COVID-19 outbreak and include the JMP ***Hygiene baselines pre-COVID 19 global snapshot*** (96) along with regional hygiene snapshots for each WHO region (97).

The report ***Progress on drinking water, sanitation and hygiene in schools: special focus on COVID-19*** (31) was published in August, with estimates from 174 countries, including 151 which had either basic water, basic sanitation, or basic hygiene estimates. The full report was followed by translations in French, Spanish, Arabic and Russian as well as summary highlights (97). The report highlights the rapid improvement needed to ensure students have access to handwashing facilities with soap and water during the COVID-19 pandemic, and to meet associated SDG targets by 2030.

The JMP updated 163 country files for WASH in health care facilities and contributed a chapter to the report ***Global progress report on water, sanitation and hygiene in health care facilities: fundamentals first*** (13), including at least one basic services indicator from 69 countries.

²² Bangladesh, Ecuador, Indonesia, Kenya, Pakistan, Serbia, Sri Lanka, Viet Nam and Zambia.

The JMP has developed new indicators for monitoring menstrual health which will feature in the 2021 progress report, and has partnered with the GLAAS team and Emory University to conduct a review of opportunities for enhanced monitoring of gender in relation to SDG WASH targets.

WHO headquarters, regional and country offices actively supported dissemination of the three reports as well as the hygiene snapshots, promoting use of the data for informing WASH programmes and policies. While translation of reports is time and resources intensive, availability of the reports in multiple languages supported broad access and use of the data.

In preparation for the 2021 JMP report on progress on household WASH services, **draft estimates were prepared for WASH in households** (SDG indicators 6.1.1 and 6.2.1). At the same time **WHO in collaboration with UN-Habitat prepared draft estimates on safely treated wastewater** (SDG indicator 6.3.1). Both sets of draft indicators were sent for country consultation, in October and November, respectively.

During 2020, JMP continued support to improving country monitoring of WASH including for SDG reporting.

- In late April and early May, JMP partnered with the Rural Water Supply Network to hold **two webinars on monitoring SDG targets for WASH in households**. The first webinar covered the definitions of the SDG indicators on WASH, and how the JMP uses national data to produce statistics. The second webinar then focused on exploring the data, with a focus on inequalities, at the JMP's interactive web portal (95). Recordings of both webinars are available in English, Spanish and French (98).
- In March, the JMP and the University of Leeds hosted an **Expert Group Meeting on monitoring of SMOSS, involving a number of global experts as well as representatives from six pilot countries**: Bangladesh, Ecuador, Kenya, Indonesia, Serbia and Zambia. Following the meeting, each of the six pilot countries developed and refined plans to collect data on SMOSS using a variety of methods including desk review, household surveys, interviews of service providers, and routine administrative monitoring systems. Some countries could make little progress in 2020 due to COVID activities, but others were able to complete significant amounts of data collection and analysis. Results from the pilot countries are expected in mid-2021, and a second group of countries will be engaged for 2021-2022.
- **JMP promoted and supported country use of JMP's WASH in health care facilities monitoring criteria** both within national health management information systems (HMIS) and also within stand-alone health facility assessment surveys, including expanded modules containing WASH.
- **To build and increase country monitoring resources and capacity, JMP trained 28 individuals** (18 men and 10 women from 22 countries and speaking a total of 24 languages) in SDG monitoring including water quality testing in household surveys, SMOSS, WASH in schools and WASH in health care facilities. This pool of trained individuals is now available for short-term or long-term work as needed in 2021 and beyond.
- The **JMP developed a virtual training package for SDG monitoring and for water quality testing in household surveys**, held a full virtual training in Viet Nam for the upcoming MICS²³ and provided technical support to Indonesia as they prepared to integrate water quality testing into a large national survey. Progress on supporting water quality testing in household surveys was slower than planned as many countries put surveys on hold due to the COVID-19 pandemic.

²³ UNICEF's multiple indicator cluster survey.

Preparatory work was completed for virtual trainings in Pakistan and Sri Lanka, and work will accelerate and expand in 2021.

- **WHO and UNICEF organized regional workshops in Latin America (November) and Europe and Central Asia (December) to support the country consultations on the update on WASH in households.** Participants examined country files, discussed data gaps, and steps that could be taken in the short or medium term to strengthen monitoring systems.

Integration of water quality testing in household surveys has become a feasible option due to the increased availability of affordable and accurate testing procedures and their adaptation for use by household survey teams. A thematic report, *Integrating water quality testing into household surveys (99)*, was published documenting the experiences of the first 32 surveys, and a journal manuscript is under preparation. Between 2013 and 2020, water quality testing in household surveys enabled 26 countries to make their first national baseline for SDG target 6.1.

WHO and UNICEF both have interests in validating portable testing kits for use in household surveys and for other applications such as water quality surveillance. The JMP has partnered with UNICEF Supply Division to develop a Target Product Profile for rapid *E. coli* detection tests (100), with the aim of accurately determining faecal contamination as rapidly as possible, and to move from slow laboratory testing to a more nimble ‘real-time monitoring’ in the field. To standardize and ensure reliability of results, **JMP is validating portable field kits for water quality testing under controlled laboratory conditions.** After a public call for proposals, a laboratory was contracted during 2020 and began work on testing 20 portable field kits, with results expected in the second quarter of 2021.

UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS)

OUTPUT 5 – GLAAS: Robust and up-to-date evidence base on WASH enabling environment (inputs, processes, finance) is produced and publicly accessible			
Output indicator	Baseline 2019	Milestone 2020	Results 2020
5.1 National, regional and global data on WASH enabling environment are documented and publicly available.	Reported date from 115 countries + 27 external support agencies (ESAs) data in 2019	Annual reporting to UNSD on 6a and 6b; Updated GLAAS country survey	Achieved: UNSD reporting + draft updated GLAAS country survey
5.2 Comprehensive data on sanitation policies from at least 15 countries based on the final (PMAT).	None	PMAT and guidance available; data on sanitation policies from 7 countries	Mainly achieved: PMAT and guidance finalized; data from 6 countries
5.3 Package of updated and new materials supporting WASH accounts/TrackFin as a global good including the WASH accounts production tool (WAPT).	Outdated TrackFin/WASH accounts materials	Materials in English; new WAPT version in English and French	Achieved: Updated WAPT in English/French; key materials completed in English/French
5.4 Number of countries developing WASH accounts (using TrackFin methodology); number of new cycles	16 countries	22 total (6 new countries, 4 new cycles)	Achieved: 22 total countries (6 new countries, 4 new cycles)

New GLAAS projects and areas of work during 2020 have expanded WHO activities related to producing and promoting the use of evidence on WASH systems, including:

- **Completion of the PMAT and pilot of the tool in six countries.** Countries completing the PMAT reported that the process highlighted areas for improvement in governance documents including the need for further emphasis on climate change and clearer roles and responsibilities for government ministries and departments related to sanitation. A report of findings will be published in 2021.
- **Initiation of a major new effort to develop a GLAAS data portal** to provide better access to data and information on the WASH enabling environment/WASH systems from GLAAS country and ESA surveys, the PMAT and WASH accounts. During 2020, comprehensive business requirements and mock-ups for the GLAAS data portal were completed. The portal will facilitate use of data by countries and partners as well as the production of country highlights. The data portal will be launched in two phases in 2021.
- **‘Friends of WASH accounts’ meetings** convened regularly by WHO during 2020 brought together key donors and stakeholders to discuss and reflect on strategic and technical topics related to WASH finance and the development of WASH accounts. The ongoing discussions support **increased partner interest and engagement in WASH accounts, better coordination on financial and technical assistance, and improved use of WASH accounts data.**
- **Launch of work to strengthen national WASH monitoring in G5 Sahel countries²⁴: Burkina Faso, Chad, Mali, Mauritania and Niger**, building on WHO’s experience in WASH monitoring through GLAAS and the JMP.

Box 10. Strengthening WASH systems in G5 Sahel countries

The G5 Sahel countries Burkina Faso, Chad, Mali, Mauritania and Niger face security, development, climate change and health challenges. The Sahel Alliance was created in 2017 to foster cooperation between development partners to scale up investment and technical support for development activities that respond to country-identified needs, including related to WASH. WHO, through GLAAS and JMP, is supporting G5 Sahel countries to strengthen monitoring capacity and to track progress on improving WASH systems and WASH in health care facilities, including the capacity to plan, finance, implement, monitor and regulate drinking-water and sanitation service delivery.

During 2020, WHO led the development of a baseline report on the status of WASH services and systems and opportunities for improving WASH monitoring capacity in G5 countries based on data from JMP, GLAAS, WASH accounts and national institutions. WHO also supported the follow-on process for development of country roadmaps of priority actions to strengthen monitoring of the WASH sector under the leadership of country focal points.

Each country held national multistakeholder meetings with technical services, donors, NGOs and civil society to develop roadmaps. Three main areas of activities emerged across all roadmaps: i) monitoring access to WASH services; ii) governance, including improving coordination mechanisms and capacity building, as well as developing or strengthening regulatory frameworks; and iii) tracking expenditure in the WASH sector.

Over the next four years, WHO will provide technical and financial support for implementation of these activities in each G5 country, completed by support from UNICEF and Sahel Alliance partners.

²⁴ G5 Sahel is an institutional framework for coordination of regional cooperation in development policies and security matters in West Africa.

GLAAS started 2020 facing a funding deficit that threatened implementation of the next GLAAS cycle. Thanks to energetic outreach by WHO and support and encouragement from partners and donors, by the end of the year the next GLAAS cycle – which will launch in mid 2021 – was assured. The next set of GLAAS data and reports will now be published in the second half of 2022. **During 2020 the GLAAS team completed an initial full review and update of the GLAAS country survey informed by feedback from users and the evolution of the overall context since the last cycle.** While changes to the survey were minimized to promote comparability between cycles, important updates include clarification of the definition of hygiene and the addition of questions on hand hygiene and COVID-19.

The rich information compiled and analysed by GLAAS during the last cycle, along with updated analyses and review of other global data, supported **comprehensive annual SDG reporting on indicators 6a and 6b for which WHO – through GLAAS – is responsible.** GLAAS also used 2018/2019 data to develop and publish *Hygiene: UN-Water GLAAS findings on national policies, plans, targets and finance* (7). Main findings include that while countries have national policies and plans for hygiene, they lack the financial and human resources to fully implement them; and household expenditures on hygiene are high compared to government expenditure.

In early 2020, **WHO completed an additional 48 GLAAS country highlights – for a total of 113 highlights in English – and Portuguese, French or Spanish versions for 41 countries (101).** The GLAAS country highlights are an important advocacy tool for countries and development partners.

While country attention to the COVID-19 pandemic slowed down development of WASH accounts, **six new countries²⁵ launched WASH accounts, and four additional countries²⁶ implemented new cycles of WASH accounts during 2020.** WHO and a growing group of engaged partners²⁷ collaborated to support countries, with involvement and support from WHO regional and country offices. Twenty-two countries have initiated at least one cycle of WASH accounts.

Work to support expansion of WASH accounts through development of a comprehensive package of materials, tools and resources gained traction during 2020 and delivered the following outputs:

- **A new version of the WAPT in French and English** with fully updated text and over 20 new features/functions including new modules showing results as a customizable Sankey diagram and standardized tables and graphics.
- **Multiple new materials in French and English** including description of the optimized approach to developing WASH accounts, guidance on developing a WASH accounts implementation plan and three associated templates, terms of reference for key roles in countries for developing WASH accounts, an orientation workshop package (presentations, exercises, overview and agenda), a partial draft of the new WASH accounts implementation guide, and a set of 10 training exercises for using the WAPT and the new features.
- **Development and description of a mechanism to promote quality and comparable data as the number of countries generating WASH accounts expands** through WHO technical reviews at three specific points in the process using standard checklists.
- **Updated TrackFin classifications in English and French** based on two consultation processes with experts to address methodological challenges. The classification updates improve definitions of hygiene, include emergencies and promote standardization.

²⁵ Bangladesh, Guatemala, Nepal, Niger, Nigeria and Zimbabwe.

²⁶ Burkina Faso, Madagascar, Mali and Kenya.

²⁷ Including AFD, IRC, WaterAid, Water.org, World Bank, WSSCC, UN-Habitat, UNICEF, USAID.

- **Pilot study results from Burkina Faso to inform recommendations on the use of WASH accounts data in country processes to inform WASH budgets and WASH policy- and decision-making processes.** Final recommendations and guidance for countries will be developed in 2021 after consultations and analyses in additional countries.

Burden of disease from WASH

OUTPUT 6 - BURDEN OF DISEASE: Estimates of diarrhoeal and other diseases attributable to WASH are updated and publicly accessible			
Output indicator	Baseline 2019	Milestone 2020	Results 2020
6.1 Global report on disease burden from WASH accessible online	NA	Technical working group formed; draft estimates prepared	Achieved

Information on the disease burden attributable to WASH drives and supports collaboration with WHO disease programmes, joint efforts with partners, engagement by donors, and targeted, evidence-based action. Regularly reviewed and updated disease burden data is critical for measuring the impacts of these actions. **WHO maintains data on the global burden of disease from WASH on WHO’s Global Health Observatory (102). This data is used to formally report on SDG 3.9.2.**

An updated global report on the disease burden from WASH is planned for 2021. During 2020, WHO undertook preparation work including:

- establishing a technical working group;
- holding regular meetings to review and discuss methods for the update; and
- exploring alternative approaches to burden of disease estimates in collaboration with the Lancet Commission and the Institute for Health Metrics and Evaluation (IHME).

Risk management, operations and value for money

OUTPUT 7 - OPERATIONS: WHO WASH demonstrates organizational excellence through better targeting of resources, effective partnerships, and documented results at country level.			
Output indicator	Baseline 2019	Milestone 2020	Results 2020
7.1 Annual publication that captures WHO WASH results including risk management and value for money	2019 report on 2018 results	2019 report by June	Achieved: 2019 report completed in June; published in Sept

For the purposes of this report, value for money focuses on how an organization achieves results and is a combination of three key dimensions: economy (keeping human and financial resources as lean as possible); efficiency (to “buy” as much output as possible); and effectiveness (keeping quality as high as possible).

WHO continued to create impact on WASH in 2020 through a lean expert team at WHO headquarters and a 2020 annual budget of US\$ 5 million that included activities and distributions to regions and countries. Each area of work – from JMP and GLAAS to water quality, sanitation and health care facilities – is led by a single staff member with assistance from a more junior staff member or a consultant. Where necessary, additional work is contracted out in rigorous competitive bidding processes.

At regional office and country office levels, WASH work is also highly cost effective, with country work often coordinated through National Professional Officers, who are local staff making competitive salaries benchmarked nationally, but highly competitive at global level.

Previous sections within this report have spoken to the quality of developed products and services and how WHO's WASH programme has adapted its programming to COVID-19, with a focus on increasing the scope of work done in partnership and through shared platforms (for example, Hand Hygiene for All and the SDG 6 Acceleration Framework) and through virtual trainings and tools.

The COVID-19 context has driven efficiencies, as the WASH team has built greater three-level coordination by sharpening the focus of regular three-level meetings, with more attention to planning and lesson-sharing in meetings and at the annual (in this case virtual) retreat.

The 2020-21 performance logframe and the outcome scoring system (see Annex 2) has allowed for a structured overview to review accountability in the broader context of value for money

The Overview of WHO WASH expenditure in Annex 5 summarizes WHO WASH resources, expenditures, aid priorities and distributions of aid disbursements and WHO's top donors to WASH.

Expression of thanks

WHO would like to express its appreciation to all partners who collaborate with WHO on achieving joint aims on WASH and health, particularly the Member States who work with us on this agenda. WHO would also like to acknowledge the special appreciation for continued support during 2020, when the Organization faced challenges like never before in delivering its work in the face of a global pandemic.

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

References

-
1. Thirteenth General Programme of Work (GPW13): methods for impact measurement. Geneva: World Health Organization; 2020. (<https://www.who.int/about/what-we-do/thirteenth-general-programme-of-work-2019---2023>, accessed 25 April 2021).
 2. UN-Water: Global Action Plan for SDG3 [website]. (<https://www.who.int/initiatives/sdg3-global-action-plan>).

-
3. The Sustainable Development Goal 6 Global Acceleration Framework. Geneva: UN-Water; 2020. (<https://www.unwater.org/publications/the-sdg-6-global-acceleration-framework/>, accessed 25 April 2021).
 4. Water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19. Geneva: World Health Organization; 29 July 2020. (<https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC-WASH-2020.4>, accessed 25 April 2021).
 5. UNICEF and WHO. Progress on household drinking water, sanitation and hygiene 2000-2017: Special focus on inequalities. New York: United Nations Children’s Fund (UNICEF) and World Health Organization; 2019 (https://www.who.int/water_sanitation_health/publications/jmp-report-2019/en/, accessed 27 April 2021).
 6. COVID-19 update on the monitoring page for hygiene. In: WHO and UNICEF JMP [website]. (<https://washdata.org/monitoring/hygiene>, accessed 27 April 2021).
 7. Hygiene: UN-Water GLAAS findings on national policies, plans, targets and finance. Geneva: World Health Organization; 2020. (https://www.who.int/water_sanitation_health/publications/hygiene-glaas-findings/en/, accessed 25 April 2021).
 8. #SafeHands Challenge. In: WHO [website]. (<https://www.who.int/campaigns/connecting-the-world-to-combat-coronavirus/safehands-challenge>).
 9. Interim recommendations on obligatory hand hygiene against transmission of COVID-19. World Health Organization; 1 April 2020. (<https://www.who.int/publications/m/item/interim-recommendations-on-obligatory-hand-hygiene-against-transmission-of-covid-19>, accessed 25 April 2021).
 10. Hand Hygiene for All. World Health Organization and the United Nations Children’s Fund (UNICEF); 2020. (https://www.who.int/water_sanitation_health/publications/hand-hygiene-for-all/en/, accessed 25 April 2021).
 11. COVID-19 strategic preparedness and response: Operational planning guidance to support country preparedness and response. Geneva: World Health Organization; 2020. (<https://www.who.int/publications/i/item/draft-operational-planning-guidance-for-un-country-teams>, accessed 25 April 2021).
 12. Almost 2 billion people depend on health care facilities without basic water services – WHO, UNICEF. In: WHO [website]. 2020. (<https://www.who.int/news/item/14-12-2020-almost-2-billion-people-depend-on-health-care-facilities-without-basic-water-services-who-unicef>, accessed 25 April 2021).
 13. Global progress report on water, sanitation and hygiene in health care facilities: fundamentals first. Geneva: World Health Organization; 2020. (<https://www.unicef.org/media/89201/file/Water-sanitation-and-hygiene-in-health-care-facilities-fundamentals-first-2020.pdf>, accessed 25 April 2021).
 14. Status of environmental surveillance for SARS-CoV-2 virus. Geneva: World Health Organization; 2020. (<https://www.who.int/publications/i/item/WHO-2019-nCoV-sci-brief-environmentalSampling-2020-1>, accessed 25 April 2021).
 15. Q&A: Coronavirus disease (COVID-19): Environmental Surveillance. In: WHO [website]. 2020. (<https://www.who.int/news-room/q-a-detail/environmental-surveillance>, accessed 25 April 2021).

-
16. WHO Manifesto for a healthy recovery from COVID-19. In: WHO [website]. 2020. (<https://www.who.int/news-room/feature-stories/detail/who-manifesto-for-a-healthy-recovery-from-covid-19>, accessed 25 April 2021).
 17. PMNCH Call to Action on COVID-19. In: The Partnership for Maternal, Newborn and Child Health (PMNCH) [website]. 2020. (<https://pmnch.who.int/news-and-events/campaigns/pmnch-call-to-action-on-covid-19>, accessed 27 May 2021).
 18. WHO Water, Sanitation and Hygiene strategy 2018-2025. Geneva: World Health Organization; 2018 (https://www.who.int/water_sanitation_health/publications/wash-strategy-2018-2025/en/, accessed 25 April 2021).
 19. WHO global water, sanitation and hygiene: annual report 2018. Geneva: World Health Organization; 2019 (WHO/CED/PHE/WSH/19.147). (https://www.who.int/water_sanitation_health/publications/global-water-sanitation-and-hygiene-annual-report-2018/en/, accessed 25 April 2021).
 20. WHO global water, sanitation and hygiene: annual report 2019. Geneva: World Health Organization; 2020. (<https://www.who.int/publications/i/item/9789240013391>, accessed 25 April 2021).
 21. Sanitation safety planning. In: WHO [website]. 2020. (https://www.who.int/water_sanitation_health/sanitation-waste/wastewater/sanitation-safety-planning/en/, accessed 25 April 2021).
 22. Water safety planning. In: WHO [website]. 2020. (https://www.who.int/water_sanitation_health/water-quality/safety-planning/en/, accessed 25 April 2021).
 23. Executive summary, WHO results report, programme budget 2020–2021 (Mid-term). World Health Organization, 2021. (<https://www.who.int/publications/m/item/executive-summary-who-results-report-programme-budget-2020-2021-mid-term-review>, accessed 26 May 2021).
 24. Guidelines on sanitation and health. Geneva: World Health Organization; 2018. (https://www.who.int/water_sanitation_health/sanitation-waste/sanitation/sanitation-guidelines/en/, accessed 25 April 2021).
 25. Sanitation inspections for sanitation systems. In: WHO [website]. 2020. (<https://www.who.int/teams/environment-climate-change-and-health/water-sanitation-and-health/sanitation-safety/sanitation-inspection-packages>, accessed 26 May 2021).
 26. State of the World’s Sanitation: An urgent call to transform sanitation for better health, environments, economies and societies. New York: United Nations Children’s Fund (UNICEF) and the World Health Organization; 2020. (<https://www.who.int/publications/i/item/9789240014473>, accessed 25 April 2021).
 27. Health care waste management manual, fourth edition. Philippines: Department of Health; 2020. (<https://www.washinhcf.org/resource/philippines-hcwm-module-4th-ed-2020/>, accessed 25 April 2021).
 28. Health care waste management policy for Ghana. Ghana Ministry of Health/Ministry of Environment; 2019. (<https://www.washinhcf.org/resource/health-care-waste-management-policy-ghana/>, accessed 25 April 2021).
 29. National Guidelines for health care waste management in Ghana. Ghana Ministry of Health/Ministry of Environment; 2019. (<https://www.washinhcf.org/resource/national-guidelines-for-health-care-waste-management-in-ghana/>, accessed 25 April 2021).

-
30. UNDP supports local production of hand sanitizers for Ghana's COVID-19 response. In: UNDP Ghana. (<https://bit.ly/2OqtjvI>, accessed 25 April 2021).
31. Progress on drinking water, sanitation and hygiene in schools: Special focus on COVID-19. New York: United Nations Children's Fund (UNICEF) and World Health Organization (WHO), 2020. (<https://washdata.org/sites/default/files/2020-09/JMP-2020-WASH-schools.pdf>, accessed 25 April 2021).
32. https://apps.who.int/gb/ebwha/pdf_files/WHA72/A72_R7-en.pdf
33. FAO. The State of Food and Agriculture 2020: Overcoming water challenges in agriculture. Rome: FAO; 2020. (<http://www.fao.org/documents/card/en/c/cb1447en>, accessed 25 April 2021).
34. World Bank. SDG 6: Clean water and sanitation. Water, sanitation, and hygiene: essential for well-being. In: Atlas of Sustainable Development Goals 2020 From World Development Indicators (World Bank) [website]. 2020. (<https://datatopics.worldbank.org/sdgatlas/goal-6-clean-water-and-sanitation/>, accessed 25 April 2021).
35. USAID. Rural Sanitation (Technical brief). USAID Water and Development Technical Series. 2020. (<https://www.globalwaters.org/resources/assets/usaids-water-and-development-technical-series-rural-sanitation>, accessed 25 April 2021).
36. Franceys R. Referee! Responsibilities, regulations and regulating for urban sanitation (discussion paper). The Eastern and Southern Africa Water and Sanitation Regulators Association (ESAWAS) and Water & Sanitation for the Urban Poor (WSUP); 2020. (<https://www.esawas.org/index.php/publications/water-supply/20-publications/other-esawas-publications/79-referee-responsibilities-regulations-and-regulating-for-urban-sanitation>, accessed 25 April 2021).
37. International Network of Drinking-water and Sanitation Regulators (RegNet). In: WHO [website]. (<https://www.who.int/groups/international-network-of-drinking-water-and-sanitation-regulators>, accessed 25 April 2021).
38. Background documents for development of WHO Guidelines for drinking-water quality and Guidelines for safe recreational water environments. Geneva: World Health Organization; 2020. (<https://www.who.int/publications/m/item/background-documents-for-development-of-who-guidelines-for-drinking-water-quality-and-guidelines-for-safe-recreational-water-environments>, accessed 25 April 2021).
39. Guidelines for drinking-water quality: fourth edition incorporating the first addendum. Geneva: World Health Organization; 2017. (<https://www.who.int/publications/i/item/9789241549950>, accessed 25 April 2021).
40. Howard G, Bartam J, Williams A, Overbo A, Fuente D, Geere JA. Domestic water quantity, service level and health, second edition. Geneva: World Health Organization; 2020. (<https://www.who.int/publications/i/item/9789240015241>, accessed 25 April 2021).
41. Costing and financing of small-scale water supply and sanitation services. Copenhagen: WHO Regional Office for Europe; 2020. (<https://www.euro.who.int/en/health-topics/environment-and-health/water-and-sanitation/publications/2020/costing-and-financing-of-small-scale-water-supply-and-sanitation-services-2020>, accessed 25 April 2021).
42. Sanitary inspection packages for drinking-water. In: WHO [website]. 2020. (https://www.who.int/water_sanitation_health/water-quality/safety-planning/sanitary-inspection-packages-for-drinking-water/en/, accessed 25 April 2021).

-
43. Policies, regulations and legislation promoting healthy housing: a review. Geneva: World Health Organization; 2021. (<https://www.who.int/publications/i/item/9789240011298>, accessed 25 April 2021).
44. Pond K, King R, Herschan J, Malcolm R, McKeown RM, Schmoll O. Improving Risk Assessments by Sanitary Inspection for Small Drinking-Water Supplies—Qualitative Evidence. Resources. 2020; 9(6):71. (<https://www.mdpi.com/2079-9276/9/6/71>, accessed 25 April 2021).
45. On-line bi-regional training on water safety planning principles and steps on 29 October 2020 [video]. WHO Regional Office for South-East Asia. (https://www.youtube.com/watch?v=FGm2LsAE4IU&ab_channel=WorldHealthOrganizationSouth-EastAsiaRegion-WHOSEARO, accessed 2 May 2021).
46. On-line bi-regional training on Introduction to water safety planning audit principles – Day 1 on 9 November 2020 [video]. WHO Regional Office for South-East Asia. (<https://www.youtube.com/watch?v=OIOVB1WzNfY>, accessed 2 May 2021)
47. On-line bi-regional training on Introduction to water safety planning audit principles – Day 2 on 10 November 2020 [video]. WHO Regional Office for South-East Asia. (<https://www.youtube.com/watch?v=Fer1rKxp23I>, accessed 2 May 2021)
48. On-line bi-regional training on Introduction to water safety planning audit principles – Day 3 on 11 November 2020 [video]. WHO Regional Office for South-East Asia. (<https://www.youtube.com/watch?v=i36nOPNjA0U>, accessed 2 May 2021)
49. On-line bi-regional training on Introduction to water safety planning audit principles – Day 4 on 12 November 2020 [video]. WHO Regional Office for South-East Asia. (<https://www.youtube.com/watch?v=VDwnLDq2yjQ>, accessed 2 May 2021)
50. On-line bi-regional training on Introduction to water safety planning audit principles – Day 5 on 13 November 2020 [video]. WHO Regional Office for South-East Asia. (<https://www.youtube.com/watch?v=cIFChaPtJSM>, accessed 2 May 2021)
51. New tool piloted to assess drinking water quality surveillance in Indonesia. In: WHO [website]. 2020. (<https://www.who.int/indonesia/news/detail/04-02-2020-new-tool-piloted-to-assess-drinking-water-quality-surveillance-in-indonesia>, accessed 25 April 2021).
52. International Scheme to Evaluate Household Water Treatment Technologies. In: WHO [website]. (https://www.who.int/water_sanitation_health/water-quality/household/scheme-household-water-treatment/en/, accessed 25 April 2021).
53. Products that meet WHO performance criteria and list of all products evaluated. In: WHO [website]. 2020. (<https://www.who.int/tools/international-scheme-to-evaluate-household-water-treatment-technologies/products-evaluated>, accessed 25 April 2021).
54. Water quality – Water safety plans – Code of practice. The British Standards Institution; 2020. (https://shop.bsigroup.com/ProductDetail?pid=00000000030364472&_ga=2.130551371.550226055.1592476623-1118409396.1592476623, accessed 25 April 2021).
55. Drinking Water Legislation. In: European Commission [website]. (https://ec.europa.eu/environment/water/water-drink/legislation_en.html).
56. Bartram J, Corrales L, Davison A, Deere D, Drury D, Gordon B, Howard G, Rinehold A, Stevens M. Water safety plan manual: step-by-step risk management for drinking-water suppliers. Geneva: World Health Organization; 2009.

-
- (https://www.who.int/water_sanitation_health/publications/publication_9789241562638/en/, accessed 25 April 2021).
57. Naylor KA, Gordon B. Learning from history: Sanitation for prosperity. In: WHO [website]. 2020. (<https://www.who.int/news/item/19-11-2020-learning-from-history-sanitation-for-prosperity>, accessed 25 April 2021).
58. Magawa Y, Majuru B, Agberemi B, Rosenboom J-W. Regulating sanitation services as a public good. In: WHO [website]. 2020. (<https://www.who.int/news/item/19-11-2020-regulating-sanitation-services-as-a-public-good>, accessed 25 April 2021).
59. World Toilet Day 2020: imagine the potential [video]. WHO Regional Office for Europe; 2020. (<https://www.youtube.com/watch?v=X-5RbKlTe60>, accessed 25 April 2021).
60. Sanitary Inspection for Sanitation Systems. In: mWaterPortal [website]. 2020. (<https://portal.mwater.co/#/indicators/37aed4651eb44c9eacf55766b7f3b149>, accessed 25 April 2021).
61. Sanitation Safety Planning [Online training platform]. 2020. (<https://ssp.creation.camp/login/>, accessed 25 April 2021).
62. Rapid expert consultation on environmental surveillance of SARS-CoV-2 in wastewater. Summary report. Virtual meeting, 23 July 2020. Copenhagen: WHO Regional Office for Europe; 2020. (<https://www.euro.who.int/en/health-topics/environment-and-health/water-and-sanitation/publications/2020/rapid-expert-consultation-on-environmental-surveillance-of-sars-cov-2-in-wastewater-summary-report-2020>, accessed 25 April 2021).
63. Expert consultation on public health needs related to surveillance of SARS-CoV-2 in wastewater. Summary report. Virtual meeting, 30 November 2020. Copenhagen: WHO Regional Office for Europe; 2021. (<https://www.euro.who.int/en/health-topics/environment-and-health/water-and-sanitation/publications/2021/expert-consultation-on-public-health-needs-related-to-surveillance-of-sars-cov-2-in-wastewater-summary-report-virtual-meeting,-30-november-2020>, accessed 25 April 2021).
64. Regulating Citywide Inclusive Sanitation. IWA. 2020. (<https://iwa-network.org/learn/regulatingcwis/>, accessed 25 April 2021).
65. World Bank, ILO, WaterAid, and WHO. Health, Safety and Dignity of Sanitation Workers: An Initial Assessment. Washington, DC.: World Bank; 2019. (https://www.who.int/water_sanitation_health/publications/sanitation-workers-report/en/, accessed 25 April 2021).
66. WHO and UNICEF: WASH in Health Care Facilities [website]. 2020. (<https://www.washinhcf.org/>), accessed 25 April 2021).
67. Simplified WASH FIT Assessment Tool [online version]. 2020. (<https://ee.kobotoolbox.org/x/egDN1mUO>, accessed 25 April 2021).
68. What is WASH FIT?. World Health Organization and United Nations Children’s Fund (UNICEF); 2020. (<https://www.washinhcf.org/resource/what-is-wash-fit-a-quick-overview/>, accessed 25 April 2021).
69. WASH in HCF & COVID-19 Webinar series: Session 1 – Water. World Health Organization and United Nations Children’s Fund (UNICEF); 2020. (<https://www.washinhcf.org/resource/covid-19-webinar-series-water/>, accessed 25 April 2021).

-
70. WASH in HCF & COVID-19 Webinar series: Session 5 – Sanitation. World Health Organization and United Nations Children’s Fund (UNICEF); 2020. (<https://www.washinhcf.org/resource/covid-19-webinar-series-sanitation/>, accessed 25 April 2021).
71. WASH in HCF & COVID-19 Webinar series: Session 2 – Health care waste management. World Health Organization and United Nations Children’s Fund (UNICEF); 2020. (<https://www.washinhcf.org/resource/covid-19-webinar-series-hcwm/>, accessed 25 April 2021).
72. WASH in HCF & COVID-19 Webinar series: Session 3 – Hand hygiene. World Health Organization and United Nations Children’s Fund (UNICEF); 2020. (<https://www.washinhcf.org/resource/covid-19-webinar-series-hand-hygiene/>, accessed 25 April 2021).
73. WASH in HCF & COVID-19 Webinar series: Session 4 – Environmental cleaning. World Health Organization and United Nations Children’s Fund (UNICEF); 2020. (<https://www.washinhcf.org/resource/covid-19-webinar-series-environmental-cleaning/>, accessed 25 April 2021).
74. Eau, Hygiène et Assainissement (EHA) et Gestion des Déchets pour la prévention du COVID-19. World Health Organization and United Nations Children’s Fund (UNICEF); 2020. (<https://www.washinhcf.org/resource/ehah-pour-la-prevention-covid-19-francais/>, accessed 25 April 2021).
75. WHO & UNICEF WASH in health care facilities [YouTube channel]. (<https://www.youtube.com/channel/UCmERJPGZTfolALXCDcpbkug>).
76. Q&A from webinar series on WASH in HCF & COVID-19: April 2020. World Health Organization and United Nations Children’s Fund (UNICEF); 2020. (<https://www.washinhcf.org/resource/q-a-from-webinar-series-on-wash-in-hcf-covid-19-april-2020/>, accessed 25 April 2021).
77. WASH FIT training package (update December 2020). World Health Organization and United Nations Children’s Fund (UNICEF); 2020. (<https://www.washinhcf.org/resource/wash-fit-training-package/>, accessed 25 April 2021).
78. Achieving quality health services for all, through better water, sanitation and hygiene. Lessons from three African countries. Geneva: World Health Organization; 2020. (https://www.who.int/water_sanitation_health/facilities/healthcare/achieving-quality-health-services-for-all-thru-better-wash/en/, accessed 25 April 2021).
79. Core competencies for infection prevention and control professionals. Geneva: World Health Organization; 2020. (<https://www.who.int/publications/i/item/9789240011656>, accessed 25 April 2021).
80. WHO guidance for climate-resilient and environmentally sustainable health care facilities. Geneva: World Health Organization; 2020. (<https://www.who.int/publications/i/item/9789240012226>, accessed 25 April 2021).
81. WHO to help Ministry of Health upgrade hygiene at 50 district hospitals under USD 200,000 World Bank financed project. In: WHO [website]. 2020. (<https://www.who.int/laos/news/detail/10-07-2020-who-to-help-ministry-of-health-upgrade-hygiene-at-50-district-hospitals-under-usd-200-000-world-bank-financed-project>, accessed 25 April 2021).
82. WHO strengthens WASH in health care facilities through Water and Sanitation for Health Facility Improvement Tool (WASH FIT). In: WHO [website]; 2020. ([https://www.who.int/indonesia/news/detail/26-12-2020-who-strengthens-wash-in-health-care-facilities-through-water-and-sanitation-for-health-facility-improvement-tool-\(wash-fit\)](https://www.who.int/indonesia/news/detail/26-12-2020-who-strengthens-wash-in-health-care-facilities-through-water-and-sanitation-for-health-facility-improvement-tool-(wash-fit)), accessed 25 April 2021).

-
83. WASH in Health Facilities HERAMS – HERAMS Assessment. Yemen. World Health Organization. [data portal] 2020. (<https://app.powerbi.com/view?r=eyJrIjoiZGI1OTRkMTQyYjYiO0ZDEyLTgxNzY0NTY5YzE0YmlyliwidCI6ImY2MTBjMGI3LWJkMjQ0NGIzOS04MTBILTnkYzI4MGFmYjU5MCIslmMiOjh9>, accessed 25 April 2021).
84. Fundamentals First: Global webinar to mark launch of new WHO/UNICEF global progress report [video]. WHO & UNICEF WASH in health care facilities; 2020. (<https://www.youtube.com/watch?v=Be9RASICc44&t=4918s>, accessed 25 April 2021).
85. Fundamentals first: Key data, findings and recommendations. Global webinar. World Health Organization and United Nations Children’s Fund (UNICEF); 2020. (<https://www.washinhc.org/resource/fundamentals-first-global-webinar/>, accessed 25 April 2021).
86. The cost of meeting basic WASH standards in health care facilities – Preliminary findings. World Health Organization and United Nations Children’s Fund (UNICEF); 2020. (<https://www.washinhc.org/resource/cost-of-basic-wash-preliminary-findings/>, accessed 25 April 2021).
87. Achieving sustainable WASH in HCF: addressing COVID-19 and safe, quality care for all [video]. WHO and UNICEF WASH in health care facilities; 2020. (<https://www.youtube.com/watch?v=IOIxNlaRgzc&t=7307s>, accessed 25 April 2021).
88. Ending the neglect to attain the Sustainable Development Goals: a global strategy on water, sanitation and hygiene to combat neglected tropical diseases, 2021-2030. Geneva: World Health Organization; 2021. (<https://apps.who.int/iris/bitstream/handle/10665/340240/9789240022782-eng.pdf>, accessed 25 April 2021).
89. Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030. Geneva: World Health Organization; 2020. (<https://www.who.int/publications/i/item/9789240010352>, accessed 25 April 2021).
90. Boisson S, Wohlgemuth L, Yajima A, Peralta G, Obiageli N, Matendechero S, Baayenda G, Seife F, Hamilton H, Chase C, Barry FBM, Solomon AW, Velleman Y. Building on a decade of progress in water, sanitation and hygiene to control, eliminate and eradicate neglected tropical diseases. *Trans R Soc Trop Med Hyg.* 2021 Jan 28;115(2):185-187. (<https://academic.oup.com/trstmh/article/115/2/185/6121893>, accessed 7 May 2021).
91. WHO, FAO, and World Organization for Animal Health. Technical brief on water, sanitation and hygiene and wastewater management to prevent infections and reduce the spread of antimicrobial resistance. Geneva: World Health Organization; 2020. (<https://www.who.int/publications/i/item/9789240006416>, accessed 25 April 2021).
92. WHO, UNICEF, and WaterAid. Combatting antimicrobial resistance through WASH and IPC and control in health care. Technical Brief. World Health Organization; 2020. (https://www.who.int/water_sanitation_health/joint-wash-ipc-amr-actions-2020.pdf, accessed 25 April 2021).
93. Hand Hygiene for All 2020. Progress Report. World Health Organization and United Nations Children’s Fund (UNICEF); 2020. (https://globalhandwashing.org/wp-content/uploads/2021/01/HH4A-progress-report-final_en.pdf, accessed 25 April 2021).
94. Hand hygiene for all initiative: improving access and behaviour in health care facilities. World Health Organization; 2020. (<https://apps.who.int/iris/handle/10665/336023>, accessed 25 April 2021).

-
95. WHO and UNICEF JMP [website]. (<https://washdata.org/>)
 96. Hygiene Baselines pre-COVID-19. Global Snapshot. WHO and UNICEF JMP; 2020. (<https://washdata.org/sites/default/files/documents/reports/2020-05/JMP-2020-COVID-global-hygiene-snapshot.pdf>, accessed 25 April 2021).
 97. Reports. In: WHO and UNICEF JMP [website]. (<https://washdata.org/reports>)
 98. Rural Water Supply Network (RWSN) Webinars. In: Vimeo [website]. (<https://vimeo.com/channels/rwsnwebinars>).
 99. Integrating Water Quality Testing into Household Surveys: Thematic report on drinking water. New York: United Nations Children’s Fund (UNICEF) and World Health Organization (WHO), 2020. (<https://www.who.int/publications/i/item/9789240014022>, accessed 25 April 2021).
 100. UNICEF. Target Product Profile: Rapid E. Coli Detection Tests. Version 3.0. UNICEF, December 2019. (<https://www.unicef.org/supply/documents/target-product-profile-rapid-e-coli-detection-tests>, accessed 25 April 2021).
 101. GLAAS 2018/2019 country highlights. World Health Organization; 2020. (https://www.who.int/water_sanitation_health/monitoring/investments/country-highlights-2019/en/, accessed 14 May 2021).
 102. [https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/burden-of-disease---burden-of-disease-sdg-3-9-2---mortality-rate-attributed-to-unsafe-water-unsafe-sanitation-and-lack-of-hygiene-\(exposure-to-unsafe-water-sanitation-and-hygiene-for-all-\(wash\)\)](https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/burden-of-disease---burden-of-disease-sdg-3-9-2---mortality-rate-attributed-to-unsafe-water-unsafe-sanitation-and-lack-of-hygiene-(exposure-to-unsafe-water-sanitation-and-hygiene-for-all-(wash)))

Annex 1 – WHO 2020 WASH publications

Publications not already referenced in the report above are referenced below the list of publications.

Title. Date published. (with link)	Languages
COVID-19 response and hand hygiene	
Environmental Public Health Technical Sheets for emergency of COVID-19. 2020. (1)	EN, SP
5 steps to saving water when washing your hands. June 2020. [Infographic] (2)	EN
5 pasos para ahorrar agua al lavarte las manos. June 2020. [Infographic] (3)	SP
Hand washing while conserving water. May 2020. [video] (4)	EN
WASH and waste management for SARS-CoV-2, the virus that causes COVID-19: Interim Guidance. July 2020.	AR, CH, EN, FR, RU, SP
Status of environmental surveillance for SARS-CoV-2 virus (Scientific brief). August 2020.	EN
Rapid expert consultation on environmental surveillance of SARS-CoV-2 in wastewater. July 2020.	EN
Q&A: Coronavirus disease (COVID-19): Environmental Surveillance. December 2020.	EN
Expert consultation on public health needs related to surveillance of SARS-CoV-2 in wastewater. November 2020.	EN
Hand hygiene for all initiative: improving access and behaviour in health care facilities. 2020.	EN
Hand Hygiene for All Global Initiative. 2020.	EN
Hand Hygiene for All 2020 Progress Report. December 2020.	EN
Drinking-water quality and safety	
Four new draft sanitary inspection packages for drinking-water . 2020 (To finalize once the remaining sanitary inspection packages are ready.)	EN
Domestic water quantity, service level and health (second edition). December 2020.	EN
Background documents for development of WHO Guidelines for drinking-water quality and Guidelines for safe recreational water environments. December 2020.	EN
Online bi-regional trainings on water safety planning (videos): Water safety planning principles and steps on 29 October 2020. Introduction to water safety planning audit principles: Day 1 on 9 November 2020. Introduction to water safety planning audit principles: Day 2 on 10 November 2020. Introduction to water safety planning audit principles: Day 3 on 11 November 2020. Introduction to water safety planning audit principles: Day 4 on 12 November 2020. Introduction to water safety planning audit principles: Day 5 on 13 November 2020.	EN
New tool piloted to assess drinking water quality surveillance in Indonesia. February 2020. [Press release]	EN
Toxic Cyanobacteria in Water, 2nd edition. February 2021. (finalized in 2020)	EN
Policies, regulations and legislation promoting healthy housing: a review. Jan 2021. (WSH contributed section on water and sanitation.)	EN

WHO 2020 WASH publications (continued)

Title. Date published. (with link)	Languages
Sanitation	
World Toilet Day 2020: imagine the potential. November 2020. [video}	EN
Regulating sanitation services as a public good. November 2020. [blog]	EN
State of the world's sanitation: An urgent call to transform sanitation for better health, environments, economies and societies. November 2020.	EN
Technical Brief on WASH and wastewater management to prevent infections and reduce the spread of AMR. November 2020.	EN, FR, PT, RU, SP
Sanitation Safety Planning on-line training course “Maximizing health impact of sanitation systems”. 2020. [access user name: whoguest, password: 2021whoguest2021]	EN
Ending the neglect to attain the Sustainable Development Goals: a global strategy on water, sanitation and hygiene to combat neglected tropical diseases, 2021-2030. 2021.	EN
Learning from history: Sanitation for prosperity. 2020. [Press release]	EN
Regulating sanitation services as a public good. 2020 [Press release]	EN
WASH in health care facilities and schools	
National situational analysis of water, sanitation and hygiene in health care facilities in Serbia Summary report. 2020. (5)	EN
Poster series on WASH in schools for pupils. 2020. (6)	EN, FR, RU, German
Global progress report on WASH in health care facilities: Fundamentals first. December 2020.	EN
Achieving quality health services for all, through better water, sanitation and hygiene. Lessons from three African countries. 2020.	EN
WASH in health care facilities HERAMS – HERAMS Assessment – Yemen. 2020. [graphics]	EN
Risk assessment and management of exposure of HCWs in context of COVID-19 – Yemen. 2020. [graphics] (7)	EN
Status of WASH services in COVID-19 treatment units – Yemen. September 2020. [graphics] (8)	EN
Almost 2 billion people depend on health care facilities without basic water services – WHO, UNICEF. 14 November 2020. [Press release]	EN
What is WASH FIT? 2020.	EN
WASH FIT training package. December 2020.	EN
WASH in HCF & COVID-19 Webinar series (WHO and UNICEF). 2020. Session 1 – Water Session 2 – Health care waste manage Session 3 – Hand hygiene Session 4 – Environmental cleaning Session 5 – Sanitation	EN
Q&A from webinar series on WASH in HCF & COVID-19: April 2020.	EN

WHO 2020 WASH publications (continued)

Achieving sustainable WASH in HCF: addressing COVID-19 and safe, quality care for all. June 2020. [video]	EN
Fundamentals First: Global webinar to mark launch of new WHO/UNICEF global progress report. December 2020. [video]	EN
WHO guidance for climate-resilient and environmentally sustainable health care facilities. October 2020.	EN, FR, SP
WHO to help Ministry of Health upgrade hygiene at 50 district hospitals under USD 200,000 World Bank financed project. July 2020. [Press release]	EN
WHO strengthens WASH in health care facilities through Water and Sanitation for Health Facility Improvement Tool (WASH FIT). 2020. [Press release]	EN
Core competencies for infection prevention and control professionals. 2020.	EN
Hand hygiene for all initiative: improving access and behaviour in health care facilities. 2020.	EN
WASH in Health Care Facilities. [website]	EN
Fundamentals first: Key data, findings and recommendations. Global webinar [ppt]. December 2020.	EN
The cost of meeting basic WASH standards in health care facilities – Preliminary findings [ppt]. 2020.	EN
Integration of WASH with other health programmes	
Ending the neglect to attain the Sustainable Development Goals: A road map for neglected tropical diseases 2021–2030. January 2020.	EN
Ending the neglect to attain the Sustainable Development Goals: a global strategy on water, sanitation and hygiene to combat neglected tropical diseases, 2021-2030. March 2021.	EN
Technical brief on water, sanitation and hygiene and wastewater management to prevent infections and reduce the spread of antimicrobial resistance. November 2020.	EN
WHO, UNICEF, and WaterAid. Combatting antimicrobial resistance through WASH and IPC and control in health care. 2020.	EN
WASH evidence and monitoring	
GLAAS 2018/2019 country highlights. 2020.	EN, FR, PT, SP
Hygiene: UN-Water GLAAS findings on national policies, plans, targets and finance. 2020.	EN
WHO global water, sanitation and hygiene: annual report 2019. June 2020.	EN
Progress on drinking water, sanitation and hygiene in schools: Special focus on COVID. 2020.	AR, EN, FR, RU, SP
Global progress report on WASH in health care facilities: Fundamentals first. Dec 2020.	EN
Integrating water quality testing into household surveys. 2020.	EN
JMP website (updated with new data on WASH in health care facilities and WASH in schools).	EN

WHO 2020 WASH publications (continued)

Pre-COVID-19 Hygiene Snapshots: Hygiene baselines pre-COVID-19 global snapshot. Hygiene baselines pre-COVID-19 WHO Regional Office for Africa. 2020. Hygiene baselines pre-COVID-19 WHO Regional Office for Eastern Mediterranean. 2020. Hygiene baselines pre-COVID-19 WHO European Region. 2020. Hygiene baselines pre-COVID-19 WHO Regional Office for the Americas. 2020. Hygiene baselines pre-COVID-19 WHO Regional Office for South-East Asia. 2020. Hygiene baselines pre-COVID-19 WHO Regional Office for the Western Pacific. 2020.	EN
WASH advocacy and communications	
Water, sanitation, hygiene and health (Policy brief). 2020.(9)	EN, RU
Costing and financing of small-scale water supply and sanitation services. 2020.	EN, RU
Articles/technical notes (WHO WASH co-authored/contributed)	
Pond K, King R, Herschan J, Malcolm R, McKeown RM, Schmoll O. Improving Risk Assessments by Sanitary Inspection for Small Drinking-Water Supplies—Qualitative Evidence. Resources. 2020; 9(6):71.	
Dorea, C.C., Karaulac, T., Namgyal, K. <i>et al.</i> Safely managed drinking water services in the Democratic People's Republic of Korea: findings from the 2017 Multiple Indicator Cluster Survey. <i>npj Clean Water</i> 3, 28 (2020).	
Bain, R., Johnston, R. & Slaymaker, T. Drinking water quality and the SDGs. <i>npj Clean Water</i> 3, 37 (2020).	

References

1. Environmental Public Health Technical Sheets for emergency of COVID-19. PAHO. 2020. (<https://drive.google.com/file/d/1qHR9L4E4nNaAGIK5osx22I846uB9bLfh/view?usp=sharing>, accessed 2 May 2021).
2. Infographic: 5 steps to saving water when washing your hands. Regional Office for the Americas of the World Health Organization (PAHO). 2020. (<https://www.paho.org/en/documents/infographic-5-steps-saving-water-when-washing-your-hands>, accessed 2 May 2021).
3. Infografía: 5 pasos para ahorrar agua al lavarte las manos. Regional Office for the Americas of the World Health Organization. 2020. (<https://www.paho.org/es/documentos/infografia-5-pasos-para-ahorrar-agua-al-lavarte-manos>, accessed 2 May 2021).
4. Hand washing while conserving water [video]. WHO Regional Office for the Americas (PAHO). May 2020. (https://www.youtube.com/watch?v=b5hV5PQGv4&ab_channel=PAHOTV, accessed 2 May 2021).
5. National situational analysis of water, sanitation and hygiene in health care facilities in Serbia (Summary report). Copenhagen: WHO Regional Office for Europe; 2020. (<https://www.euro.who.int/en/health-topics/environment-and-health/water-and-sanitation/publications/2020/national-situational-analysis-of-water,-sanitation-and-hygiene-in-health-care-facilities-in-serbia.-summary-report-2020>, accessed 2 May 2021).
6. Poster series on WASH in schools for pupils (2020). WHO Regional Office for Europe. 2020. (<https://www.euro.who.int/en/health-topics/environment-and-health/water-and->

[sanitation/multimedia/posters-and-infographics/poster-series-on-wash-in-schools-for-pupils-2020](#), accessed 2 May 2021).

7. Risk assessment and management of exposure of HCWs in context of COVID-19 – Yemen [data portal]. World Health Organization; 2020.

(<https://app.powerbi.com/view?r=eyJrIjoiN2YzNzcyYWUtNGEwMy00Y2IxLWJhN2UtNjdkZjE4Y2U1OTZmliwidCI6ImY2ZjcwZjFiLTJhMmQtNGYzMC04NTJhLTlTY0YjhjZTBjMTlkNyIsImMiOjF9&pageName=ReportSection1fef67d54980d7b103d8>, accessed 2 May 2021).

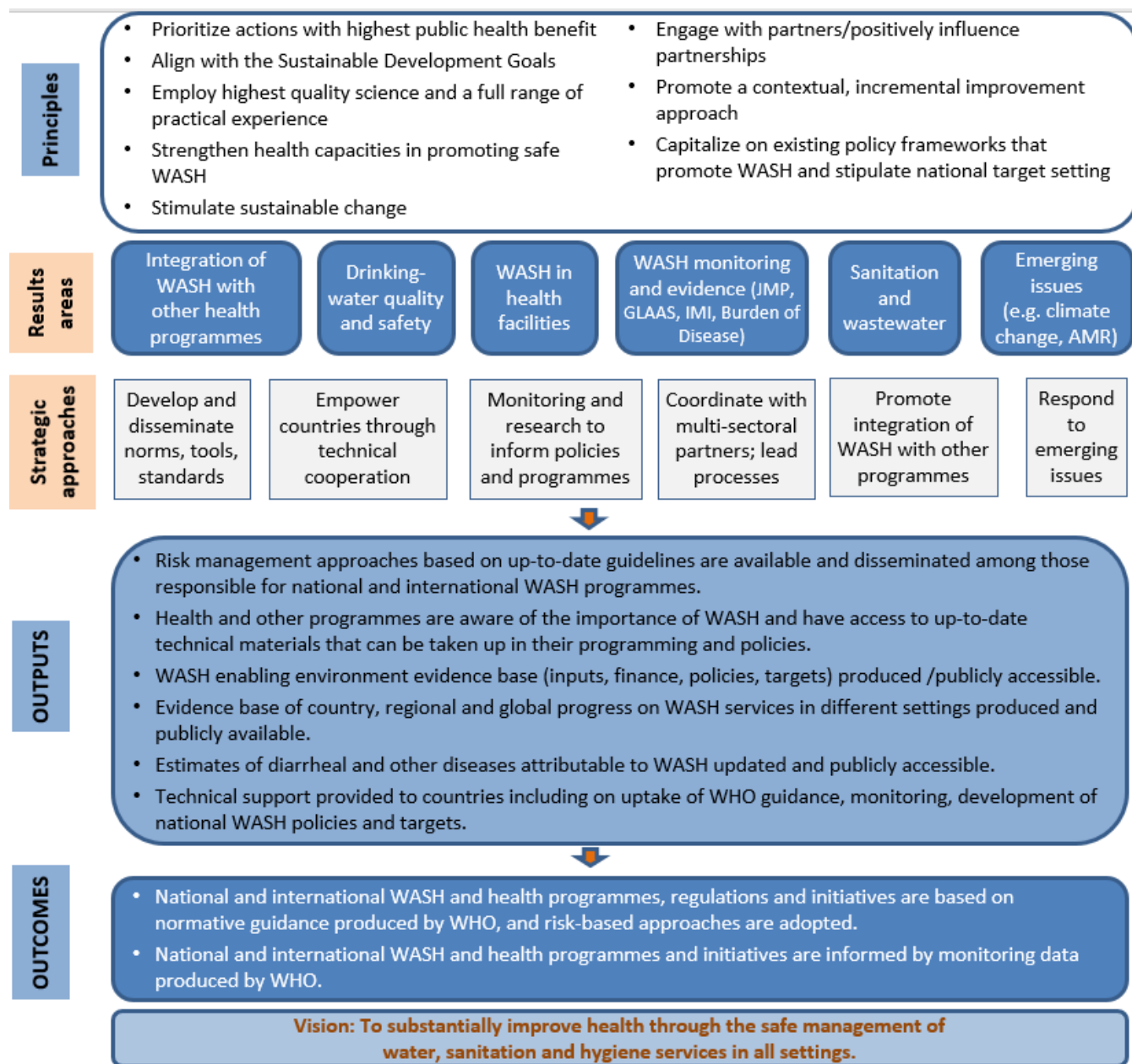
8. Status of WASH services in COVID-19 treatment units – Yemen [data portal]. World Health Organization. September 2020.

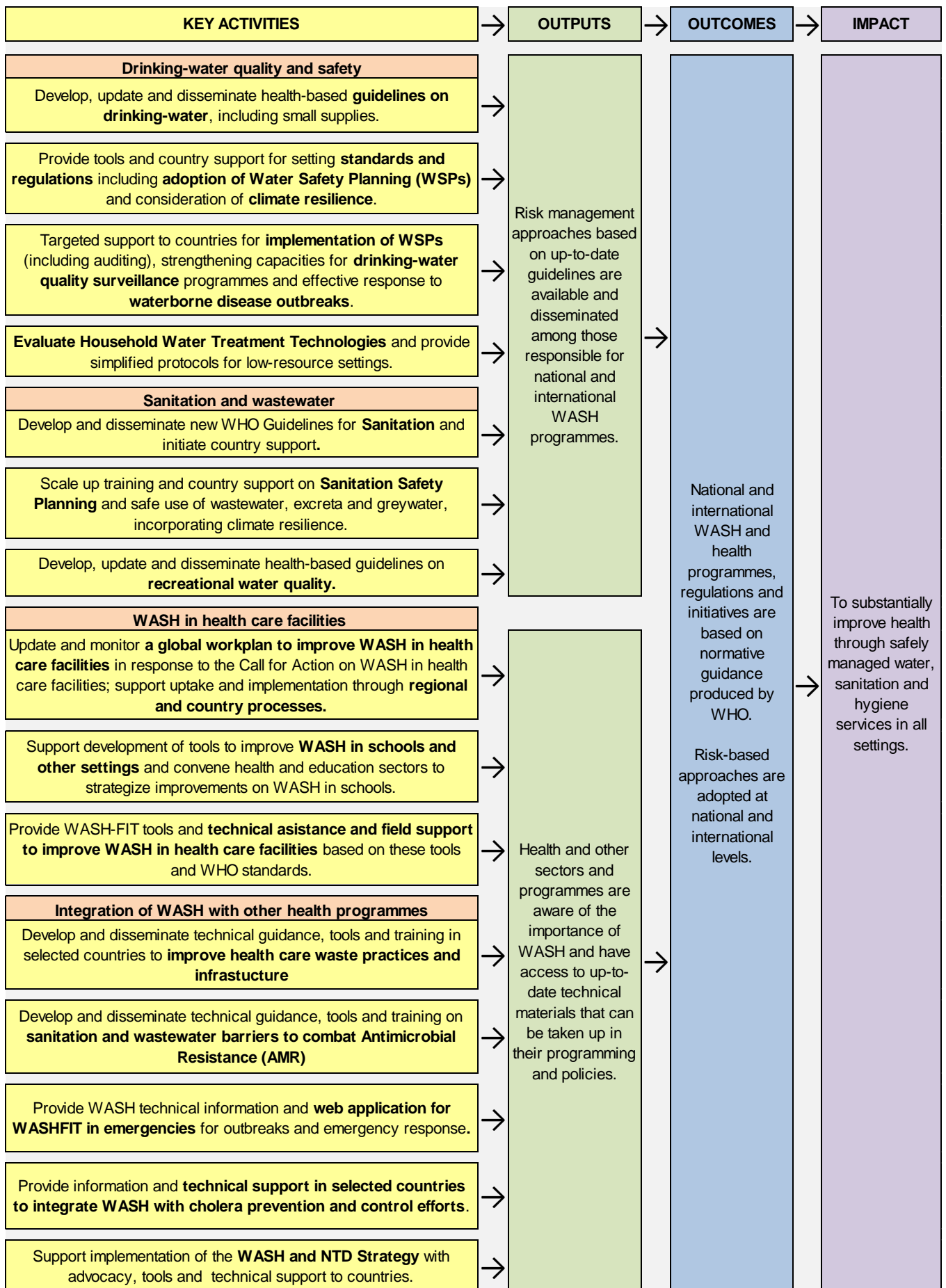
(<https://app.powerbi.com/view?r=eyJrIjoiZDQ2NWw3ZTEtNzM5Mi00YTgzLWl3OGQtMDRkOWMwMwI5ZmUxliwidCI6ImY2MTBjMGI3LWJkMjQtNGl3OS04MTBiLTNkYzI4MGFmYjU5MCI6ImMiOjh9>, accessed 2 May 2021).

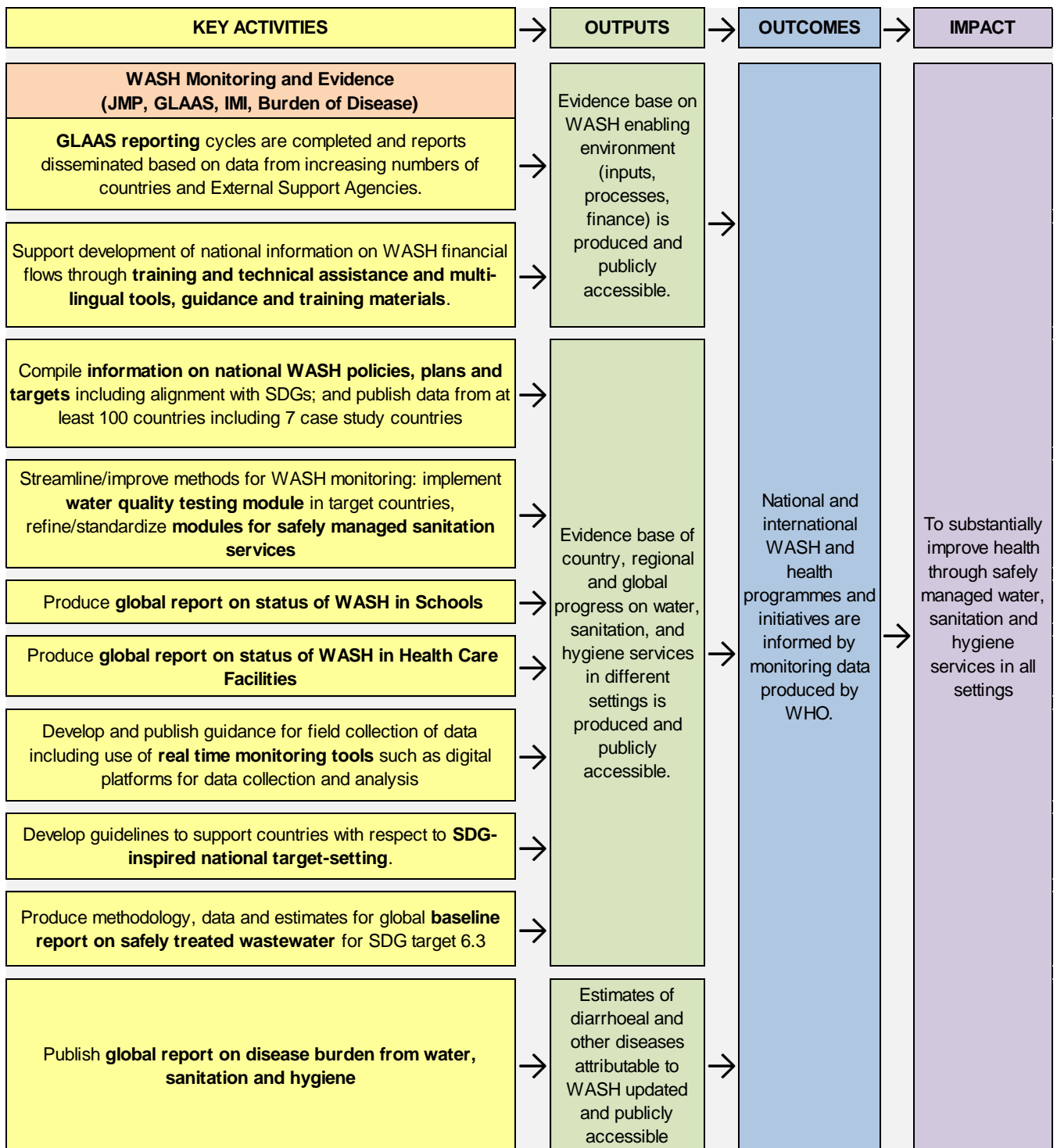
9. Water, sanitation, hygiene and health (Policy brief). WHO Regional Office for Europe. 2020.

(https://www.euro.who.int/__data/assets/pdf_file/0008/466946/water-sanitation-hygiene-health-SDG-brief.pdf, accessed 2 May 2021).

Annex 2 – Strategic framework and Theory of change







Annex 3 – Overview of WHO WASH expenditure

The figures below provide an overview of WHO WASH expenditure.

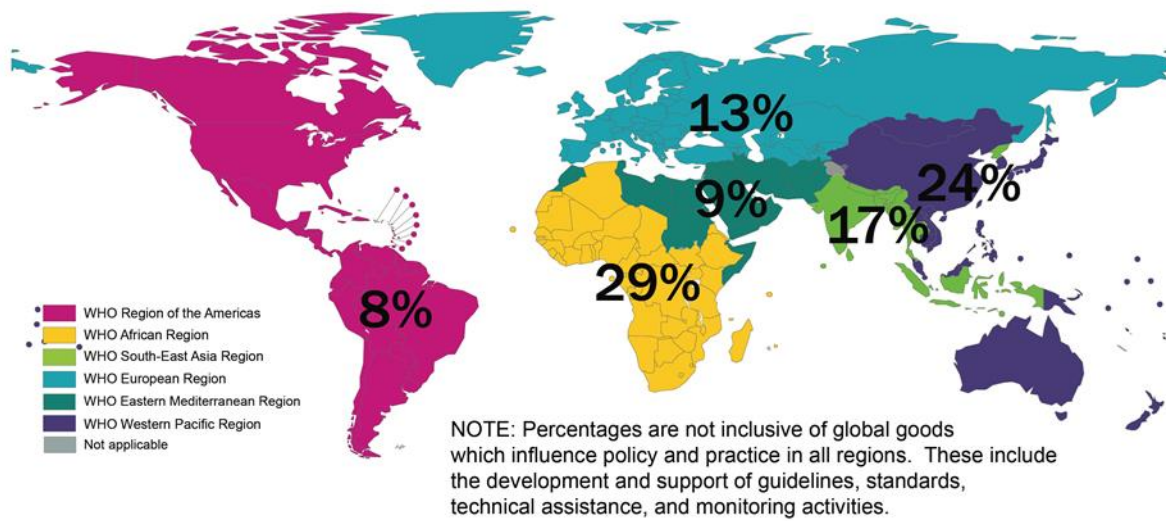


Figure 1 Distribution of WASH expenditures by WHO region, 2018–2019

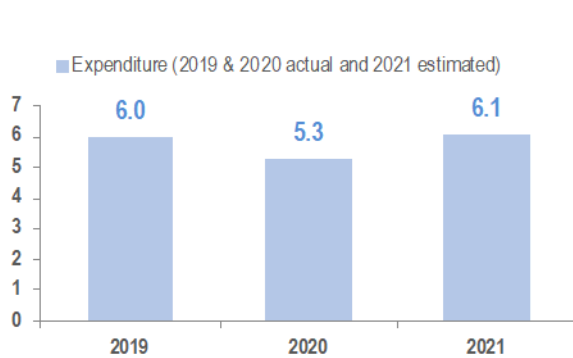


Figure 2 WASH budget and expenditure, 2019–2021

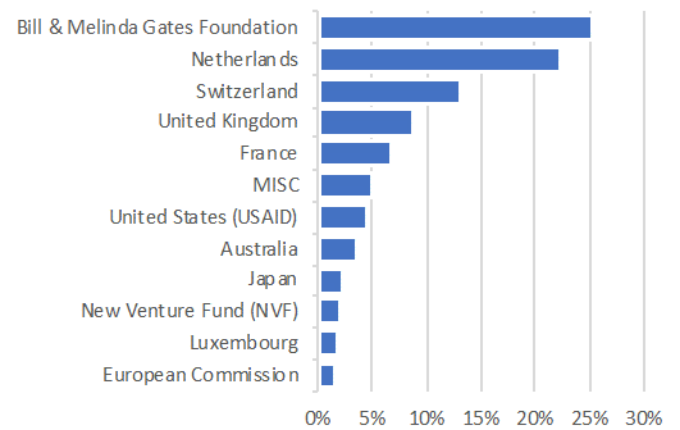


Figure 3 Top donors, 2020

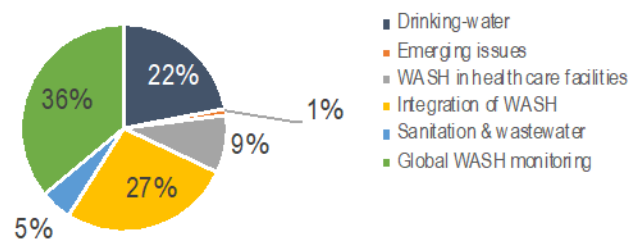


Figure 4 Breakdown of expenditures for WASH activities, 2020

NOTES

A series of horizontal dotted lines for writing notes.



**World Health
Organization**

Department of Environment, Climate Change
And Health

World Health Organization
Avenue Appia 20
1211 Geneva 27
Switzerland

