



# PROGRESS ON WASH IN HEALTH CARE FACILITIES 2000–2021

Special focus on WASH and infection  
prevention and control (IPC)

**LAUNCH VERSION, AUGUST 2022**

WHO/UNICEF JOINT MONITORING PROGRAMME FOR WATER SUPPLY, SANITATION AND HYGIENE



World Health  
Organization

WHO  
UNICEF



JMP

unicef



## Progress on WASH in health care facilities 2000–2021: special focus on WASH and infection prevention and control (IPC)

ISBN (WHO) XXX-XX-X-XXXXXX-X (electronic version)

ISBN (WHO) XXX-XX-X-XXXXXX-X (print version)

© World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) 2022

This joint report reflects the activities of the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF).

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 or UNICEF endorses any specific organization, products or services. The unauthorized use of the WHO or UNICEF names or logos 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) or the United Nations Children's Fund (UNICEF). Neither WHO nor UNICEF are 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.** *Progress on WASH in health care facilities 2000–2021: special focus on WASH and infection prevention and control (IPC)*. Geneva: World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), 2022. Licence: CC 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.

**UNICEF and WHO photographs.** UNICEF and WHO photographs are copyrighted and are not to be reproduced in any medium without obtaining prior written permission. Permissions may be granted for one-time use in a context that accurately represents the real situation and identity of all human beings depicted. UNICEF and WHO photographs are not to be used in any commercial context; content may not be digitally altered to change meaning or context; assets may not be archived by any non-WHO or non-UNICEF entity. Requests for permission to reproduce UNICEF photographs should be addressed to UNICEF, Division of Communication, 3 United Nations Plaza, New York 10017, USA (email: [nyhqdoc.permit@unicef.org](mailto:nyhqdoc.permit@unicef.org)). Requests for permission to reproduce WHO photographs should be addressed to <[http://www.who.int/about/licensing/copyright\\_form/en/](http://www.who.int/about/licensing/copyright_form/en/)>.

**Photography credits.** Front cover: Adobe Stock/Gorondekoff; Page 4: Adobe Stock/Budimir Jevtic; Page 6–7: © UNICEF/UN0417886/Pouget; Page 9: © UNICEF/UN0653681/Katragadda; Page 10: Adobe Stock/sinitar; Page 14–15: © UNICEF/UNI388377/Arcos; Page 19: © UNICEF/UN0513026/Dejongh; Page 20–21: Adobe Stock/OscarStock; Page 25: © UNICEF/UN0549898; Page 28: © UNICEF/UN0432036/Kabuye; Page 29: © UNICEF/UN0647774/Jariwala; Page 30–31: Adobe Stock/nimito; Page 33: © UNICEF/UN0653834/Katragadda; Page 35: © UNICEF/UNI366360/Sibiloni; Page 38: © UNICEF/UN0588806/Jariwala; Page 39: © UNICEF/UN0412763/Chikondi; Page 40–41: Adobe Stock/Robert Kneschke; Page 45: © UNICEF/UN0337705/Htet; Page 47: © UNICEF/UNI287459/Bhardwaj; Page 48: © UNICEF/UN0306441/Abdul; Page 49: Adobe Stock/tong2530; Page 50–51: © UNICEF/UN0306421/Abdul; Page 55: © UNICEF/UN0542025/Desjardins; Page 57: © UNICEF/UN0424596/Tremeau; Page 60–61: © UNICEF/UN0513023/Dejongh; Page 62–63: © UNICEF/UN0306427/Abdul; Page 64: © UNICEF/UN0306435/Abdul; Page 69: © UNICEF/UN0653387/Katragadda; Page 71: © UNICEF/UN0376928/Esiebo; Page 73: © UNICEF/UN0549869/Dubourthoumieu; Page 74–75: Adobe Stock/WavebreakMediaMicro; Page 77: © UNICEF/UNI324926/Párraga; Page 82–83: Adobe Stock/Vadim; Page 87: © UNICEF/UN0655214/Katragadda; Back cover: Adobe Stock/Roman.

**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 or UNICEF 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 or UNICEF 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.

The figures included in this report have been estimated by the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene <<https://washdata.org>> to ensure international comparability; thus, they are not necessarily the official statistics of the concerned country, area or territory, which may use alternative methods.

All reasonable precautions have been taken by WHO and UNICEF 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 or UNICEF be liable for damages arising from its use.

Edited by Richard Steele. Design, layout and production by Elwa Design Studio.

# PROGRESS ON WASH IN HEALTH CARE FACILITIES 2000–2021

Special focus on WASH and infection  
prevention and control (IPC)





# Contents

	<b>6</b>		<b>14</b>		<b>20</b>
Hand hygiene	8	WASH and health in	14	Basic hygiene services	20
Environmental cleaning	9	the 2030 Agenda for		Other elements	25
Waste management	10	Sustainable Development		of hygiene services	
Water	11	WASH and IPC in health	16	Data coverage	28
Sanitation	12	care facilities			
Data coverage	13				
	<b>30</b>		<b>40</b>		<b>50</b>
Basic environmental	30	Basic waste	40	Basic water services	50
cleaning services		management services		Other elements	57
Other elements of environmental	35	Other elements of waste	45	of water services	
cleaning services		management services		Data coverage	60
Data coverage	39	Data coverage	49		
	<b>62</b>		<b>74</b>		<b>82</b>
Basic sanitation services	62			Annex 1: JMP methods	82
Other elements of	70			Annex 2: Regional groupings	90
sanitation services				Annexes 3: National, regional	92
Data coverage	73			and global estimates	

# Highlights



The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), through the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP), have produced regular updates on water, sanitation and hygiene (WASH) since 1990. Together, they are responsible for monitoring the 2030 Sustainable Development Goal (SDG) targets related to WASH. Targets 6.1 and 6.2 refer to universal and equitable access to drinking water, sanitation and hygiene for all (Table 1). The term 'universal' implies all settings, including households, schools, health care facilities, workplaces and public spaces, and since 2019 the JMP has maintained a global database on WASH services in health care facilities. WASH in health care facilities is also essential for achievement of target 3.8 which aims to provide access to quality essential health care services for all.

This 2022 update presents national, regional and global estimates for WASH in health care facilities up to the year 2021, with a special focus on the linkages between WASH and infection prevention and control (IPC).<sup>1</sup>

<sup>1</sup> JMP reports are available at the JMP website: <https://washdata.org/reports>.

The JMP uses service ladders to benchmark and track progress on WASH services. For the purpose of global monitoring, the definition of WASH in health care facilities includes not only water supply, sanitation and hand hygiene, but also health care waste management and environmental cleaning (Figure 1), which in health care settings are closely related to sanitation and hygiene.

	GOALS	TARGETS
<b>6</b> CLEAN WATER AND SANITATION 	<b>6: Ensure availability and sustainable management of water and sanitation for all</b>	6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all  6.2: By 2030 achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
<b>3</b> GOOD HEALTH AND WELL-BEING 	<b>3: Ensure healthy lives and promote well-being for all at all ages</b>	3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

**TABLE 1** Global goals and targets related to WASH in health care facilities



JMP service ladders for WASH in health care facilities

SERVICE LEVEL	WATER	SANITATION	HYGIENE	WASTE MANAGEMENT	ENVIRONMENTAL CLEANING
<b>BASIC SERVICE</b>	Water is available from an improved source* on the premises.	Improved sanitation facilities* are usable, with at least one toilet dedicated for staff, at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility.	Functional hand hygiene facilities (with water and soap and/or alcohol-based hand rub) are available at points of care, and within five metres of toilets.	Waste is safely segregated into at least three bins, and sharps and infectious waste are treated and disposed of safely.	Protocols for cleaning are available, and staff with cleaning responsibilities have all received training.
<b>LIMITED SERVICE</b>	An improved water source is available within 500 metres of the premises, but not all requirements for a basic service are met.	At least one improved sanitation facility is available, but not all requirements for a basic service are met.	Functional hand hygiene facilities are available either at points of care or toilets but not both.	There is limited separation and/or treatment and disposal of sharps and infectious waste, but not all requirements for a basic service are met.	There are cleaning protocols and/or at least some staff have received training on cleaning.
<b>NO SERVICE</b>	Water is taken from unprotected dug wells or springs, or surface water sources; or an improved source that is more than 500 metres from the premises; or there is no water source.	Toilet facilities are unimproved (e.g. pit latrines without a slab or platform, hanging latrines, bucket latrines) or there are no toilets.	No functional hand hygiene facilities are available either at points of care or toilets.	There are no separate bins for sharps or infectious waste, and sharps and/or infectious waste are not treated/disposed of.	No cleaning protocols are available and no staff have received training on cleaning.

\* Improved water sources are those that by nature of their design and construction have the potential to deliver safe water. These include piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water. Improved sanitation facilities are those designed to hygienically separate human excreta from human contact. These include wet sanitation technologies – such as flush and pour-flush toilets connecting to sewers, septic tanks or pit latrines – and dry sanitation technologies – such as dry pit latrines with slabs, and composting toilets.

**FIGURE 1** JMP service ladders for global monitoring of WASH in health care facilities

# HAND HYGIENE

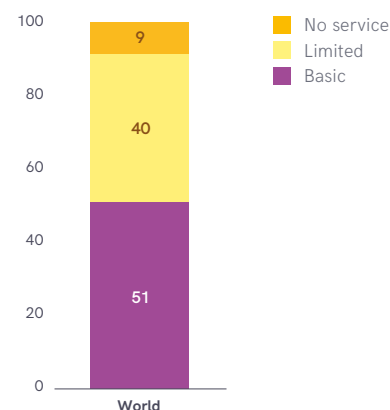
## BASIC SERVICE

Functional hand hygiene facilities (with water and soap and/or alcohol-based hand rub) are available at points of care, and within five metres of toilets.

### IN 2021

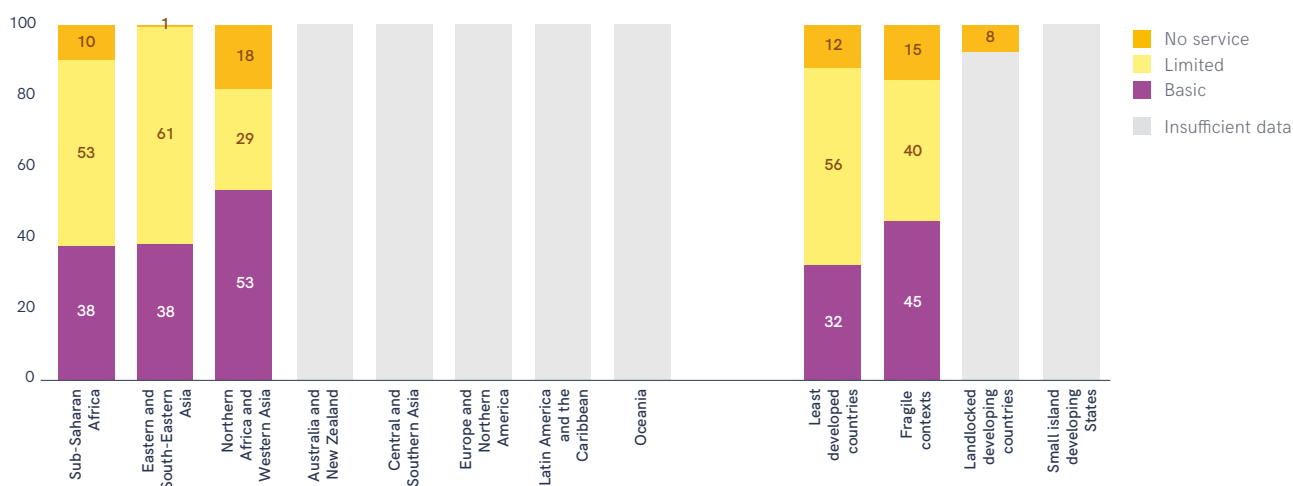
- Half (**51%**) of health care facilities globally had a **basic** hand hygiene service, meaning that functional hand hygiene facilities were available at points of care, and within five metres of toilets.
- Only **one third (32%)** of health care facilities in least developed countries (LDCs) had a **basic** hygiene service.
- National data on basic hygiene services were available for **35%** of the global population, and for **37%** of the population of LDCs.
- **40** countries and **three** SDG regions had sufficient data to estimate national coverage of **basic** hygiene services in health care facilities.
- **1 out of 11** health care facilities (**9%**) globally had **no service** (lacking hand hygiene facilities at points of care, as well as soap and water at toilets).
- **48%** of government health care facilities and 51% of non-government facilities had a basic hygiene service.
- **68%** of health care facilities globally had hand hygiene facilities at points of care, while **65%** had handwashing facilities with soap and water at toilets.
- In sub-Saharan Africa, **three quarters (73%)** of health care facilities had hand hygiene facilities at points of care, and only one third (**37%**) had handwashing facilities with soap and water at toilets.
- In sub-Saharan Africa, **87%** of hospitals had hand hygiene facilities at points of care, compared with **68%** of non-hospitals.
- **3.85 billion** people lacked a **basic** hygiene service at their health care facility, including **688 million** people with **no service**.

### Half of health care facilities had a basic hygiene service in 2021



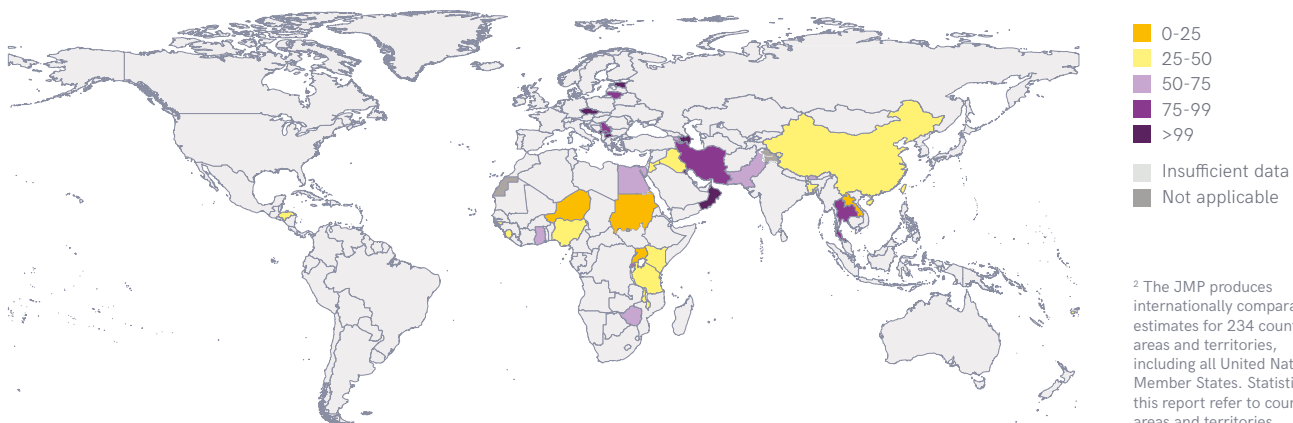
**FIGURE 2** Global coverage of hygiene services in health care facilities in 2021 (%)

### Three out of eight SDG regions had estimates for basic hygiene services in 2021



**FIGURE 3** Regional coverage of hygiene services in health care facilities in 2021 (%)

### 40 countries<sup>2</sup> had national estimates for basic hygiene services in 2021



**FIGURE 4** Proportion of health care facilities with basic hygiene services, 2021 (%)

<sup>2</sup> The JMP produces internationally comparable estimates for 234 countries, areas and territories, including all United Nations Member States. Statistics in this report refer to countries, areas and territories.



# ENVIRONMENTAL CLEANING

## BASIC SERVICE

Protocols for cleaning are available, and staff with cleaning responsibilities have all received training.

### IN 2021

- **21** countries (representing 7% of the global population) had sufficient data to estimate national coverage of **basic** environmental cleaning services in health care facilities.
- There were not enough countries with national data on environmental cleaning to calculate regional or global estimates for **basic** environmental cleaning services.
- **72%** of hospitals in Central and Southern Asia had a **basic** environmental cleaning service, meaning that cleaning protocols were available, and that staff with cleaning responsibilities had all received training.
- In sub-Saharan Africa, **26%** of rural health care facilities had a **basic** environmental cleaning service. **45%** had cleaning protocols, and **32%** had staff trained on environment cleaning.



# WASTE MANAGEMENT

**BASIC SERVICE**  
Waste is safely segregated into at least three bins, and sharps and infectious waste are treated and disposed of safely.

IN 2021

- **65** countries had sufficient data to estimate national coverage of **basic** waste management services in health care facilities, meaning that waste was segregated at points of generation, and sharps and infectious waste were treated and disposed of safely.
- There were not enough countries with basic estimates to calculate global coverage of waste management services. National data on **basic** waste management services were available for **24%** of the global population.
- **39%** of health care facilities in sub-Saharan Africa had a **basic** health care waste management service.
- **One out of three** health care facilities in fragile contexts (**32%**) and in LDCs (**34%**) had a **basic** health care waste management service.
- In sub-Saharan Africa, **55%** of hospitals and **30%** of non-hospitals had a basic waste management service. **6 out of 10** government facilities (**60%**) and less than half of non-government health care facilities (**47%**) safely segregated waste.
- **Three out of five (61%)** hospitals globally had a basic health care waste management service.
- **73%** of health care facilities globally had systems for segregating waste.
- **681 million** people in sub-Saharan Africa lacked a **basic** waste management service at their health care facility, including **66 million** people with **no service** (neither segregation at points of generation nor safe treatment and disposal).



Only one SDG region had an estimate for basic waste management services in 2021

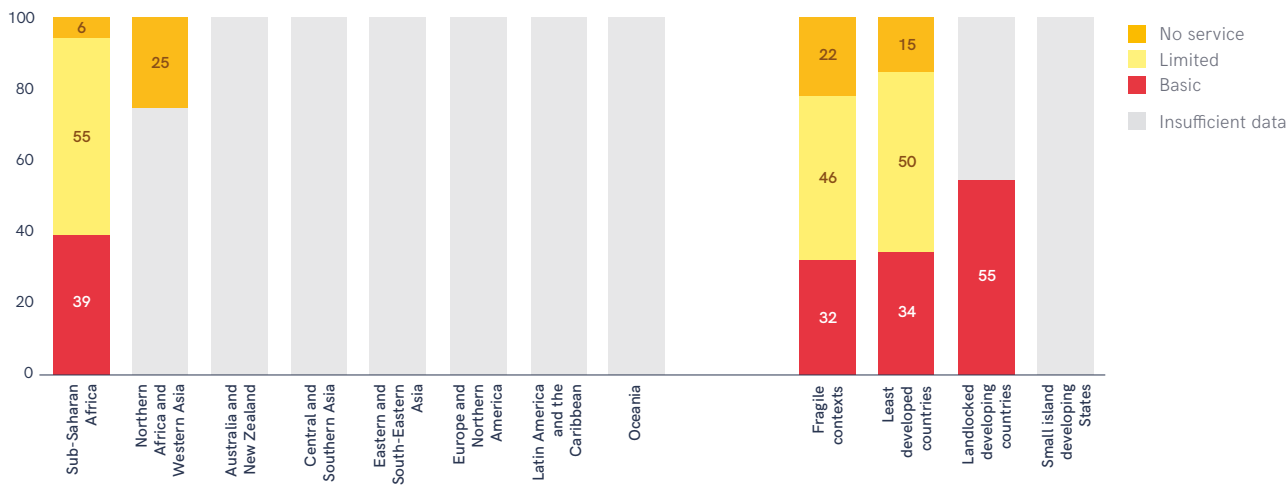


FIGURE 5 Regional coverage of waste management services in health care facilities in 2021 (%)

65 countries had national estimates for basic waste management services in 2021

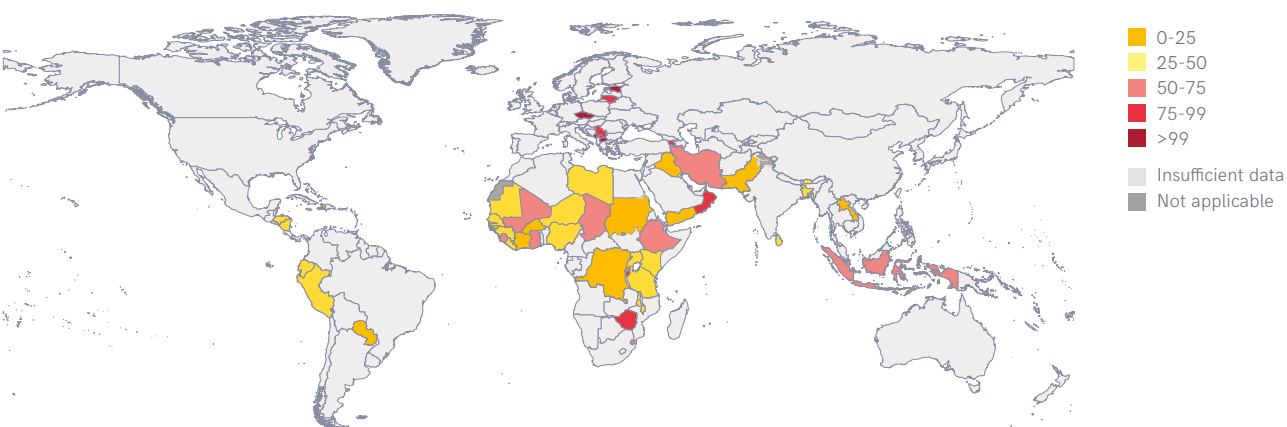


FIGURE 6 Proportion of health care facilities with basic waste management services in 2021 (%)

# WATER

## BASIC SERVICE

Water is available from an improved source on the premises.

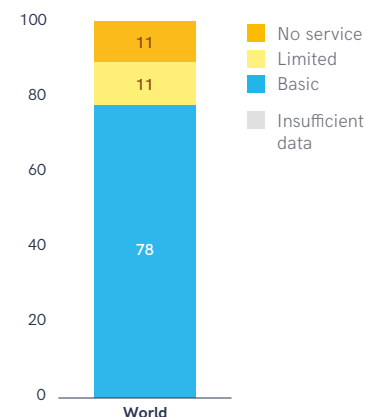
### IN 2021

- **78%** of health care facilities globally had a **basic** water service, meaning water was available from an improved source on the premises.
- **59** countries and three of the eight SDG regions had sufficient data to estimate national coverage of **basic** water services in health care facilities.
- Regional coverage of **basic** water services ranged from **52%** in sub-Saharan Africa to **90%** in Eastern and South-Eastern Asia.
- In LDCs, only **53%** of health care facilities had a **basic** water service.
- National data on **basic** water services were available for **37%** of the global population, and for **53%** of the population of LDCs.
- **11%** of health care facilities globally had a **limited** water service, meaning they had access to an improved source that was either

located off the premises or did not have water available at the time of the survey.

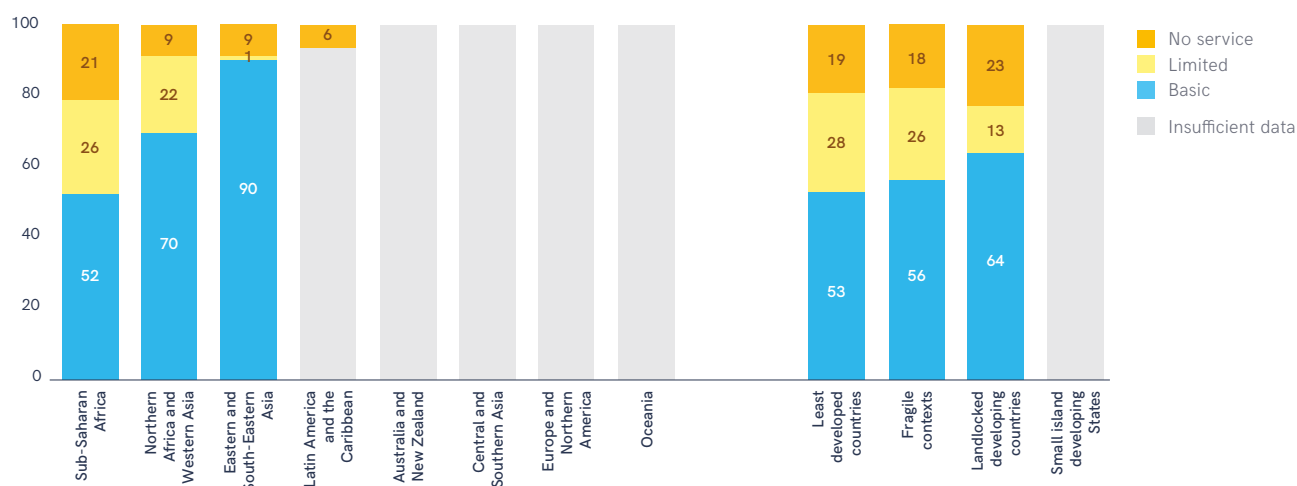
- **11%** of health care facilities globally had **no service**, meaning they either used water from an improved source more than 500 metres from the premises or an unimproved source, or had no water source at all.
- Globally, **3%** of health care facilities in urban areas and **11%** in rural areas had **no service**.
- **88%** of hospitals but only **77%** of smaller health care facilities had a **basic** water service.
- Globally, **1.7 billion** people lacked a **basic** water service at their health care facility, including **857 million** people who had **no service** at their health care facility.

### Four out of five health care facilities had a basic water service in 2021



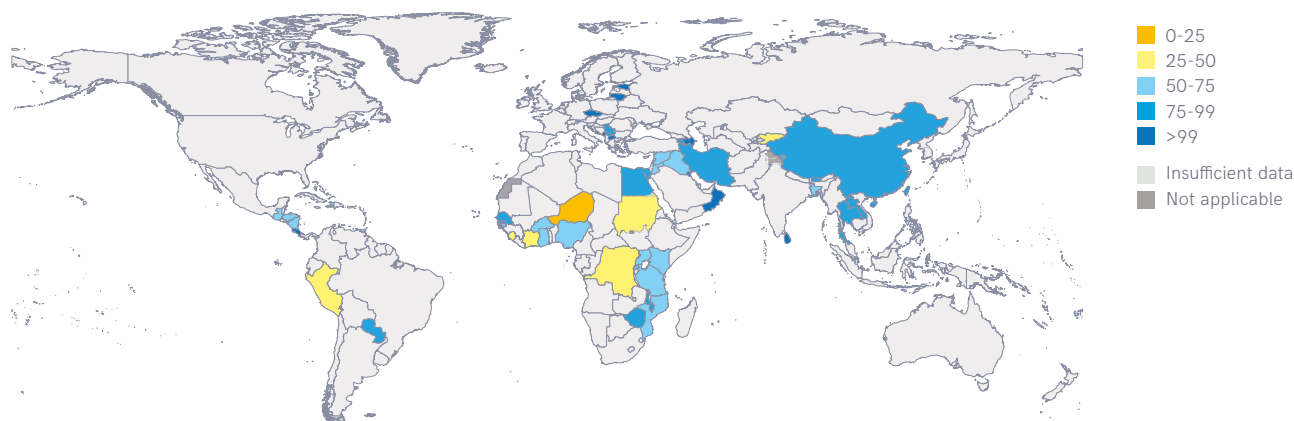
**FIGURE 7** Global coverage of water services in health care facilities in 2021 (%)

### Three out of eight SDG regions had estimates for basic water services in 2021



**FIGURE 8** Regional coverage of water services in health care facilities in 2021 (%)

### 59 countries had estimates for basic water services in 2021



**FIGURE 9** Proportion of health care facilities with basic water services in 2021 (%)

# SANITATION

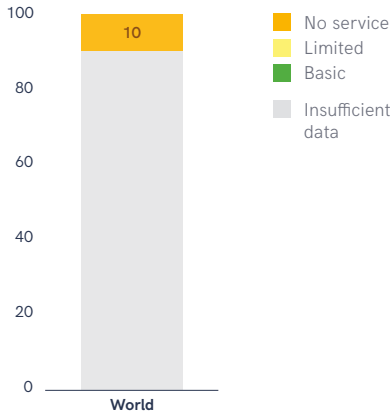
## BASIC SERVICE

Improved sanitation facilities are usable, with at least one toilet dedicated for staff, at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility.

### IN 2021

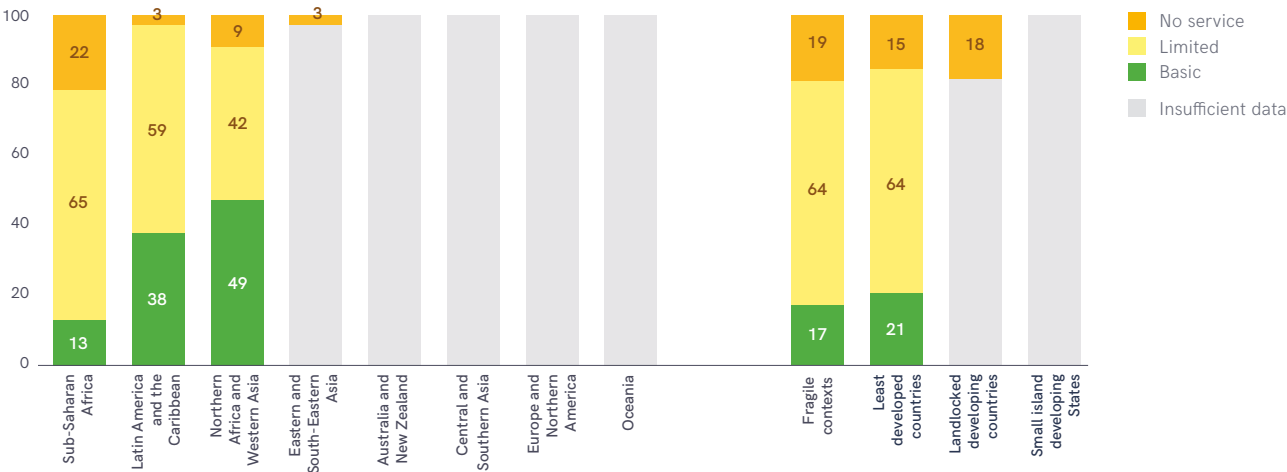
- **41** countries and three SDG regions had sufficient data to estimate national coverage of **basic** sanitation services in health care facilities.
- There were not enough countries with estimates to calculate global coverage of basic sanitation services in health care facilities. National data on basic sanitation services were available for **19%** of the global population.
- In sub-Saharan Africa, **13%** of health care facilities had a **basic** service (with usable improved sanitation facilities, including at least one toilet dedicated for staff, at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility).
- **21%** of health care facilities in LDCs had a **basic** sanitation service.
- **10%** of health care facilities globally had **no service**, meaning they had unimproved toilets or no toilets at all.
- The proportion of health care facilities with **no** sanitation service ranged from **3%** in Latin America and the Caribbean as well as Eastern and South-Eastern Asia to **22%** in sub-Saharan Africa.
- **780 million people** globally had **no service** at their health care facility.

### 1 in 10 health care facilities had no sanitation service in 2021



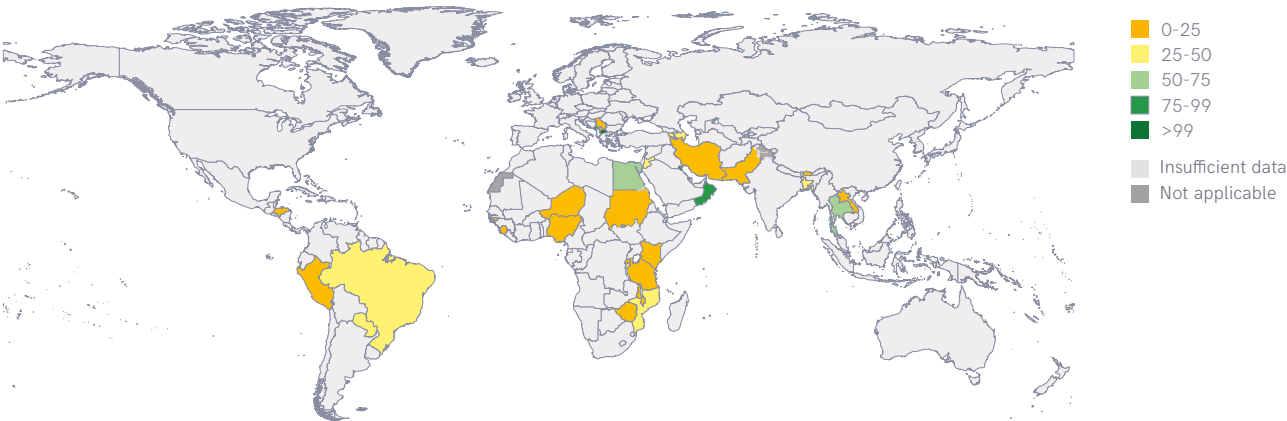
**FIGURE 10** Global coverage of sanitation services in health care facilities in 2021 (%)

### Three out of eight SDG regions had estimates for basic sanitation services in 2021



**FIGURE 11** Regional coverage of sanitation services in health care facilities in 2021 (%)

### 41 countries had national estimates for basic sanitation services in 2021



**FIGURE 12** Proportion of health care facilities with basic sanitation services in 2021 (%)



## DATA COVERAGE

Since the first global report on WASH in health care facilities was published in 2019, many countries have strengthened their national monitoring systems and included WASH indicators in health care facility assessments as well as in routine monitoring information systems (MIS).

In 2022, for the first time, there were sufficient data<sup>3</sup>, from 40 countries representing 35% of the global population, to make a global estimate for hand hygiene services in health care facilities (Table 2). The increase in data coverage was in sub-Saharan Africa and in Northern Africa and Western Asia, both of which had enough data to produce regional estimates of basic hygiene for the first time. The only national data available from China

<sup>3</sup> The JMP produces regional or global estimates when national data are available from countries representing at least 30% of the regional or global population. Estimates are more robust when they represent at least 50% of the population. More details on JMP methods are provided in Annex 1.

covered basic water and basic hygiene services (from a 2018 survey on WASH in primary health care facilities), while no national data were available from India for any of the basic WASH services<sup>4</sup>.

Overall data coverage is highest for basic water services, which was the only service area to have a global estimate in the 2019 baseline report. However, not many large countries have added estimates since the 2019 report, and estimates are still only available for 59 countries representing 37% of the global population. Data coverage has grown rapidly for basic sanitation, waste management and environmental cleaning services, but remains below the 30% threshold needed to make estimates of global service levels.

<sup>4</sup> Data on WASH in health care facilities in India are collected through the Kayakalp programme (<http://qi.nhsrindia.org/kayakalp-swachh-swasth-sarvatra>). National data on WASH services were received by the JMP after the country consultation period for this report and will be included in future updates. This will bring global data coverage for several WASH indicators above 50%. The 2022 report does include Kayakalp data from 2018 on WASH services in hospitals in India.

### Global availability of data on basic WASH services in health care facilities

% OF POPULATION (# OF COUNTRIES, AREAS AND TERRITORIES) IN 2021	BASIC WATER			BASIC SANITATION			BASIC HYGIENE			BASIC WASTE MANAGEMENT			BASIC ENVIRONMENTAL CLEANING		
	2019	2020	2022	2019	2020	2022	2019	2020	2022	2019	2020	2022	2019	2020	2022
<b>WORLD (234)</b>	36% (38)	37% (52)	37% (59)	7% (18)	12% (27)	19% (41)	23% (14)	26% (21)	35% (40)	19% (48)	20% (58)	24% (65)	0% (4)	2% (12)	7% (21)
<b>SDG regions</b>															
Australia and New Zealand (2)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Central and Southern Asia (14)	9% (3)	9% (4)	14% (6)	0% (1)	8% (3)	23% (5)	0% (1)	8% (3)	23% (5)	11% (4)	11% (5)	25% (6)	0% (1)	0% (2)	15% (4)
Eastern and South-Eastern Asia (18)	78% (3)	77% (3)	66% (3)	0% (0)	3% (1)	3% (2)	63% (1)	65% (2)	66% (3)	14% (3)	15% (4)	12% (4)	0% (0)	3% (1)	0% (0)
Europe and Northern America (53)	2% (7)	2% (8)	2% (8)	2% (3)	1% (3)	1% (3)	2% (5)	2% (7)	2% (7)	2% (6)	2% (8)	2% (8)	0% (2)	1% (4)	1% (4)
Latin America and the Caribbean (50)	7% (3)	14% (7)	14% (7)	7% (3)	40% (4)	40% (4)	0% (0)	0% (0)	2% (1)	10% (4)	12% (5)	13% (6)	0% (0)	0% (0)	2% (1)
Northern Africa and Western Asia (25)	5% (4)	8% (5)	47% (11)	5% (4)	5% (4)	36% (9)	3% (3)	3% (3)	43% (9)	10% (5)	10% (5)	27% (9)	2% (1)	3% (2)	21% (6)
Oceania (21)	72% (1)	82% (7)	18% (8)	0% (0)	0% (2)	16% (6)	0% (0)	0% (0)	16% (4)	72% (1)	80% (5)	18% (8)	0% (0)	0% (0)	9% (3)
Sub-Saharan Africa (51)	60% (17)	66% (18)	61% (16)	41% (7)	40% (10)	41% (12)	26% (4)	26% (6)	44% (11)	73% (25)	77% (26)	75% (24)	0% (0)	5% (3)	8% (3)
<b>Other regional groupings</b>															
Landlocked developing countries (32)	46% (9)	52% (12)	33% (13)	36% (6)	41% (11)	21% (11)	6% (3)	16% (8)	26% (10)	62% (13)	68% (16)	61% (16)	0% (0)	11% (5)	8% (4)
Least developed countries (46)	45% (12)	62% (20)	53% (18)	21% (5)	36% (10)	37% (14)	6% (2)	21% (6)	37% (13)	75% (25)	73% (29)	71% (26)	0% (0)	5% (4)	8% (6)
Small island developing States (53)	14% (3)	36% (10)	23% (10)	2% (2)	5% (4)	8% (8)	1% (1)	4% (2)	7% (6)	32% (5)	36% (9)	25% (12)	1% (1)	1% (1)	2% (4)
Fragile contexts (57)	43% (17)	49% (21)	56% (24)	25% (8)	33% (10)	53% (18)	16% (4)	23% (5)	56% (17)	56% (27)	55% (27)	77% (32)	0% (0)	1% (1)	27% (9)
<b>Income groupings</b>															
Low income (27)	30% (5)	60% (12)	48% (11)	25% (3)	32% (7)	23% (8)	1% (1)	9% (4)	23% (7)	61% (14)	67% (16)	72% (16)	0% (0)	8% (3)	12% (3)
Lower middle income (55)	30% (18)	25% (18)	25% (22)	8% (5)	12% (6)	28% (16)	8% (3)	12% (4)	29% (16)	30% (19)	28% (21)	37% (25)	0% (1)	0% (2)	11% (9)
Upper middle income (54)	60% (9)	63% (14)	65% (17)	3% (8)	14% (11)	14% (13)	58% (6)	61% (8)	62% (11)	3% (9)	6% (12)	5% (13)	0% (2)	3% (5)	2% (6)
High income (79)	2% (6)	2% (6)	2% (7)	1% (2)	0% (1)	1% (2)	1% (4)	2% (5)	2% (6)	1% (6)	2% (8)	2% (9)	0% (1)	0% (2)	1% (3)

0-29% coverage

30-49% coverage

50-100% coverage

**TABLE 2** Proportion of population (%) and number of countries with national estimates available for basic WASH services, by region in JMP progress updates (2019–2022)

# Introduction



The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), through the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) produces comparable national, regional and global estimates of progress on drinking water, sanitation and hygiene (WASH) and are responsible for global monitoring of the Sustainable Development Goal (SDG) targets related to WASH. The JMP releases updated estimates for WASH in households in odd years and updated estimates for WASH in health care facilities and schools in even years. This progress report presents national, regional and global estimates for WASH in health care facilities up to the year 2021, with a special focus on WASH and infection prevention and control (IPC). Details of the methods used to produce estimates are provided in **Annex 1**.

## WASH AND HEALTH IN THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

The 2030 Agenda for Sustainable Development, adopted by the United Nations General Assembly in 2015, provides an overarching framework to monitor progress across 17 SDGs and 169 global targets over the 2015–2030 period. SDG 6 aims to 'ensure available and sustainable management of water and sanitation for all' and includes targets for universal access to safe drinking water, sanitation and hygiene for all by 2030 (targets 6.1 and 6.2), while SDG 3 aims to 'ensure healthy lives and promote well-being for all at all ages'. These targets are highly ambitious but also inter-related and mutually reinforcing. SDG target 3.8 on universal health coverage is tracked using an index of essential health services, which includes the use of basic sanitation services at home. Target 3.9 calls for 'substantially reducing the number of deaths and illnesses' attributed to unsafe water, unsafe sanitation and lack of hygiene. Other targets (3.1, 3.2, 3.3) call for reducing maternal



mortality and under-five and neonatal mortality, as well as ending epidemics including of water-borne diseases. All these targets are directly impacted by WASH conditions in health care settings.

In March 2018, the Secretary-General of the United Nations launched a global call to action for WASH in all health care facilities, noting that health care facilities are essential tools in reducing disease, and that without basic WASH services, health care facilities can instead contribute to more infections, prolonged hospital stays and preventable deaths, including of mothers and babies. This call was answered in a May 2019 World Health Assembly resolution<sup>5</sup> calling on countries to conduct comprehensive assessments of WASH and IPC in health care facilities, and to take steps to improve WASH and IPC conditions where necessary. The resolution requests WHO to provide global leadership in this area, to work with UNICEF

to produce regular reports on the global status of WASH in health care facilities as part of efforts to achieve SDG 6, and to include safe WASH and IPC in health care facilities within effective universal health coverage, primary health care and efforts to monitor the quality of care.

In May 2022, the World Health Assembly passed a resolution calling for WHO to draft a global strategy on infection prevention and control. The resolution further calls on WHO Member States to ensure that at least the minimum requirements for IPC – which encompass WASH services – are implemented and monitored, and to take steps to ensure that sustainable IPC and WASH infrastructures and resources are in place and utilized across all health care facilities<sup>6</sup>.

<sup>5</sup> 2019 World Health Assembly Resolution – WHA72.7. *Water, sanitation and hygiene in health care facilities*. In: Seventy-second World Health Assembly, Geneva, 20–28 May 2019. Resolutions and decisions, annex. Geneva: World Health Organization, 2019 <[https://apps.who.int/gb/ebwha/pdf\\_files/WHA72/A72\\_R7-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/WHA72/A72_R7-en.pdf)>.

<sup>6</sup> 2022 World Health Assembly Resolution – WHA75.13. *Global strategy on infection prevention and control*. In: Seventy-fifth World Health Assembly, Geneva, 20–28 May 2022. Resolutions and decisions, annex. Geneva: World Health Organization, 2022 <[https://apps.who.int/gb/ebwha/pdf\\_files/WHA75/A75\\_R13-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/WHA75/A75_R13-en.pdf)>.



## WASH AND IPC IN HEALTH CARE FACILITIES

IPC programmes prevent patients, health workers, and visitors to health care facilities from being harmed by avoidable infections, including those caused by antimicrobial-resistant (AMR) pathogens, acquired during the provision of health care services. IPC is also a cornerstone of health system resiliency and preparedness<sup>7</sup>. Without basic WASH services in health care facilities, it is impossible to deliver safe health care services; inadequate water, sanitation, hand hygiene, health care waste management, and environmental cleaning services limit the ability of health care professionals to maintain hygienic environments and provide quality health care to patients. IPC and WASH can and should be described as interdependent and complementary. WASH is one of the eight core components for effective IPC programmes, providing the enabling environment for safety, and it is important that IPC and WASH professionals work together in the design and maintenance of health care facilities, including WASH infrastructure and services.

Inadequate WASH and IPC contribute to health-care-associated infections (HAI), which are a major public health concern globally. In high income countries, 7% of patients in acute-care hospitals will develop one or more HAI during their hospital stays, and the rate is more than twice as high (15%) in low and middle income countries. Up to 30% of patients in intensive care can be affected by HAI, with an incidence that is 2 to 20 times higher in low and middle income countries than in high income countries, in particular among neonates<sup>7</sup>.

Sepsis remains a major cause of mortality globally, causing approximately 20% of all deaths: around 11 million potentially avoidable deaths each year. Approximately one in four hospital-treated sepsis cases are health care-associated, mortality among patients affected by health care-associated sepsis is nearly one in four. And mortality among patients affected with antimicrobial resistant pathogens is at least two to three times higher than among those infected with sensitive pathogens<sup>8</sup>. Sepsis mortality is often related to suboptimal quality of care in health care settings, inadequate WASH and health infrastructure, poor IPC, late diagnosis and inappropriate clinical management. More than half of all cases of health care-associated sepsis are thought to be preventable through basic WASH services and appropriate IPC measures.

While inadequate WASH contributes to the transmission of avoidable infection in health care – and by extension the spread of AMR – evidence suggests that poor WASH in health care facilities also leads to increased prophylactic use of antibiotics before birth, which may

be an important contributor to AMR. Almost one third of the 670 000 neonatal deaths due to sepsis worldwide each year may be attributable to resistant pathogens. In addition, unsafe disposal of wastewater from health care facilities can contribute to the spread of AMR in the environment<sup>9</sup>.

Within WHO's guidelines on the core components of IPC programmes, WASH is firmly positioned as one of the eight core components (Table 3). The guidelines outline the necessary elements in achieving an effective IPC programme to prevent current and future threats, strengthen health service resilience and help combat AMR<sup>10</sup>.

Within core component 8 (CC8), the guidelines recommend that **'patient care activities should be undertaken in a clean and hygienic environment that facilitates practices related to the prevention and control of HAI, as well as AMR, including all elements around WASH infrastructure and services and the availability of appropriate IPC materials and equipment.'** WHO has also defined minimum requirements for the core components, which all countries and health care facilities should have in place at the primary, secondary and tertiary care levels to ensure minimum protection to patients, health workers and visitors<sup>11</sup>.

<sup>9</sup> Report by the WHO Director-General to the 72nd World Health Assembly. Patient safety. Geneva: World Health Organization, 2019 <[https://apps.who.int/ebwha/pdf\\_files/WHA72/A72\\_27-en.pdf](https://apps.who.int/ebwha/pdf_files/WHA72/A72_27-en.pdf)>.

<sup>10</sup> Guidelines on Core Components of Infection Prevention and Control Programmes at the National and Acute Health Care Facility Level. Geneva: World Health Organization, 2016 <<https://www.who.int/publications/i/item/9789241549929>>.

<sup>11</sup> Minimum Requirements for Infection Prevention and Control Programmes. Geneva: World Health Organization, 2019 <<https://www.who.int/publications/i/item/9789241516945>>.

### Core components of IPC programmes

CORE COMPONENT	DESCRIPTION
CC1	Infection prevention and control programmes
CC2	National and facility level infection prevention and control guidelines
CC3	Infection prevention and control education and training
CC4	Health care-associated infection surveillance
CC5	Multimodal strategies for implementing infection prevention and control activities
CC6	Monitoring/audit of IPC practices and feedback and control activities
CC7	Workload, staffing and bed occupancy at the facility level
CC8	Built environment, materials and equipment for IPC at the facility level

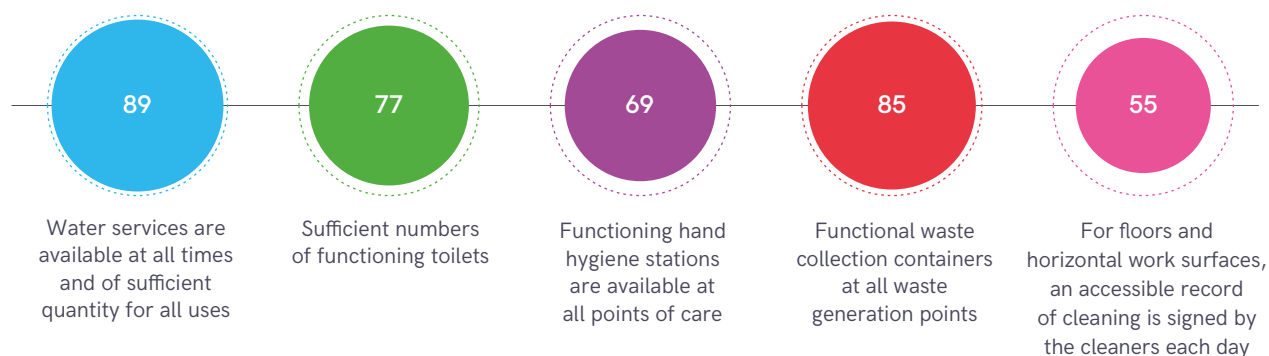
TABLE 3 Core components of infection prevention and control programmes

<sup>7</sup> Global Report on Infection Prevention and Control. Geneva: World Health Organization, 2022 <<https://www.who.int/publications/i/item/9789240051164>>.

<sup>8</sup> Global Report on the Epidemiology and Burden of Sepsis. Geneva: World Health Organization, 2020 <<https://www.who.int/publications/i/item/9789240010789>>.



## Infection prevention and control assessment framework results highlight inadequate WASH



**FIGURE 13** Selected WASH elements from IPCAF survey 2019, weighted medians (%)

The IPC Assessment Framework (IPCAF) has been developed to support and track the implementation of the WHO core components of IPC programmes at the acute health care facility level<sup>12</sup>. The IPCAF is a structured, closed-formatted questionnaire with associated scoring system, which is usually self-administered. It consists of 81 indicators covering the eight core components. Over the course of 2019, WHO supported a global survey among health care facilities using the IPCAF tool.

Following a global call to participate in the survey, a total of 4,440 responses were received from 81 countries (additional data from some countries were excluded due to low numbers of facilities responding per capita in a country)<sup>13</sup>. Since the health care facilities participated voluntarily, the results are not considered nationally representative and were therefore not used for JMP country estimates, except where publicly available reports indicated that the IPCAF assessment was nationally representative. In order to improve global representativeness, recruitment efforts aimed to engage countries in different WHO regions and World Bank income classifications<sup>14</sup>, and scores were weighted on the basis of country, WHO region, income classification, facility care level (primary, secondary and tertiary) and type (private or public). Weighted IPCAF score medians and inter-quartile ranges were produced overall and by WHO region and World Bank income groups.

The IPCAF questionnaire covering core component 8 includes 10 indicators on water, sanitation, hand hygiene, waste management, and environmental cleaning. These comprise 60% of the possible total score for the component, with power supply, ventilation,

patient placement and personal protective equipment (PPE), decontamination and sterilization making up the remainder. Among health care facilities with fully completed surveys, water supply generally had the highest median score, with 89% of facilities reporting that water services were available at all times and of sufficient quantity for all uses. Fewer facilities had functioning hand hygiene stations available – only 69% said that these were available at all points of care. And the biggest challenges were related to environmental cleaning – only 55% of facilities reported having cleaning records for floors and horizontal work surfaces (Figure 13).

The IPCAF survey, and the global WASH indicators presented in this report, highlight the fact that many health care facilities lack even basic WASH services. Outbreaks of viral diseases, such as Ebola in West Africa, Middle East Respiratory Syndrome, and most recently the global pandemic of SARS-CoV-2, have shown how limited or non-existent IPC programmes in health care facilities, combined with inadequate WASH services, can threaten national and global health security.

Achieving universal access to WASH in health care facilities requires political will and strong leadership at both national and facility levels, but is highly cost-effective, and would yield substantial health benefits. While investments would need to increase to reach full coverage of basic WASH services, the financial needs are modest compared to current overall health and WASH spending. A global analysis estimated that universal basic WASH services in health care facilities could be achieved in 46 least developed countries (LDCs) by 2030 for less than US\$10 billion, which represents additional expenditures of less than US\$1 per person per year<sup>15</sup>. Furthermore, several tools are readily available for countries to improve IPC and WASH in health care facilities (Box 1).

<sup>12</sup> *Infection Prevention and Control Assessment Framework at the Facility Level*. Geneva: World Health Organization, 2018 <<https://www.who.int/publications/i/item/WHO-HIS-SDS-2018.9>>.

<sup>13</sup> The first WHO global survey on infection prevention and control in health-care facilities. *Lancet Infectious Diseases*, 2022. <[https://doi.org/10.1016/S1473-3099\(21\)00809-4](https://doi.org/10.1016/S1473-3099(21)00809-4)>.

<sup>14</sup> World Bank Country and Lending Groups, 2022 fiscal year. <<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>>.

<sup>15</sup> Chaitkin, Michael et al. 'Estimating the cost of achieving basic water, sanitation, hygiene, and waste management services in public health-care facilities in the 46 UN designated least-developed countries: A modelling study'. *Lancet Global Health*, 6 April 2022 <[https://doi.org/10.1016/S2214-109X\(22\)00099-7](https://doi.org/10.1016/S2214-109X(22)00099-7)>.

## Tools for improving IPC and WASH in health care facilities

The 2019 WHO/UNICEF JMP global baseline report on WASH in health care facilities was accompanied by a report on eight practical steps (Figure 14) that countries can take to improve WASH in health care facilities<sup>16</sup>.

WHO and UNICEF have supported the development of WASH FIT (the Water and Sanitation for Health Facility Improvement Tool), a risk-based quality improvement tool for improving and managing WASH services in health care facilities, in line with the eight practical steps<sup>17</sup>. Introduced in 2018 and updated in 2022, WASH FIT has been applied in more than 50 countries to date. Modelled after water and sanitation planning approaches, it includes five main steps, starting with an assessment and concluding with regular internal monitoring and improvements.

The package covers the five WASH domains (water, sanitation, hand hygiene, health care waste management, and environmental cleaning), as well as two domains necessary to support WASH (energy and environment, and management and personnel) and two cross-cutting domains (climate resilience, and equity and inclusion). The

assessment tool includes 71 WASH indicators, which include and go beyond the 16 core questions needed for monitoring the global WASH indicators developed by the JMP in 2018<sup>18</sup>. While the JMP core questions are designed to have yes/no or single specific responses – which facilitates data analysis – the WASH FIT questions are more qualitative, with traffic-light style responses (red, yellow or green). The new edition of WASH FIT provides guidance on how to convert from the traffic-light responses to the JMP service ladders.

The WASH FIT questions are designed not only to provide a snapshot of WASH services at the facility level, but to identify and help to prioritize improvements that can be made. Where room for improvements in IPC and WASH is found, health care facilities can draw upon a number of tools to support improvements. WHO has developed a multimodal improvement strategy and a five-step cycle to IPC implementation, which complement the WASH FIT materials and are described in detail in an interim practical manual<sup>19</sup> as well as in the recent 2022 global IPC report<sup>20</sup>.

<sup>16</sup> *Water, Sanitation and Hygiene in Health Care Facilities: Practical steps to achieve universal access to quality care*. Geneva: World Health Organization, 2019 <<https://www.who.int/publications/i/item/9789241515511>>.

<sup>17</sup> *Water and Sanitation for Health Facility Improvement Tool (WASH FIT): A practical guide for improving quality of care through water, sanitation and hygiene in health care facilities*. Second Edition. Geneva: World Health Organization, 2022 <<https://washinwhf.org/wash-fit/>>.

<sup>18</sup> *Core Questions and Indicators for Monitoring WASH in Health Care Facilities in the Sustainable Development Goals*. Geneva: World Health Organization and the United Nations Children's Fund, 2018 <<https://washdata.org/report/jmp-2018-core-questions-monitoring-winwhf>>.

<sup>19</sup> *Interim Practical Manual: Supporting national implementation of the WHO guidelines on core components of infection prevention and control programmes*. Geneva: World Health Organization, 2017 <<https://www.who.int/publications/i/item/WHO-HIS-SDS-2017-8>>.

<sup>20</sup> *Global Report on Infection Prevention and Control*. Geneva: World Health Organization, 2022 <<https://www.who.int/publications/i/item/9789240051164>>.

### Practical steps to improve WASH in health care facilities



**FIGURE 14** Eight practical steps to improve WASH in health care facilities

As part of the follow up to the 2019 World Health Assembly resolution on WASH in health care facilities<sup>21</sup>, WHO Member States are asked to summarize their progress on national actions to improve WASH in health care facilities, following the eight practical steps. WHO and UNICEF have developed resources to support countries in addressing these practical steps, including conducting national situational analyses with WASH FIT and other tools<sup>22</sup>. Countries can report on their progress towards the first seven practical steps using an online form; the data are then used to prepare biennial updates to the World Health Assembly on progress against the resolution. As of May 2022, 63 countries had reported on progress in addressing the practical steps using this country tracker<sup>23</sup>. While the majority of participating countries reported having conducted national situational analyses and established baselines, fewer than one in three reported having integrated WASH into health systems monitoring and programming and even fewer had dedicated and tracked budgets for WASH in health care facilities.

<sup>21</sup> World Health Assembly Resolution WHA72.7. *Water, sanitation and hygiene in health care facilities*. In: Seventy-Second World Health Assembly, Geneva, 20–28 May 2019. Resolutions and decisions, annex. Geneva: World Health Organization, 2019 <[https://apps.who.int/ebwha/pdf\\_files/WHA72/A72\\_R7-en.pdf?](https://apps.who.int/ebwha/pdf_files/WHA72/A72_R7-en.pdf?)>.

<sup>22</sup> *Understanding Barriers to Quality of Care: Conducting a situational analyses for WASH in health care facilities*. Geneva: World Health Organization, 2021 <<https://www.who.int/publications/i/item/9789240022577>>.

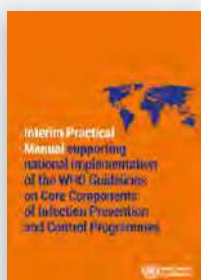
<sup>23</sup> WHO/UNICEF Country Tracker on Water Supply, Sanitation and Hygiene (WASH) [online database]. Geneva: World Health Organization, 2022 <<https://washinhcf.org/country-progress-tracker/>>.



## Selected resources for improving IPC and WASH in health care facilities



Guidelines on core components of infection prevention and control programmes at the national and acute health care facility level



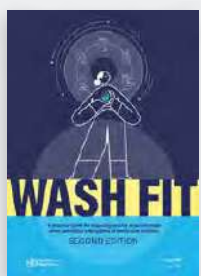
Interim practical manual: supporting national implementation of the WHO guidelines on core components of infection prevention and control programmes



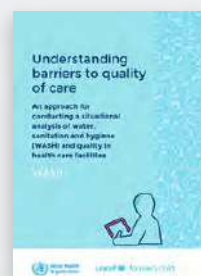
Global report on infection prevention and control



WASH in health care facilities: Practical steps to achieve universal access to quality care



Water and Sanitation for Health Facility Improvement Tool



Understanding barriers to quality of care: An approach for conducting a situational analysis of water, sanitation and hygiene (WASH) and quality in health care facilities

# Hygiene services in health care facilities



## BASIC HYGIENE SERVICES

Numerous studies have confirmed the important role the contaminated hands of health care workers and patients play in pathogen transmission in health care facilities. Interventions to increase hand hygiene compliance are one of the most effective approaches for reducing HAI, and form the cornerstone of IPC programmes. There has been renewed attention to hand hygiene in light of the Ebola epidemic in Africa, the SARS epidemic in Asia, and the subsequent COVID-19 global pandemic. While we now know COVID-19 is not primarily spread through hands and surfaces, many other infectious diseases – including influenza – are. Therefore, hand hygiene is likely to remain a primary barrier to transmission in future pandemics.

To meet the criteria for a basic hygiene service, health care facilities must have functional hand hygiene facilities (with water and soap or alcohol-based rub) available at points of care, and within five metres of the toilet (Figure 15). Health care facilities that have hand hygiene facilities either at points of care or toilets, but not both,

	IPC RECOMMENDATIONS
PRIMARY CARE	Functional hand hygiene facilities should always be available at points of care/toilets and include soap, water and single-use towels (or if unavailable, clean reusable towels) or alcohol-based hand rub (ABHR) at points of care, and soap, water and single-use towels (or if unavailable, clean reusable towels) within five metres of toilets.
SECONDARY AND TERTIARY CARE	Functional hand hygiene facilities should always be available at points of care, toilets and service areas (e.g. the decontamination unit), which include alcohol-based hand rub and soap, water and single-use towels (or if unavailable, clean reusable towels) at points of care and service areas, and soap, water and single-use towels (or if unavailable, clean reusable towels) within five metres of toilets.

Source: Minimum requirements for infection prevention and control programmes, WHO, 2019





are classed as having a limited service, and those with no facilities at all are classed as having no service. While the basic service indicators are universally relevant, they do not capture all aspects of WASH services that are important for health care, and IPC guidelines cover many other aspects of hygiene, such as handwashing promotion and assessments of compliance.

A **point of care** is defined as the place where three elements come together: the patient, the health care worker, and care or treatment involving contact with the patient or their surroundings (within the patient zone). The concept embraces the need to perform hand hygiene at recommended moments exactly where care delivery takes place. This requires that hand hygiene materials (for example, alcohol-based hand rub, or water and soap) be easily accessible and as close as possible – within arm's reach of where patient care or treatment is taking place. Point of care products should be accessible without having to leave the patient zone.

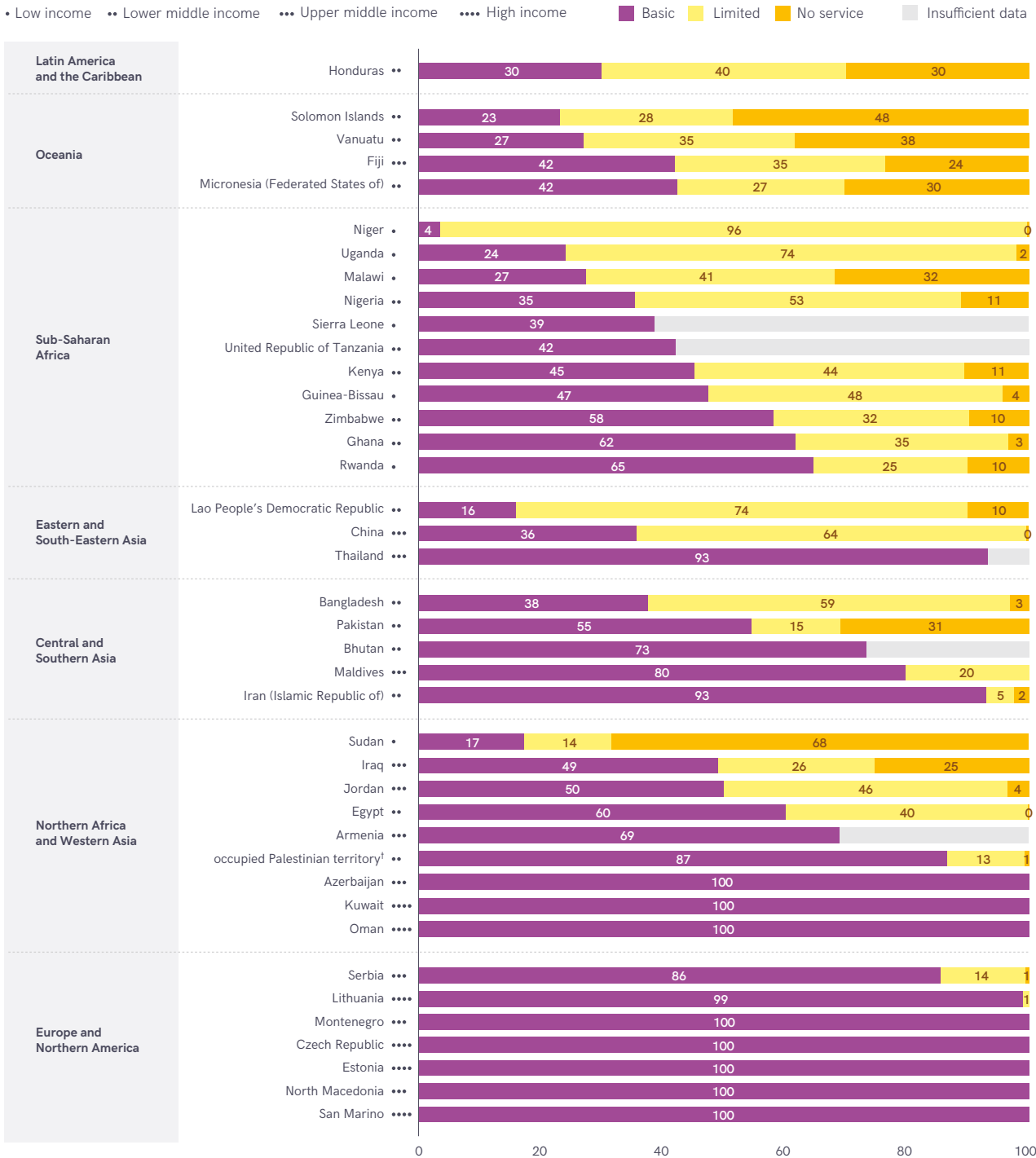
HYGIENE
<b>BASIC SERVICE</b> Functional hand hygiene facilities (with water and soap and/or alcohol-based hand rub) are available at points of care, and within five metres of toilets
<b>LIMITED SERVICE</b> Functional hand hygiene facilities are available either at points of care or toilets but not both
<b>NO SERVICE</b> No functional hand hygiene facilities are available either at points of care or toilets

**FIGURE 15** Hygiene service ladder for health care facilities

By 2021, estimates for basic hygiene services were available for 40 countries and three out of eight SDG regions, representing 35% of the global population. On this basis, it is estimated that globally just over half (51%) of health care facilities had a basic hygiene service. This means that 3.85 billion people lacked basic hand hygiene facilities at points of care at their health care facility,

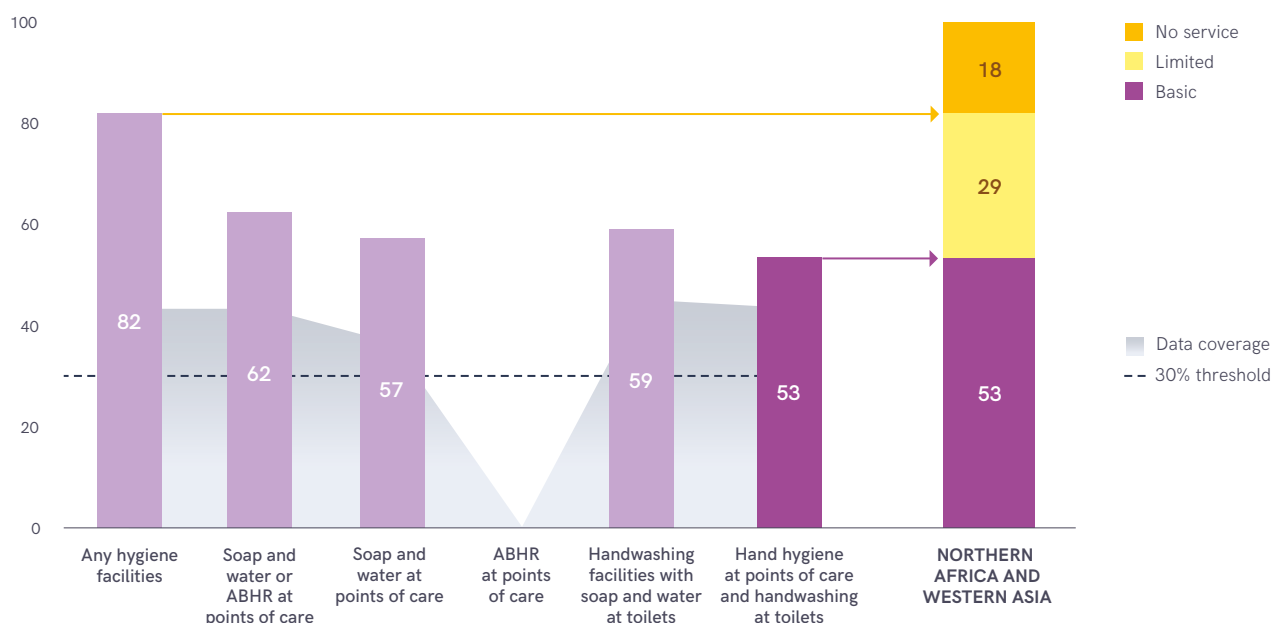
including 3.16 billion whose health care facility had functional hand hygiene facilities available at points of care or toilets but not both, and therefore counted as a limited service, and 688 million whose health care facility had no hygiene service – no functional hand hygiene facilities available either at points of care or toilets.

### Hygiene service levels varied widely between countries and regions in 2021



**FIGURE 16** National coverage of hygiene services in health care facilities, by country, SDG region and income group, 2021 (%)

## Constructing the hygiene service ladder in Northern Africa and Western Asia



**FIGURE 17** Proportion of health care facilities by type of hygiene service and data coverage in Northern Africa and Western Asia, 2021 (%)

Among the three SDG regions with sufficient data available to calculate regional estimates, coverage ranged from 53% in Northern Africa and Western Asia to just 38% in sub-Saharan Africa and in Eastern and South-Eastern Asia, while in LDCs only one in three health care facilities (32%) had basic hygiene services in 2021.

While there was at least one country with national estimates available in each SDG region, service levels varied widely (Figure 16). Among 40 countries with available data, national coverage of basic hygiene services was at least 50% in just over half the countries (22) but only one third (14) had reached 75% coverage, and in one fifth of countries (8) coverage remained below 33% in 2021.

In Europe and Northern America, Serbia (86%) was the only country with data available that had not yet achieved universal access (>99%). In Northern Africa and Western Asia, coverage ranged from universal access in Azerbaijan, Kuwait and Oman to just 17% in Sudan while in Eastern and South-Eastern Asia coverage ranged from 93% in Thailand to just 16% in the Lao People's Democratic Republic. In sub-Saharan Africa, Rwanda, Ghana and Zimbabwe were the only countries with >50% coverage but none of the countries in Oceania met this threshold in 2021. In eight countries, more than one in four health care facilities had no hygiene service at all, including Sudan where two out of three health care facilities had no facilities at either points of care or toilets.

Figure 17 shows how the JMP estimates different levels of hygiene service in health care facilities, using the example of Northern Africa and Western Asia. The JMP only produces regional estimates when data for the relevant domain are available for at least 30% of the regional population. Data coverage is shown in grey behind the bars showing the proportion of health care facilities with hand hygiene facilities and materials in place. In 2021, 82% of health care facilities in Northern Africa and Western Asia had any hygiene facility and the remaining 18% were therefore classified as having no service (data on any facility were available for 44% of the population). But to establish whether hand hygiene facilities meet the criteria for a basic service additional information is needed. In 2021, 62% of health care facilities had hygiene facilities with water and soap or alcohol-based hand rub at points of care (and 59% had facilities with water and soap at toilets (data on water and soap at points of care and at toilets were available for 37% and 35% of the population, but there no data about alcohol-based hand rub at points of care) and 59% had facilities with water and soap at toilets. These data are then combined to estimate the proportion with both hand hygiene at points of care and handwashing at toilets, therefore meeting the criteria for a basic service (53%). The remaining 29% that have facilities available either at points of care or at toilets, but not both, are classed as having a limited service.

A basic hygiene service implies having both hand hygiene facilities at points of care and handwashing facilities at toilets, and disaggregated data show that the limiting factor varies across countries (Figure 18). In the majority of countries with data, access to hand hygiene facilities is higher at points of care than at toilets, but there are important exceptions. For example, in China two thirds of health care facilities (67%) had handwashing facilities with water and soap at toilets, but just one third (36%) had hand hygiene facilities at points of care. By contrast, in Uganda three quarters of health care facilities (74%) had hand hygiene facilities at points of care, but only a quarter (24%) had handwashing facilities at toilets.

Disaggregation by type of facility can also highlight disparities in basic hygiene coverage between government and non-government health care facilities (Figure 19). While there is little difference in Iran and the occupied Palestinian territories, in Vanuatu only one fifth (20%) of government facilities have a basic hygiene service, compared with two thirds (67%) of non-government health care facilities. In Bangladesh, Sudan and the United Republic of Tanzania, basic hygiene coverage was over 30 percentage points higher in non-government health care facilities.

Hand hygiene coverage at points of care and at toilets varies widely between countries

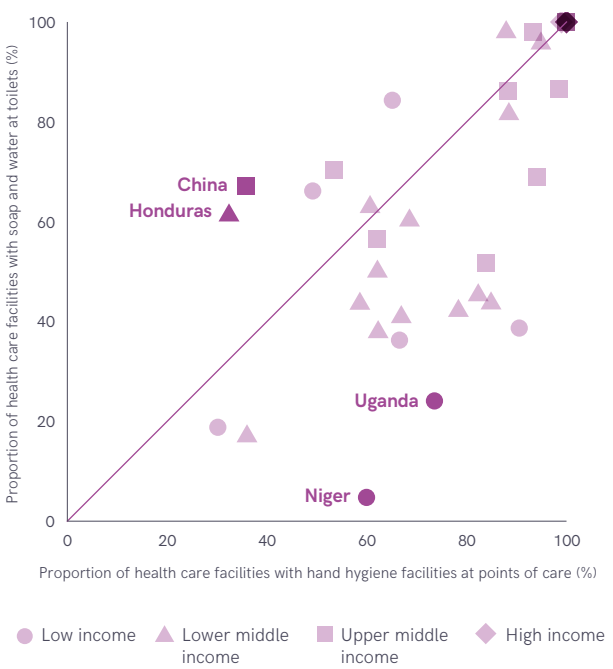


FIGURE 18 Proportion of health care facilities with hand hygiene facilities at points of care and at toilets, by income group in 2021 (%)

Basic hygiene coverage is often higher in non-government health care facilities



FIGURE 19 Basic hygiene services by government or non-government management, 2021 (%)

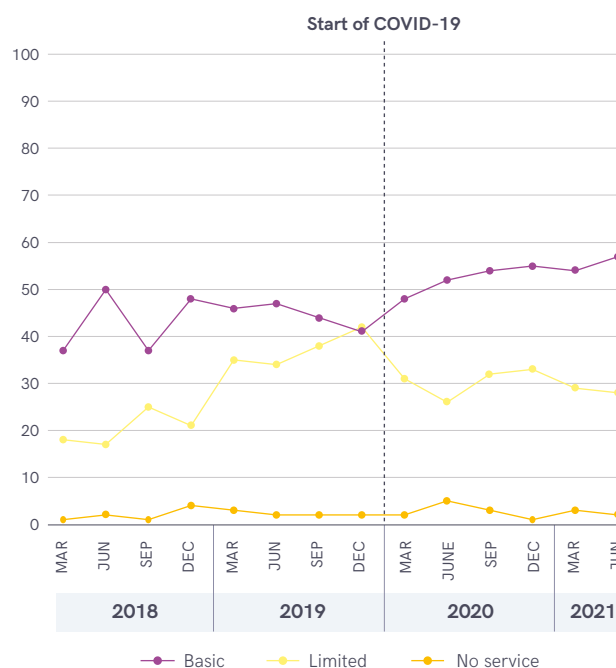


Ghana is one of the few countries with sufficient time series data to enable analysis of trends in hygiene services before and during the COVID-19 pandemic. Quarterly data from the District Health Management Information System show that between March 2018 and December 2019 there was a steady increase in the proportion of health care facilities with a limited service while coverage of basic services showed little change. Since the start of the COVID-19 pandemic there has been a marked acceleration, with coverage of basic services rising from 41% in December 2019 to 57% by June 2021. But over the same period, the proportion of health care facilities with no hygiene service remained largely unchanged at 2% (Figure 20).

### OTHER ELEMENTS OF HYGIENE SERVICES

While the global indicator for basic hygiene services is universally relevant, it does not address other aspects of hygiene that are important for preventing and controlling infections and for providing high quality healthcare. It is therefore important to progressively incorporate other aspects of hygiene into national monitoring systems, especially in countries where most health care facilities have already met the basic service level.

### Basic hygiene services in Ghana improved markedly in response to the COVID-19 pandemic



**FIGURE 20** Hygiene service levels in health care facilities, Ghana District Health Information Management Systems (DHIMS) 2018–2021 (%)



In Ireland, hand hygiene compliance in hospitals increased from 75% to 93% between 2011 and 2021

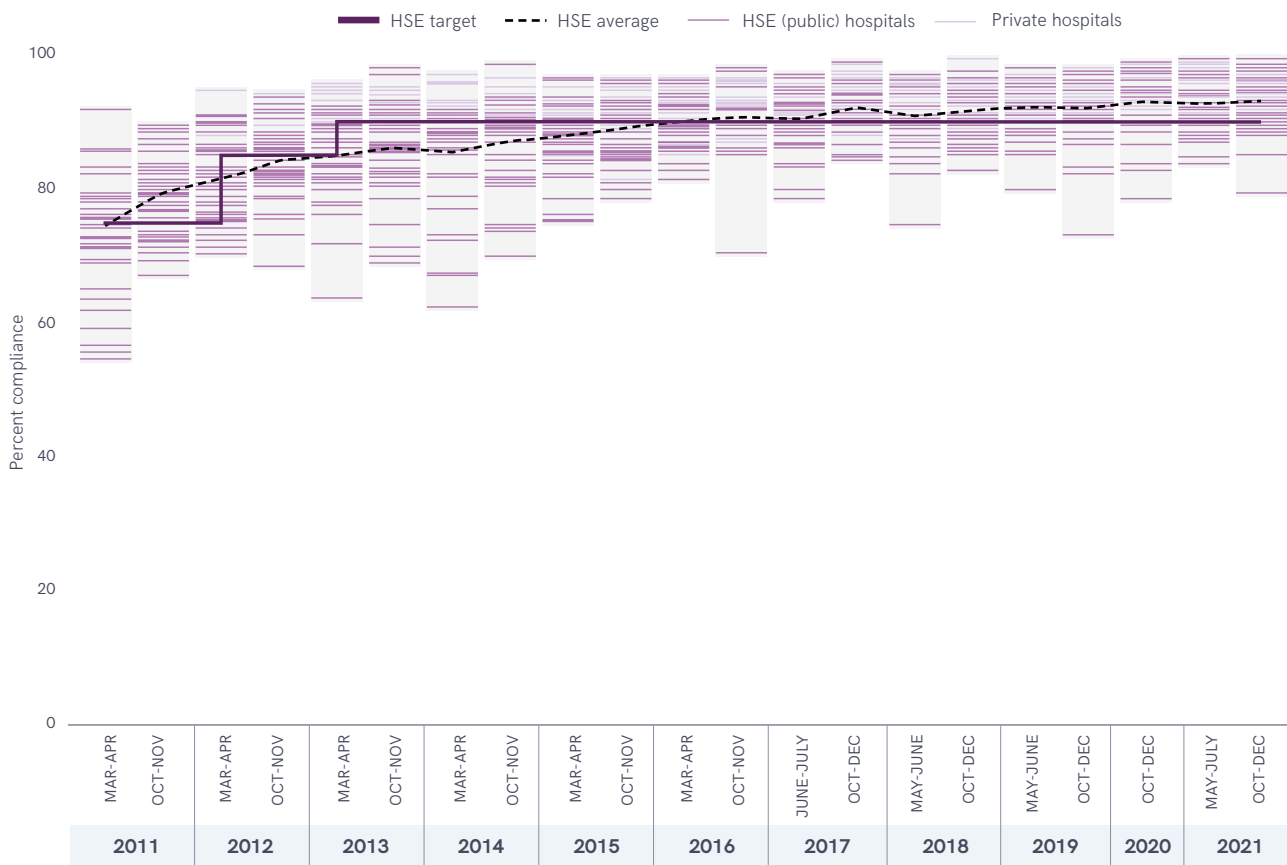


FIGURE 21 Hand hygiene compliance by hospital type in Ireland, 2011–2021 (%)

For example, Ireland requires health care facilities to monitor whether health care workers are complying with basic hand hygiene protocols and has established national targets for compliance. The Irish Health Protection Surveillance Centre<sup>24</sup> of the Health Service Executive (HSE) reported that there has been a steady increase in average levels of compliance (Figure 21), from 75% in 2011 to 93% in 2021, following progressive increases in the national target. While compliance varies between individual facilities, it tends to be higher in private hospitals than in public hospitals.

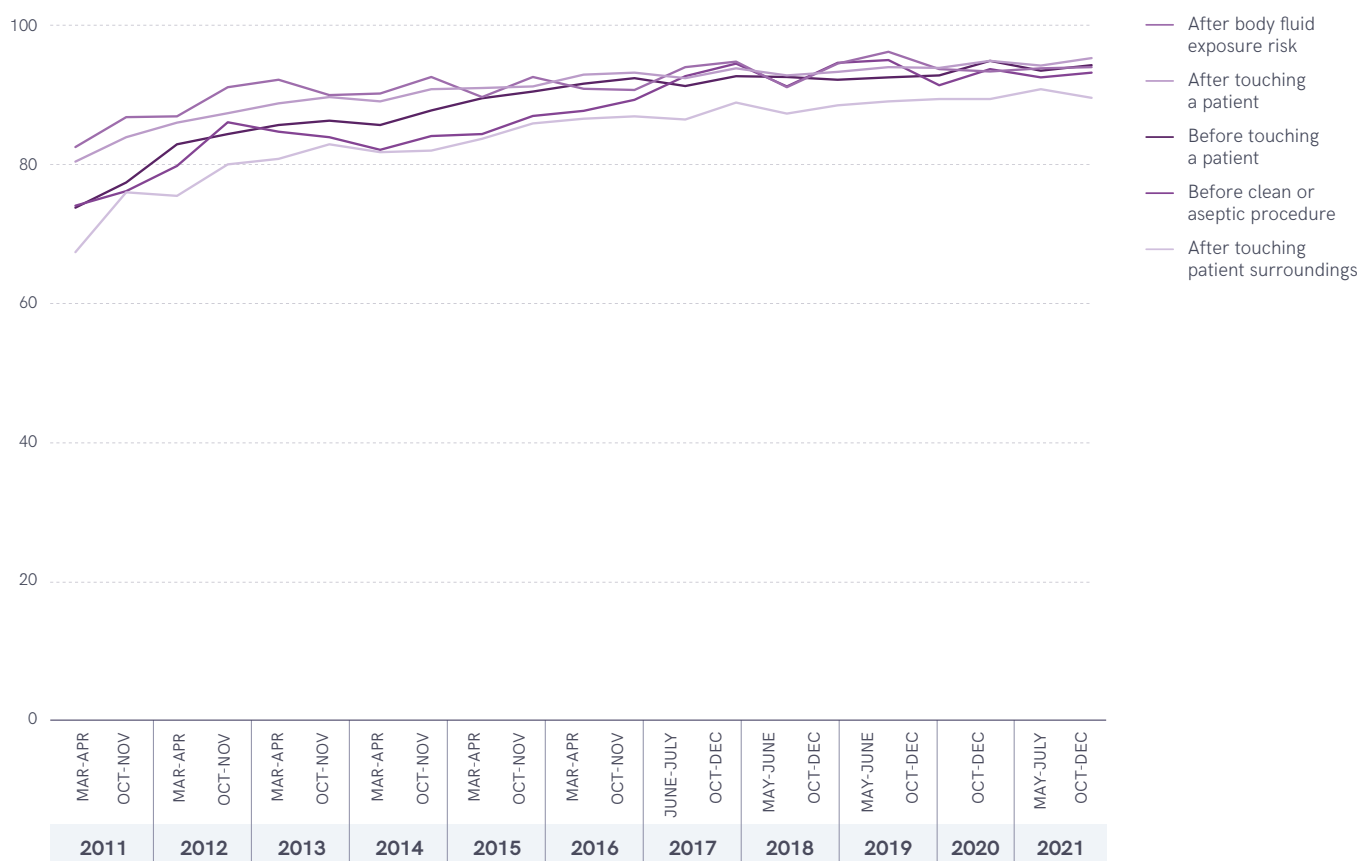
By further disaggregating these data, it is possible to analyse trends in specific hand hygiene behaviours at ‘five key moments’ defined by WHO. Over the last 10 years there has been a steady improvement in compliance at all five key moments in acute public hospitals (Figure 22). In 2011, compliance was higher after body fluid exposure (83%) and after touching a patient (80%), than before clean or aseptic procedures (74%) and before touching a patient (74%), and lowest after touching patient surroundings (67%). By 2021, 9 out of 10 health care workers in Ireland were reportedly

practising hand hygiene at all five key moments, and compliance after touching patient surroundings had increased by over 20 percentage points.

Promoting hand hygiene has been shown to positively influence compliance among health care workers and several countries collect information on the availability of promotional materials in health care facilities. Figure 23 shows that among countries with recent survey data available there are sometimes significant differences between settings. In Kenya, Iraq and Jordan promotional materials were more frequently available in hospitals than in non-hospitals, while the reverse was true in the Federated States of Micronesia. In both Kenya and in Jordan the gap in availability of promotional materials exceeded 25 percentage points. Promotional materials were more widely available in urban facilities than in rural facilities in all countries with disaggregated data available, except for Oman which had universal coverage in all settings. The 2021 census in Iraq found that while nearly half (50%) of health care facilities had promotional materials available, coverage was significantly higher in urban areas (58%) than rural areas (38%).

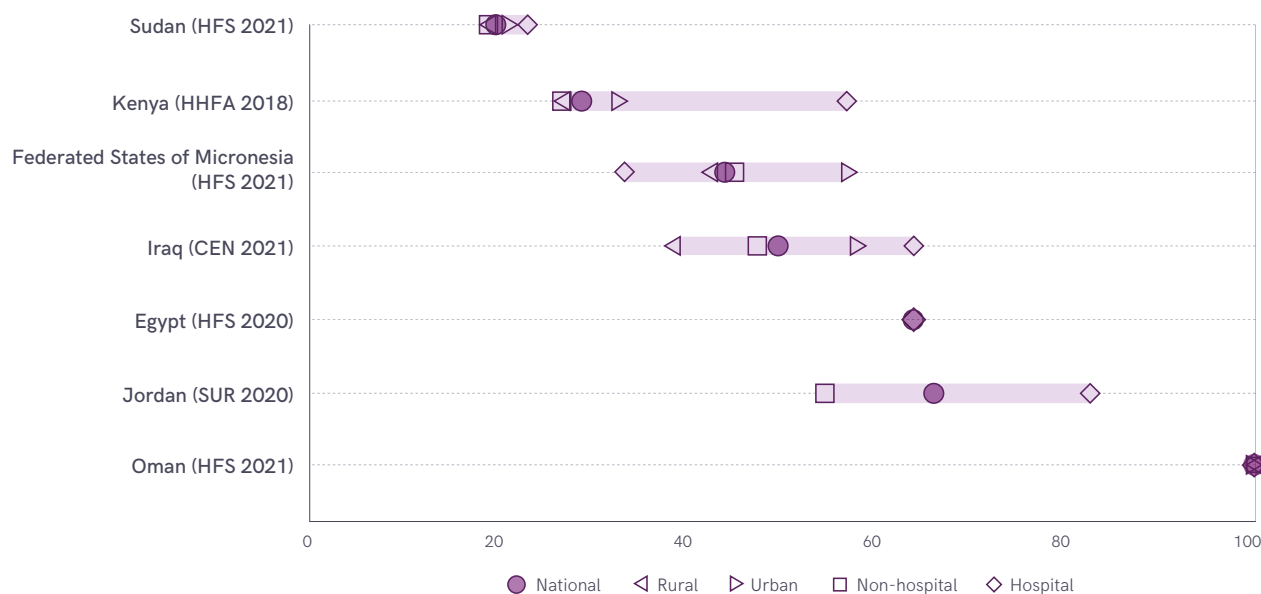
<sup>24</sup> The Health Protection Surveillance Centre (HPSC) has operational responsibility for the running of health services in Ireland. <<https://www.hpsc.ie/>>.

By 2021, 9 out of 10 health care workers in Ireland practised hand hygiene at each of the WHO five key moments



**FIGURE 22** Hand hygiene compliance by WHO five key moments in acute public hospitals in Ireland, 2011–2021 (%)

Availability of hand hygiene promotional materials varies by country and type of health care facility



**FIGURE 23** Availability of hand hygiene promotional materials in different settings, selected surveys<sup>25</sup> 2019–2021 (%)

<sup>25</sup> This figure refers to data from individual surveys, not to estimates resulting from multiple data sources. In this report, when figures refer to individual surveys, these are identified with a short name and the survey year. For more details about individual surveys please refer to the relevant JMP country files for WASH in health care facilities: <https://washdata.org/data/downloads>.

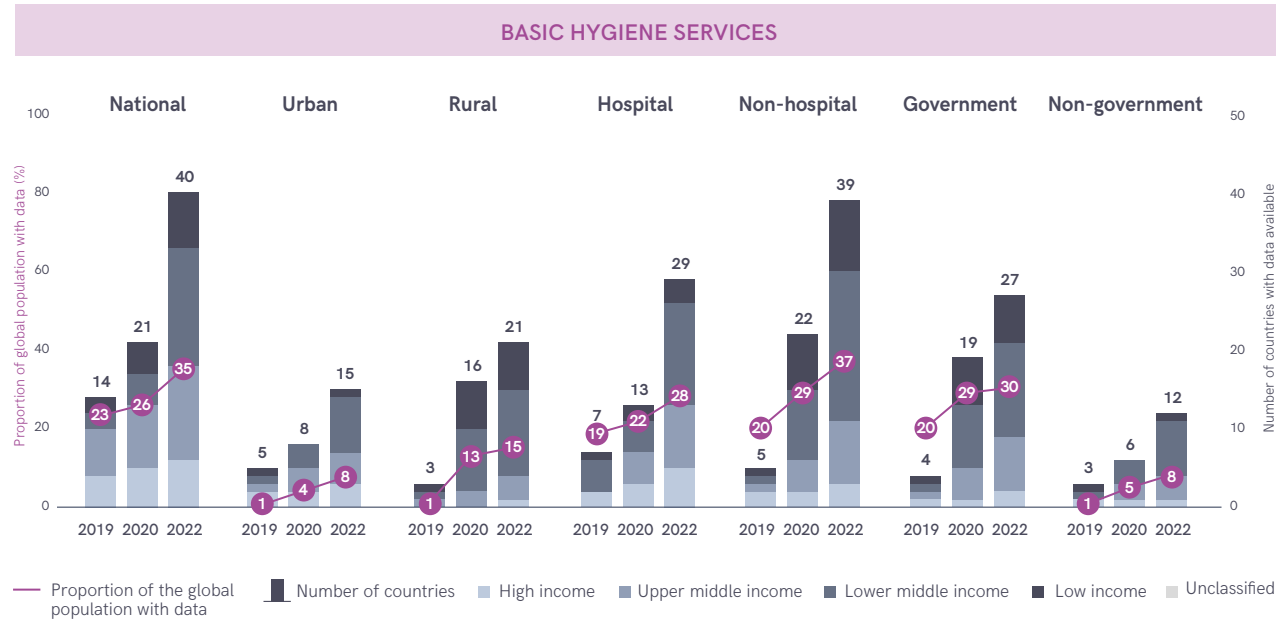


DATA COVERAGE

Since the 2019 JMP global baseline report, there has been a significant increase in the availability of national data for monitoring the global indicator for basic hygiene services in health care facilities. The number of countries with national estimates available has increased from 14 to 40 and the proportion of the population for which estimates are available has increased from 23% to 35%, exceeding the 30% threshold required to make a global estimate (Figure 24). While there has been a four-fold increase in

the number of countries with estimates for hospitals, and an eight-fold increase in the number with estimates for non-hospitals, data coverage for the former remains below the threshold. Data coverage is now sufficient to make a global estimate for government facilities (30%) and for non-hospitals (37%), but remains far lower for non-government health care facilities (8%) and for disaggregation into urban (8%) and rural (15%) areas.

Data coverage on basic hygiene services has grown rapidly, permitting global estimates for the first time



**FIGURE 24** Proportion of population (%) and number of countries with data on basic hygiene services in JMP progress updates 2019–2022, nationally and by type of facility (%)

Note: income categories using the World Bank’s classification for fiscal year 2022 <<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>>





# Environmental cleaning in health care facilities



## BASIC ENVIRONMENTAL CLEANING SERVICES

Microbial contamination of surfaces in health care facilities can lead to transmission of HAI, as well as contribute to the development of antimicrobial resistance (AMR). Robust systems for routine environmental cleaning are therefore essential to reduce the risk of HAI for patients, visitors and staff in health care facilities. This requires that staff with responsibility for cleaning floors and work surfaces should be identified, trained, provided with the necessary materials, and supervised as part of a broader approach to IPC within the health care facility. Effective cleaning of environmental surfaces (e.g. bed rails, call buttons, floors, work surfaces) is a fundamental intervention for IPC and has been shown to significantly reduce the transmission of HAI.

The service ladder used for global monitoring reflects this focus on processes and procedures. The **basic environmental cleaning** service level requires that

	IPC RECOMMENDATIONS
PRIMARY CARE	Sufficient and appropriate IPC supplies and equipment (e.g. mops, detergent, disinfectant, PPE and sterilization) and power/energy (e.g. fuel) should be available for performing all basic IPC measures according to minimum requirements/standard operating procedures (SOPs), including all standard precautions, as applicable.
SECONDARY AND TERTIARY CARE	Sufficient and appropriate supplies and equipment and reliable power/energy should be available for performing all IPC practices, including standard and transmission-based precautions, according to minimum requirements/SOPs.

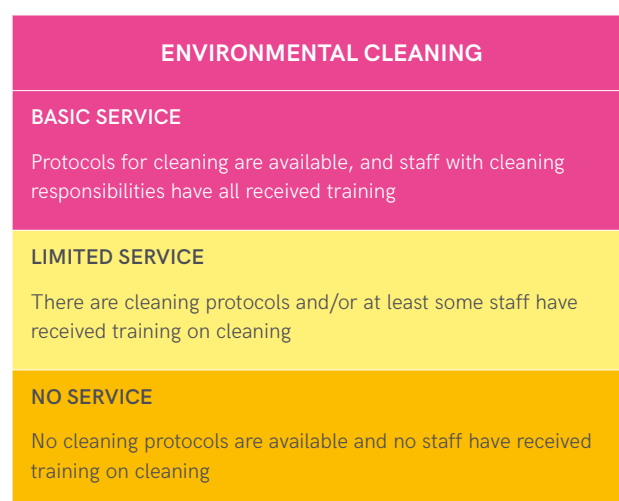
Source: Minimum requirements for infection prevention and control programmes, WHO, 2019



cleaning protocols are in place and that all staff with cleaning responsibilities have received training. Health care facilities are classed as having a limited service if there are cleaning protocols and at least some staff have received training, and no service if there are no protocols and no staff have been trained (Figure 25). While the basic service indicator is suitable for the purposes of global monitoring it does not address all the minimum requirements for national IPC programmes, including availability of sufficient and appropriate supplies and equipment and power/energy required for cleaning.

In 2021, 21 countries had sufficient data to estimate coverage of basic environmental cleaning services. While this is a marked increase from the 4 countries that had data on basic services for the global baseline report in 2019, the countries with national data still represent only 7% of the global population, and it is not yet possible to produce global or regional estimates. However, it can be estimated that 72% of hospitals in Central and Southern Asia had basic services in 2021. By contrast, in rural sub-Saharan Africa only 26% of health care facilities

had basic services, less than half (45%) had cleaning protocols, and only one third (32%) had staff trained on environmental cleaning.



**FIGURE 25** Environmental cleaning service ladder for health care facilities



Service levels varied widely among the 21 countries with national estimates available for environmental cleaning in 2021 (Figure 26). While 3 countries had already achieved universal access (>99%) to basic services, in 14 countries coverage was below 50%, including in 8 countries where less than 25% of health care facilities had basic environmental cleaning services. None of the countries in sub-Saharan Africa and Oceania had reached 50% coverage by 2021 and Northern Africa and Western Asia had the biggest disparities between countries, ranging from universal access in Kuwait to just 1% in Sudan.

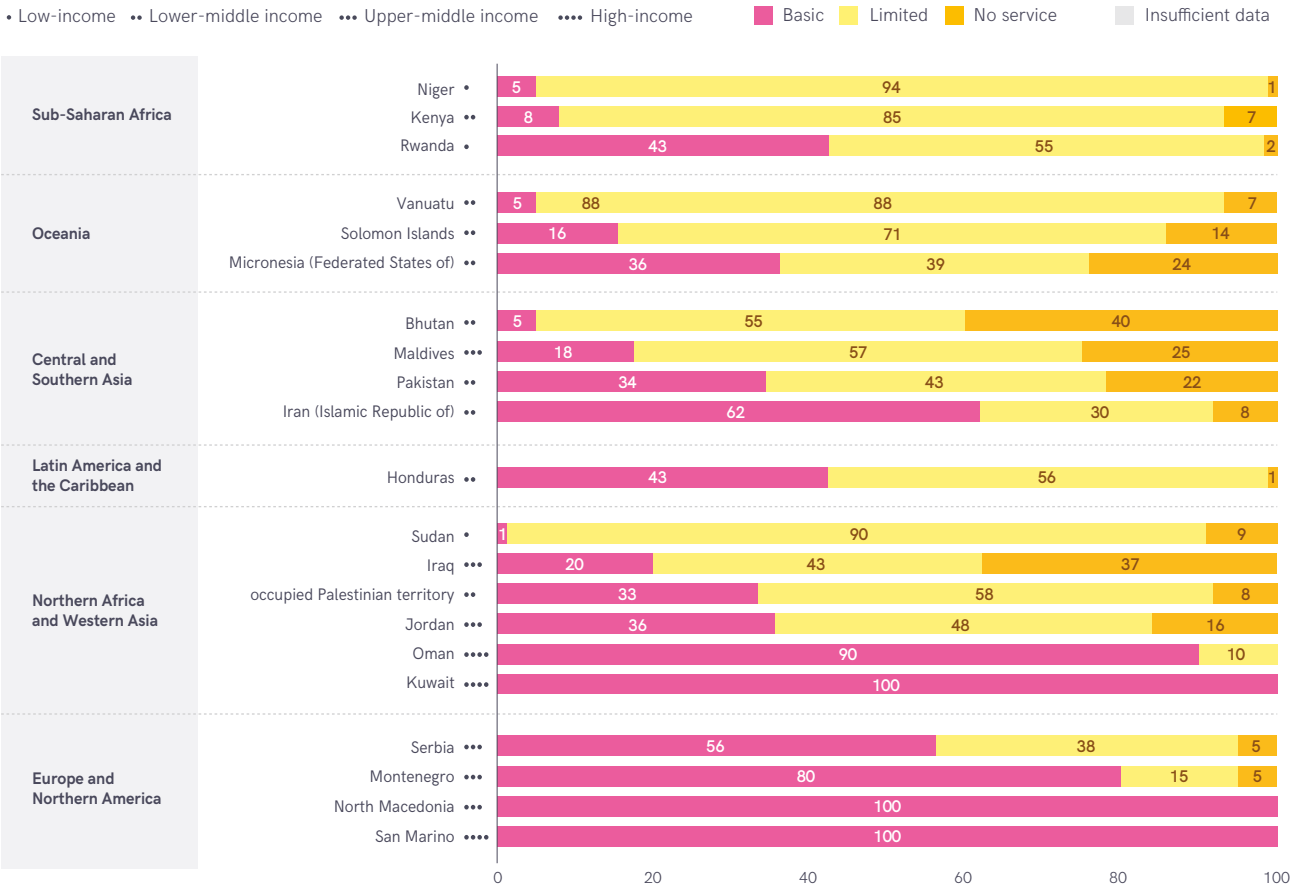
In ten countries, over half of health care facilities had cleaning protocols but not all staff had been trained on environmental cleaning, and were therefore classed as having a limited service. And in Bhutan, Iraq, and the Maldives, over a quarter of health care facilities had neither protocols nor trained staff and were classed as having no service at all.

In order to calculate environmental cleaning service ladders at the regional or global level, data must be available for countries representing at least 30% of

the regional or global population. None of the SDG regions have yet met this data coverage level, but 10 of the 57 countries categorized as 'fragile contexts'<sup>26</sup>, representing 36% of the total population living in fragile contexts, do have national data on training in environmental cleaning (Figure 27, data coverage shown in grey). In 2021, 62% of health care facilities reported having any cleaning element, meaning that the remaining 38% had none. Among those with any cleaning, 48% reported having cleaning protocols (or Standard Operating Procedures, SOPs) but only 34% reported that all staff responsible for cleaning had been trained, and the proportion meeting both criteria for a basic cleaning service was just 31%. However, only 9 of these countries have data on the availability of protocols or SOPs. These countries represent only 27% of the total population living in fragile contexts, so regional estimates for the service levels can't be made. Training was the only cleaning element for which data coverage (36%) was sufficient to make a regional estimate for fragile contexts in 2021.

<sup>26</sup> As of May 2021, the OECD States of Fragility series identifies 57 fragile contexts, including 13 that are classified as extremely fragile. Source: <https://www.oecd.org/dac/states-of-fragility-fa5a6770-en.htm>.

## Environmental cleaning services varied widely between countries and regions in 2021



**FIGURE 26** Environmental cleaning services in health care facilities, by country, SDG region and income group, 2021 (%)



## Constructing the environmental cleaning service ladder in fragile contexts



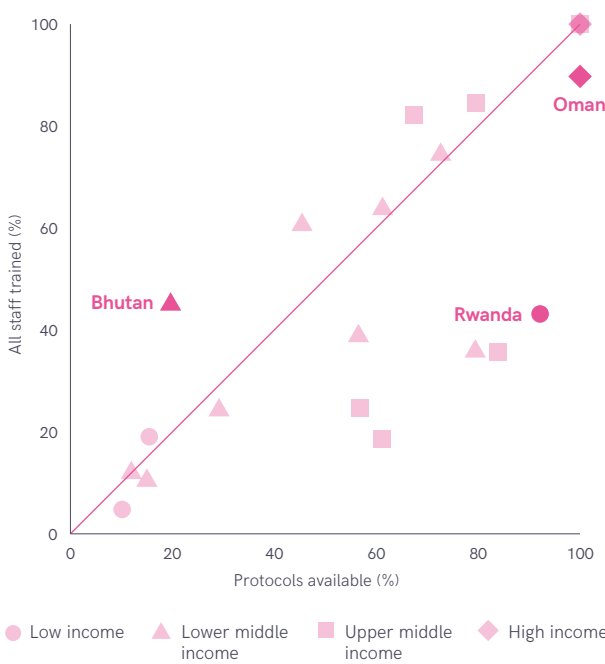
**FIGURE 27** Proportion of health care facilities by type of environmental cleaning service and data coverage in fragile contexts, 2021 (%)



In countries that have disaggregated data available on both the availability of cleaning protocols and the extent to which responsible staff have been trained, it is possible to analyse the limiting factors for environmental cleaning in different types of health care facilities (Figure 28). In some countries, protocols are widely available but staff are not all trained; in Rwanda there was nearly a 50 percentage point gap between the proportion of facilities with protocols (92%) and with all staff trained (43%). However, in Bhutan all staff were trained in 45% of health care facilities, but only 20% of facilities had protocols available.

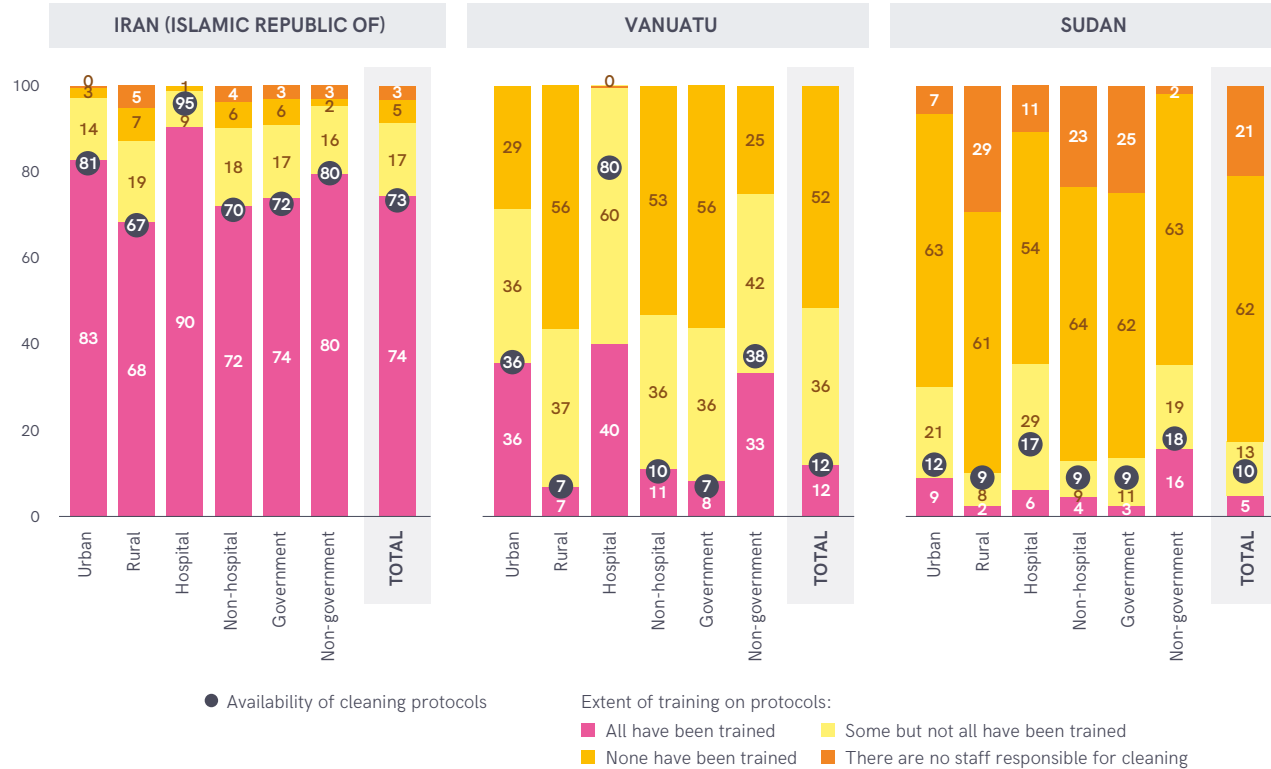
Figure 29 shows comparable data from three countries with data on both protocols and training, which can be disaggregated by type of facility. In all three countries there were a number of hospitals with protocols in place but where all staff had not been trained, with the gap ranging from 5 percentage points in the Islamic Republic of Iran to 40 percentage points in Vanuatu. In Sudan, 1 in 5 health care facilities (21%) had no staff responsible for environmental cleaning, only 1 in 20 (5%) met the basic service level, and in 3 out of 5 facilities (62%) none of the staff had been trained. Non-government facilities were twice as likely to have protocols than government facilities (18% versus 9%), and five times as likely to have trained all staff (16% versus 3%). In many countries, there were also significant disparities in basic

Either availability of protocols or training of all staff can be the limiting factor for basic services



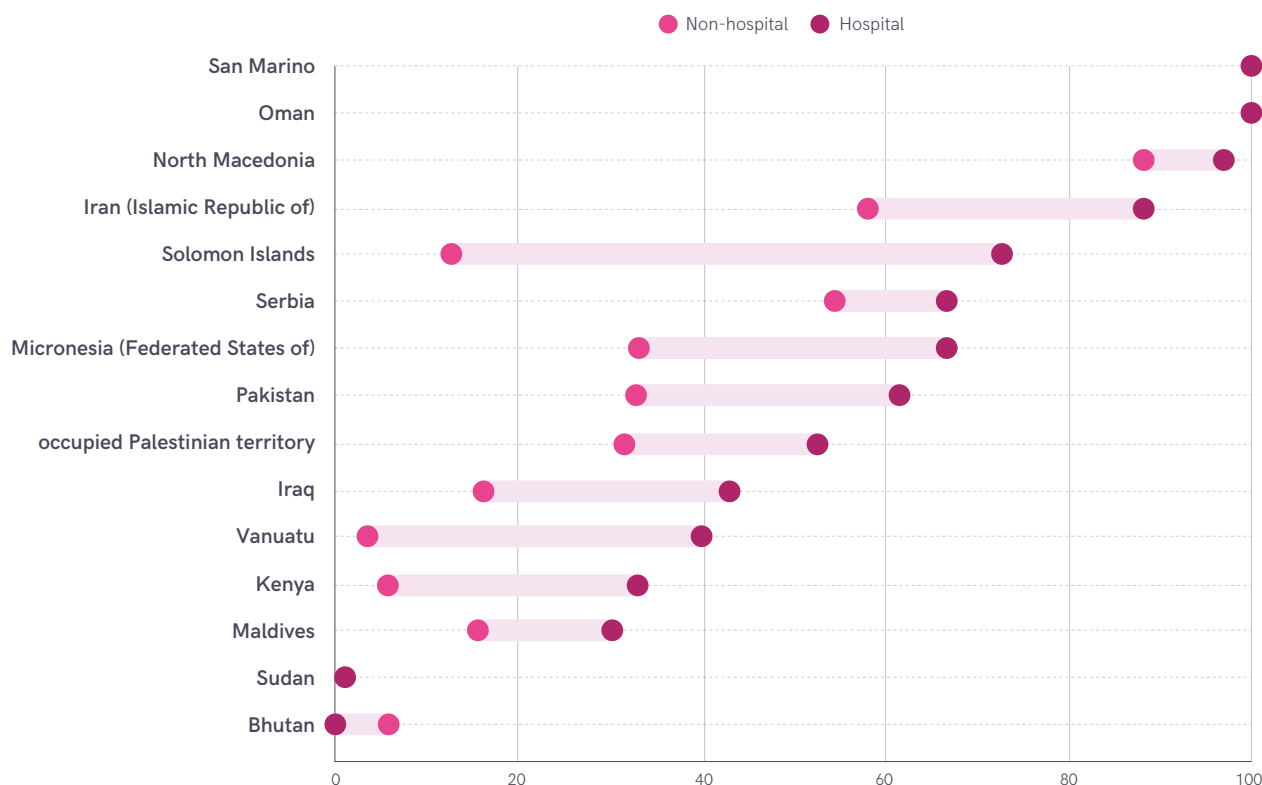
**FIGURE 28** Proportion of health care facilities with cleaning protocols available, and with all staff with cleaning responsibilities trained, by income group, 2021 (%)

In some health care facilities cleaning protocols are in place but not all staff have been trained



**FIGURE 29** Proportion of health care facilities with cleaning protocols available, and extent of staff training on protocols, by type of facility in the Islamic Republic of Iran, Vanuatu and Sudan, 2021 (%)

## Environmental cleaning services in hospitals are often significantly better than in smaller facilities



**FIGURE 30** Basic environmental cleaning services by type of health care facility, 2021 (%)



environmental cleaning coverage between hospitals and non-hospitals in 2021 (Figure 30). Coverage was equally high in San Marino and Oman and equally low in Sudan, but coverage was higher in non-hospitals in all other countries, except for Bhutan. Solomon Islands had a 60 percentage point gap in coverage between non-hospitals (73%) and hospitals (13%), and the gap exceeded 25 percentage points in the Islamic Republic of Iran, the Federated States of Micronesia, Pakistan, Iraq, Vanuatu and Kenya. Bhutan is an exception to this rule: a 2019 census of health care facilities found that none of the 26 hospitals, but 6% of the 208 smaller facilities (Basic Health Units) had basic environmental cleaning services.

### OTHER ELEMENTS OF ENVIRONMENTAL CLEANING SERVICES

The basic service indicator only includes information about the availability of protocols and training of staff. But trained staff may be unable to follow protocols if appropriate cleaning materials are not available, or if they are not motivated and encouraged to follow regular cleaning routines. And even when cleaning is actually done, it may not be done effectively. Many governments have set their own standards for environmental cleaning in health care facilities that go beyond the basic service level. For example, the 2019 IPCAF survey asked

health care facilities to report on whether they had appropriate and well-maintained materials available for cleaning (Figure 31). Self-reported data from 4,400 health care facilities showed relatively little variation by type of facility (primary, secondary or tertiary), but a strong gradient by income group; 84% of facilities in high income countries reported having access to the necessary cleaning materials, nearly double the coverage in low income countries (43%).

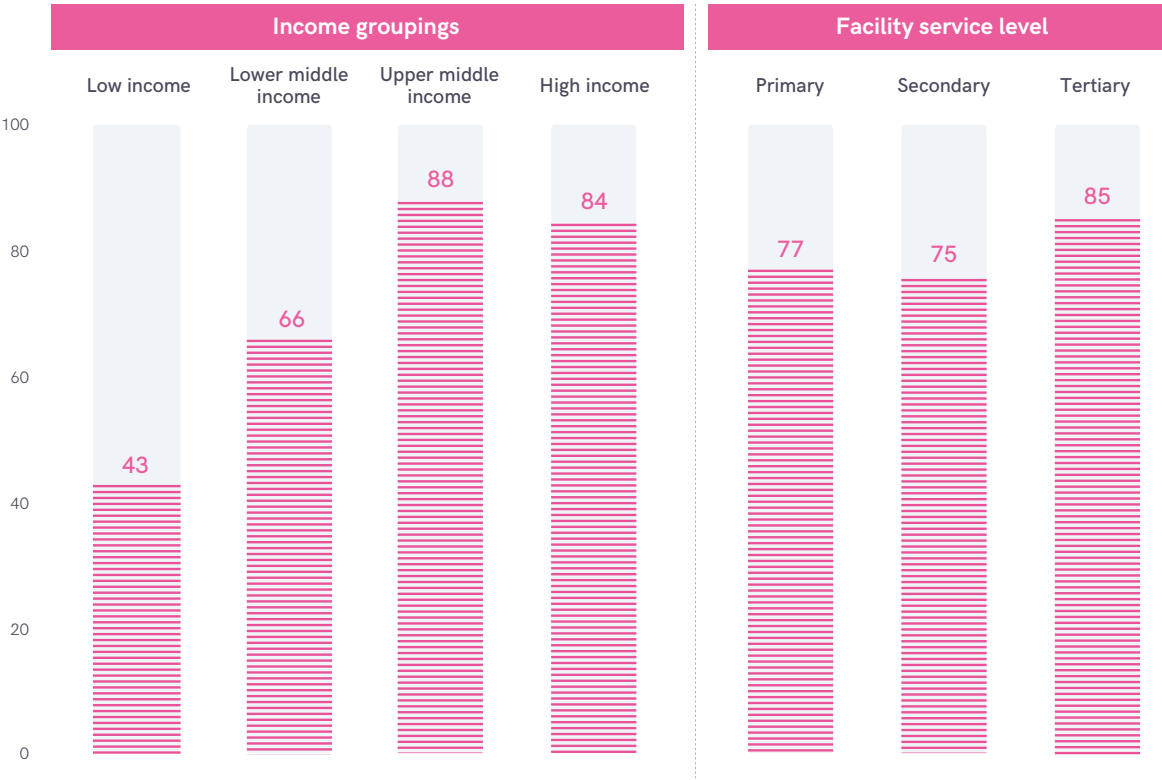
A number of countries have attempted to measure the visible cleanliness of health care facilities. The Service Provision Assessments (SPA) <sup>27</sup>, for example, end their facility surveys by recording the general cleanliness and conditions of the facility, including if the floors are swept, with no obvious dirt and waste present, and if counters, tables and chairs are wiped clean, with no obvious dust and waste. Among 13 surveys with similar indicators, visible cleanliness ranged from 48% in the Federated States of Micronesia to universal (>99%) in Oman and the Islamic Republic of Iran (Figure 32). The 2014 SPA in Malawi revealed modest differences in visible

cleanliness between urban and rural areas, and between hospitals and non-hospitals. Differences were greater between government and non-government facilities (71% and 95%, respectively) and greatest by sub-national area – four districts had universal coverage (>99%) but only 41% of health care facilities in Nsanje District were considered visibly clean.

In the Kenya Harmonized Health Facility Assessment of 2018, a number of questions were asked about different types of cleaning protocols, as well as the extent of staff training. This large survey could be disaggregated by multiple stratifiers, with hospitals and facilities in urban areas generally having the highest services, and rural and government facilities having the lowest (Figure 33). Among the different indicators included in the survey, health care facilities most commonly had protocols for cleaning floors, followed by cleaning counters and tables (both at 78% nationally). About two thirds of facilities had cleaning rosters and step-by-step techniques for specific tasks, but only 42% of facilities had trained all staff responsible for cleaning.

<sup>27</sup> The Service Provision Assessment (SPA) is a health facility survey implemented through the Demographic Health Survey programme and supported by the US Agency for International Development: <<https://dhsprogram.com/methodology/Survey-Types/SPA.cfm>>.

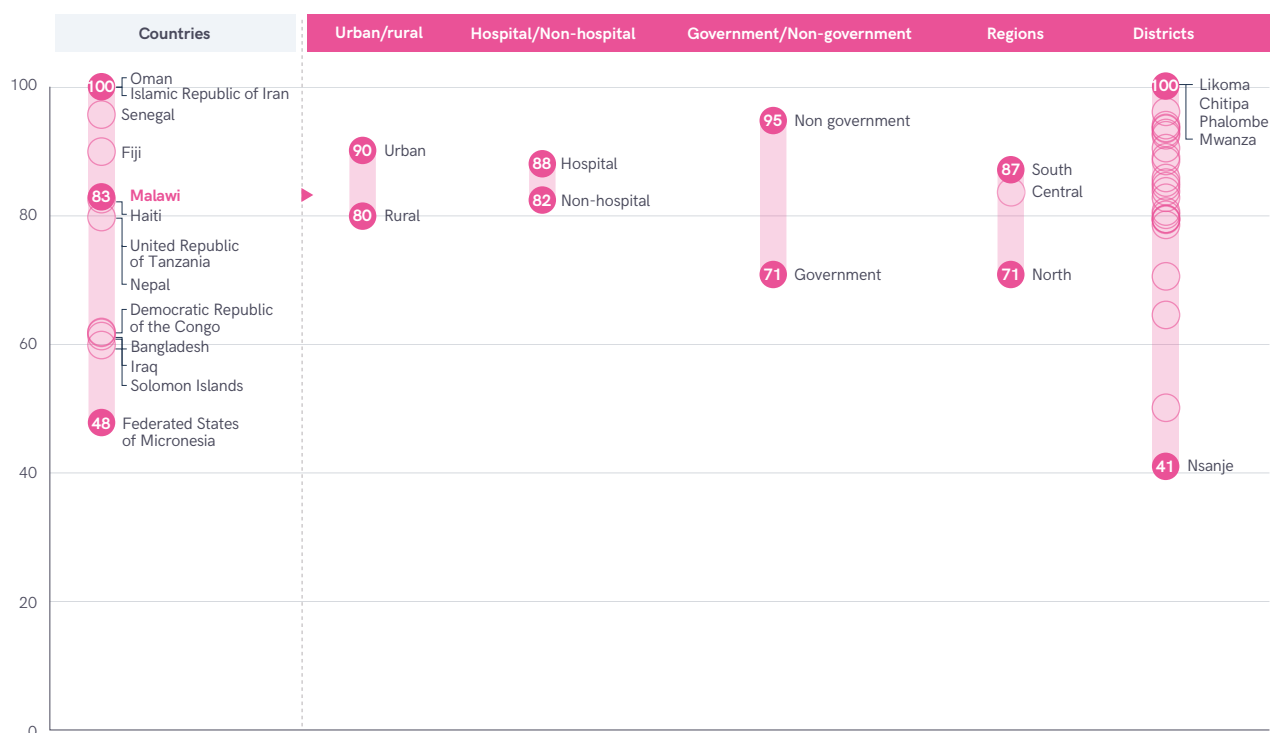
Many health care facilities lack the materials necessary for environmental cleaning



**FIGURE 31** Availability of appropriate and well-maintained materials for cleaning, IPCAF survey 2019 (%)

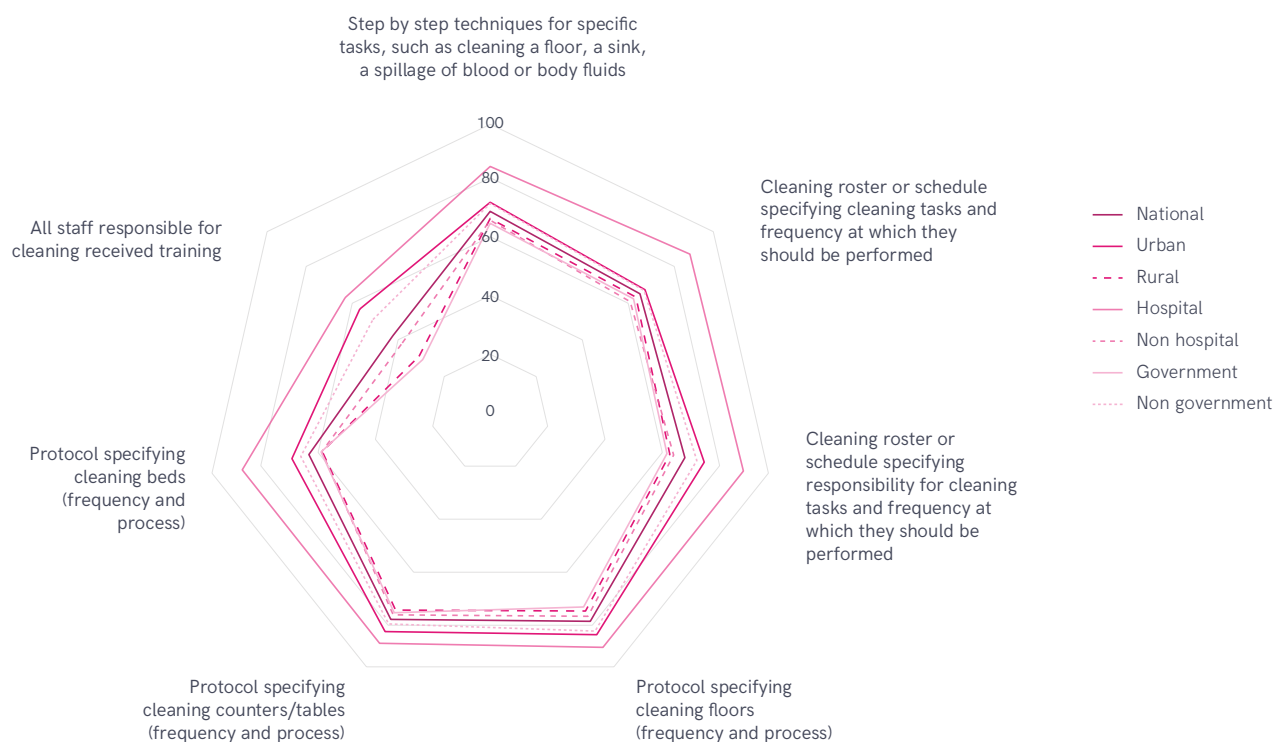


## Cleanliness of health care facilities varies widely between and within countries



**FIGURE 32** Proportion of health care facilities considered visibly clean by country and by facility type within Malawi, selected surveys 2014–2021 (%)

## In Kenya, training on environmental cleaning is lower than availability of protocols in all settings



**FIGURE 33** Environmental cleaning indicators in Kenya, 2018 Health Facility Assessment (%)



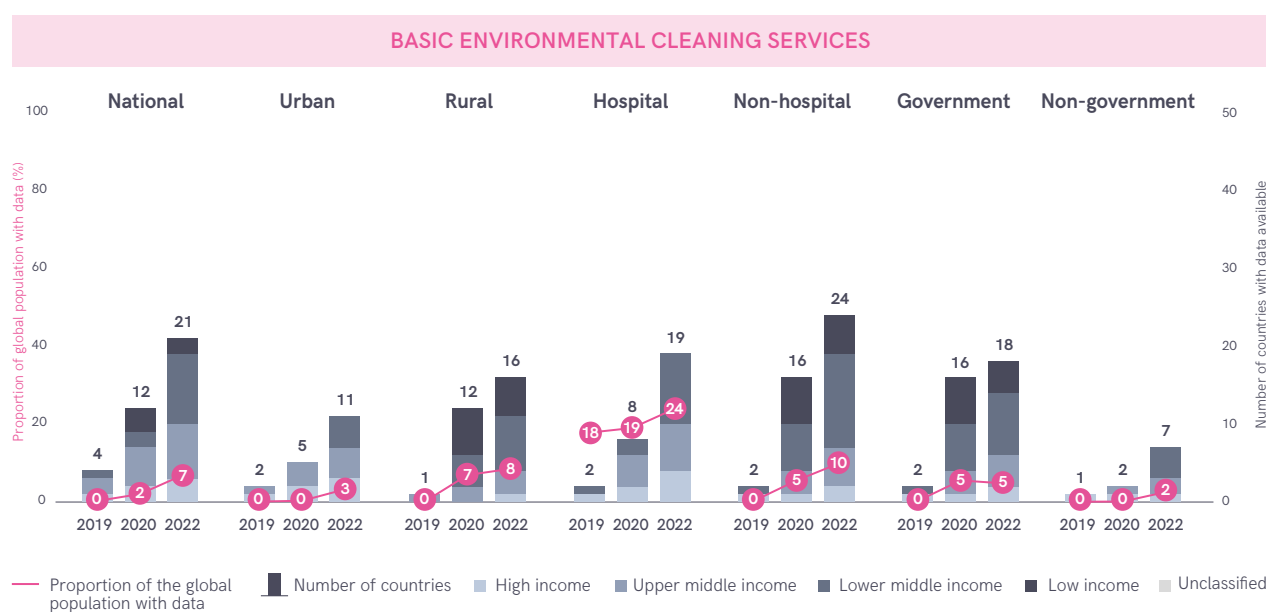


## DATA COVERAGE

The environmental cleaning indicators were developed relatively recently, and have not been included in many health sector facility assessments or management information systems (MIS) to date. Still, in recent years countries have been adopting the new indicators, and the number of countries with national data has risen from 4 in 2019 to 12 in 2020 and 21 in 2022 (Figure 34).

More countries have made assessments in non-hospitals (24) than in hospitals (19), as some surveys target primary health centres. However, as a few large countries (notably India) have made assessments in hospitals, data coverage by population is higher for hospitals (24%) than for non-hospitals (10%). Disaggregated data is least available for non-government facilities, and relatively few countries can disaggregate between urban and rural settings.

Data coverage on basic environmental cleaning services has grown rapidly but remains low



**FIGURE 34** Proportion of population (%) and number of countries with data on basic environmental cleaning services in JMP progress updates 2019–2022, nationally and by type of facility (%)



# Waste management services in health care facilities



## BASIC WASTE MANAGEMENT SERVICES

Sound management of health care waste is an essential element of IPC programmes. Needlestick injuries are one of the most serious occupational health threats to health care workers, with more than 2 million cases occurring per year<sup>28</sup>. Proper segregation and management of sharps waste at the point of generation, as well as subsequent safe treatment and disposal, can reduce this number, and prevent some of the thousands or even millions of infections with hepatitis B, hepatitis C and HIV caused by needlestick injuries each year. Other forms of health care waste also generate risks of infections for staff, patients and surrounding communities, and uncontrolled burning and inadequate incineration can generate toxic dioxins and furans. However, the majority of health care waste

<sup>28</sup> Bouya, Salehoddin et al. 'Global Prevalence and Device Related Causes of Needle Stick Injuries Among Health Care Workers: A systematic review and meta-analysis'. *Ann Glob Health*. 2020; 86(1): 35. doi: 10.5334/aogh.2698. <<https://annalsofglobalhealth.org/article/10.29024/aogh.2698/>>.

	IPC RECOMMENDATIONS
PRIMARY CARE	Sufficient and appropriately labelled bins to allow for health care waste segregation should be available (less than five metres from point of generation); waste should be treated and disposed of safely via autoclaving, incineration, and/or buried in a lined, protected pit.
SECONDARY AND TERTIARY CARE	Sufficient and appropriately labelled bins to allow for health care waste segregation (including for needle and sharps disposal) should be available and used (less than five metres from point of generation) and waste should be treated and disposed of safely via autoclaving, incineration (850° to 1,100°C), and/or buried in a lined, protected pit.

Source: Minimum requirements for infection prevention and control programmes, WHO, 2019





is not infectious<sup>29</sup>, and proper segregation at the point of generation can greatly reduce the volume of waste requiring treatment and disposal.

The service ladder used for global monitoring of health care waste management focuses on safe segregation of health care waste and safe treatment and disposal of wastes in line with the minimum requirements for IPC programmes. The basic waste management service indicator calls for segregation of waste at points of generation (into at least three bins), as well as appropriate waste treatment and disposal. Facilities that have neither bins for segregation nor appropriate systems for treatment and disposal of waste are classed as having no waste management service, while those only partially meeting the criteria for basic services are classed as having a limited service (Figure 35).

<sup>29</sup> Only 10 to 15% of waste generated through routine health service provision is hazardous or infectious. *Global Analysis of Healthcare Waste in the Context of COVID-19: Status, impacts and recommendations*. Geneva: World Health Organization, 2022 <<https://www.who.int/publications/i/item/9789240039612>>.

## WASTE MANAGEMENT

### BASIC SERVICE

Waste is safely segregated into at least three bins, and sharps and infectious waste are treated and disposed of safely

### LIMITED SERVICE

There is limited separation and/ or treatment and disposal of sharps and infectious waste, but not all requirements for basic service are met

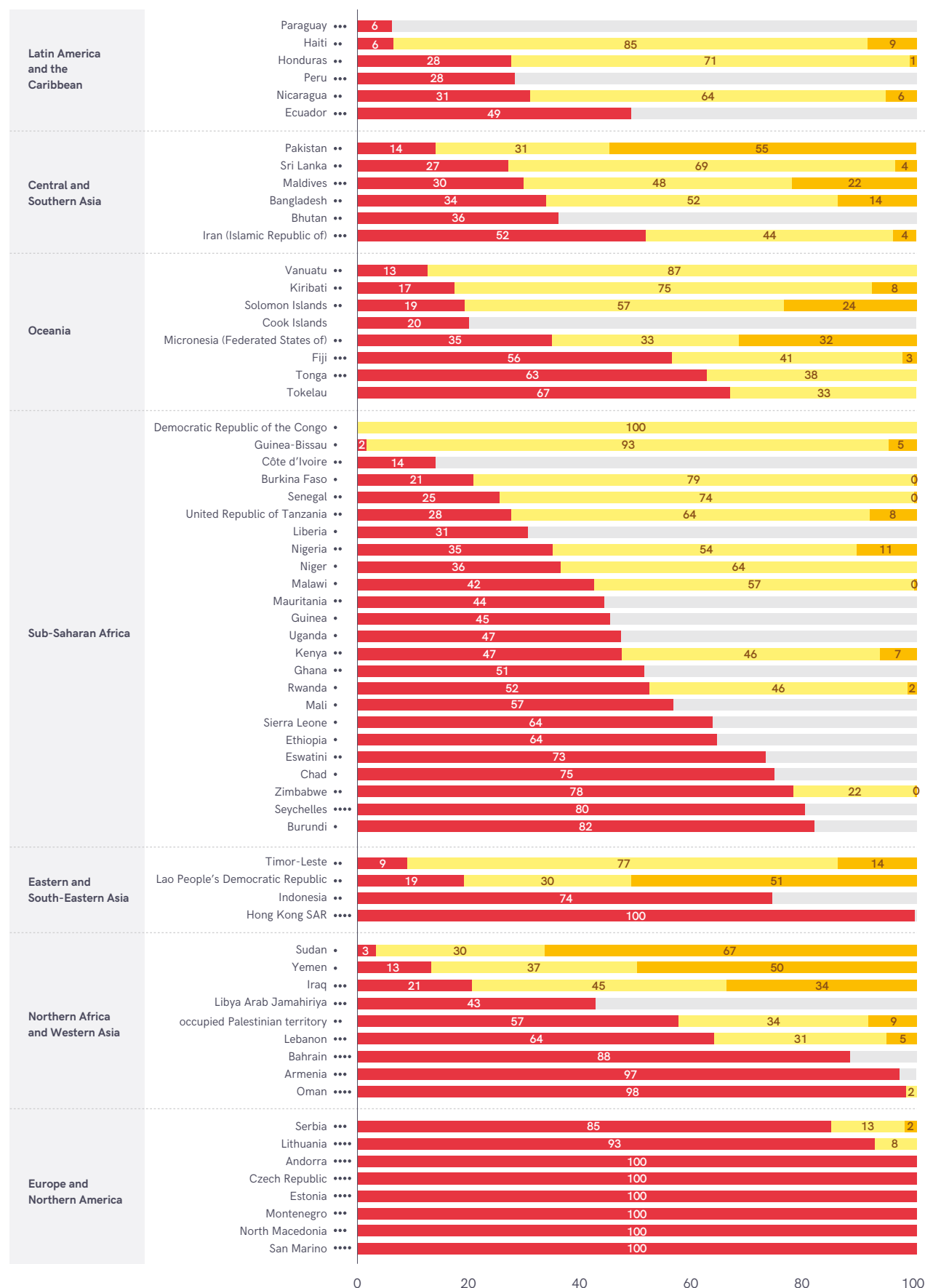
### NO SERVICE

There are no separate bins for sharps or infectious waste, and sharps and/or infectious waste are not treated/disposed of safely

**FIGURE 35** Waste management service ladder for health care facilities

# Health care waste management service levels varied widely between countries and regions in 2021

• Low income •• Lower middle income ••• Upper middle income •••• High income Basic Limited No service Insufficient data



**FIGURE 36** Waste management services in health care facilities, by country, SDG region and income group, 2021 (%)

In 2021, estimates for basic health care waste management services were available for 65 countries, including several in each SDG region, apart from Australia and New Zealand (Figure 36). These represented 24% of the global population, which is below the 30% threshold required to make a global estimate. However, data for segregation of wastes were available for 47% of the global population and on this basis it is estimated that 73% of health care facilities globally had systems for segregating waste.

Sub-Saharan Africa was the region with the highest data coverage, with estimates from 24 countries representing three quarters of the regional population. A regional estimate could therefore be made, that 39% of health care facilities (55% of hospitals and 30% of non-hospitals) in sub-Saharan Africa had basic services in 2021. This means that 682 million people in sub-Saharan Africa lacked a basic waste management service at their health care facility, including 66 million people with no waste management service (neither segregation at points of generation nor safe treatment and disposal).

In 10 countries of sub-Saharan Africa, over 50% of health care facilities had a basic waste management service, but in Guinea-Bissau and the Democratic Republic of the Congo less than 5% did. Other regions also showed great diversity; in Northern Africa and Western Asia, basic services ranged from just 3% in Sudan to 98% in Oman. Basic services are generally higher in countries with more developed economies, but six upper-middle income countries (Ecuador, Iraq, Libya, Maldives, Paraguay and Peru) had less than 50% coverage, and four high income countries (Bahrain, Lithuania, Oman and Seychelles) had less than universal (>99%) coverage.

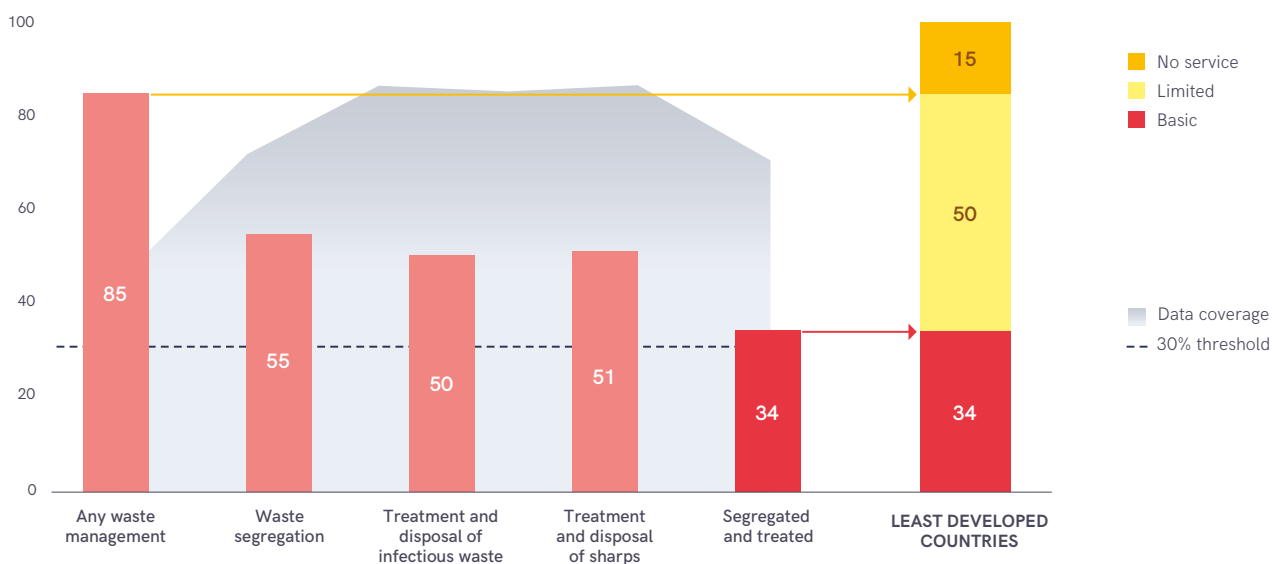
In many countries, a large proportion of health care facilities had some limited separation and/or treatment

and disposal of sharps and infectious waste but did not meet all criteria for a basic service, so are classed as having a limited service. But in six countries, over a quarter of health care facilities had no safe segregation, treatment or disposal, and are classed as having no waste management service at all.

Calculation of the basic waste management indicator requires data on waste segregation as well as treatment and disposal of infectious wastes and sharps. Because these data often come from the same sources, and can be integrated at the level of the health care facility, the JMP calculates the basic service indicator at the facility level, and aggregates data to produce national, regional and global estimates. Among the 46 countries classified by the United Nations as 'least developed countries'<sup>30</sup>, 28 countries representing 72% of the regional population had data on waste segregation, and in 55% of the health care facilities represented, systems for waste segregation were in place. 31 countries (87% of the regional population) had data on waste treatment and disposal, which showed a similar situation for different types of waste; infectious waste and sharps were treated and disposed of appropriately in 50% and 51% of health care facilities, respectively. In 26 countries, with 71% of the regional population, data were available on both segregation and treatment. This is well above the 30% data coverage threshold for producing regional estimates, so is estimated that 34% of health care facilities in LDCs had both segregation and treatment, and therefore a basic service, in 2021. Since 85% of health care facilities had some kind of waste management (segregation or treatment), the 15% without either were classified as having no service. The remaining 50% of health care facilities were counted as having a limited service (Figure 37).

<sup>30</sup> UN list of least developed countries: <https://unctad.org/fr/node/2972>.

### Constructing the waste management service ladder in LDCs



**FIGURE 37** Proportion of health care facilities by type of waste management service and data coverage in LDCs, 2021 (%)

Globally, 58 countries had data on both segregation and treatment of waste, and Figure 38 shows that one or the other of these may be the limiting factor for basic services. In 28 countries, more health care facilities segregated than treated waste, while in 21 countries more facilities treated waste than practised segregation. Treatment levels were significantly higher than segregation levels in several low income countries, including the Democratic Republic of the Congo and Guinea-Bissau where almost no health care facilities segregated waste. In low and upper-middle income countries segregation was often more common than treatment; in Kiribati and Peru more than 90% of facilities segregated waste but only around 20% treated waste appropriately.

In most countries, basic waste management services are higher in urban than in rural areas. In 21 of the 30 countries with estimates in both settings, basic services are at least 10 percentage points higher in urban than in rural; in Ethiopia and Kiribati the gap is over 60 percentage points. In a few countries this trend is reversed; in Indonesia, Mali, Senegal and Haiti, basic services were slightly higher in rural areas, usually because of higher waste segregation rates.

Waste is sometimes treated without segregation; segregated waste is often not treated

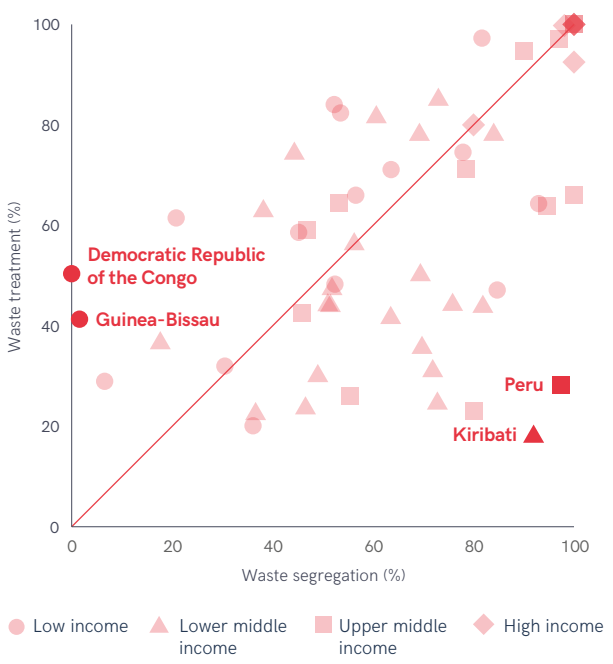


FIGURE 38 Waste segregation and treatment in health care facilities, by income group, 2021 (%)

Urban health care facilities are more likely than rural facilities to have a basic waste management service

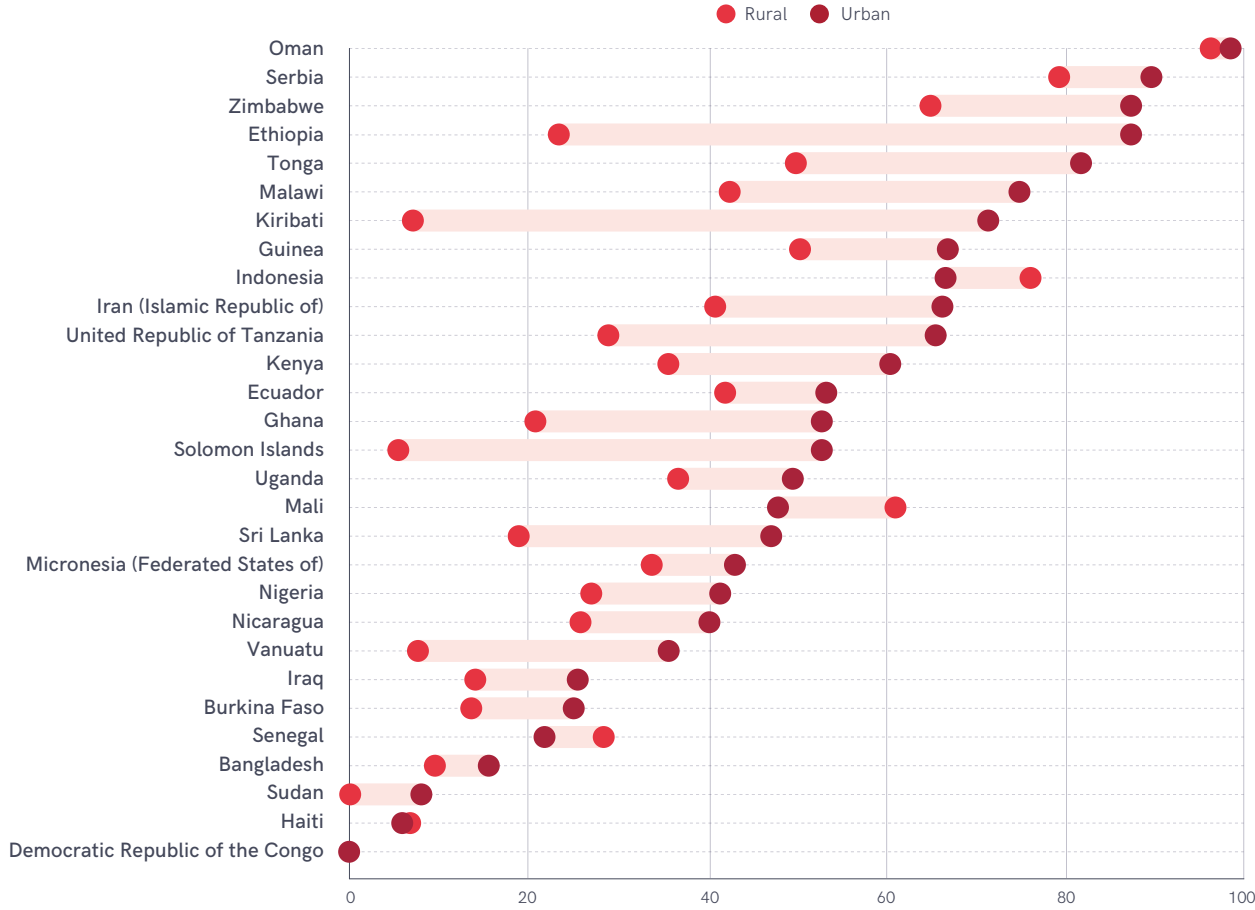


FIGURE 39 Basic waste management services in urban and rural health care facilities, 2021 (%)



## OTHER ELEMENTS OF WASTE MANAGEMENT SERVICES

The global indicator for basic waste management services is a useful starting point, but does not incorporate many important aspects of waste management, such as the effectiveness of segregation practices or the reliability of treatment systems.

Many surveys record very basic information about waste segregation, such as whether sharps containers are present or not, but only a few collect multiple indicators about waste segregation. The WHO Effective Vaccine Management (EVM) initiative supports countries in monitoring vaccine supply chains, and EVM assessments have been carried out in more than 80 countries<sup>31</sup>. Figure 40 shows four comparable indicators related to segregation of sharps waste, selected from 14 countries that have conducted national assessments in 2020 and 2021; one indicator on whether the container complies with national standards and policies, or has been prequalified through WHO's Performance, Quality and Safety (PQS) process, and three indicators about actual use of the containers. While in all countries there were many health care facilities without appropriate containers (ranging from 18% in Djibouti to 52% in Nepal), even



when containers are available they are often not used properly. In Burundi, Djibouti and Lebanon, more than 50% of health care facilities had appropriate sharps containers but in Lebanon only 14% were apparently using the safety boxes, in Djibouti only 9% reported defanging used syringes or placing them in safety boxes immediately after use, and in Burundi none of the health care facilities reported filling safety boxes to the appropriate level.

<sup>31</sup> Effective Vaccine Management initiative: <https://extranet.who.int/evm2/web/Public>.

### Sharps containers may meet standards but not be used properly



**FIGURE 40** Proportion of health care facilities practising different measures of waste segregation, Effective Vaccine Management initiative, 2020-21 (%)

A wide range of technologies are used to treat health care waste, and the most appropriate technology will depend on local circumstances, balancing the need to protect public health and the environment. In accordance with the Basel Convention<sup>32</sup>, it is recommended that waste treatment techniques that minimize the formation and release of chemicals or hazardous emissions should be prioritized. Incineration or burning is widely practised, but can cause serious environmental pollution, including the formation of highly toxic dioxin and furan compounds.

The Stockholm Convention<sup>33</sup> sets targets for avoiding the formation of dioxins and furans by either avoiding combustion-based technologies or ensuring that combustion is done at high temperature; a first chamber should reach at least 850 °C, while temperatures in a second chamber should reach at least 1,100 °C to minimize the formation of toxic compounds<sup>34</sup>. However, health care facilities in low income and middle income settings more commonly use simpler single-chamber incinerators or open burning (Figure 41), which don't reach high enough temperatures to prevent the formation

of toxic chemicals. This may be the best available option as a transitional measure if the only alternative is uncontrolled dumping. Where low-temperature burning is practised, health care facilities should avoid burning PVC plastics and other chlorinated wastes that can lead to the formation of dioxins and furans.

For global monitoring, the JMP counts incineration, including single-stage, towards the basic service level, but does not count open burning. Among the 11 countries with comparable data shown in Figure 41, two-stage incineration was used in less than 5% of health care facilities. Single-stage incineration was more common, ranging from 4% in Afghanistan and Bangladesh to 41% in Zimbabwe, but open burning was far more prevalent, ranging from 25% in Afghanistan and the Democratic Republic of the Congo to over 60% in Mozambique and Nepal. Burial in a protected lined pit or removal for treatment offsite are also counted towards the basic service level. In principle, steam-based technologies such as autoclaving, or innovative technologies such as microwave radiation and frictional heat treatment can also effectively decontaminate waste and would count towards the basic service level, but these are not commonly available in low income and middle income settings or recorded in most facility assessments. Some surveys (including the Service Availability and Readiness Assessment – SARA and Service Provision Assessment – SPA) collect information on a variety of treatment technologies, but many assessments only record if waste is 'treated' or 'burned'.

<sup>32</sup> The most comprehensive global environmental treaty on hazardous and other wastes is: United Nations Environment Programme. *The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*. Geneva: UN, 1989 <[www.basel.int/TheConvention/Overview](http://www.basel.int/TheConvention/Overview)>.

<sup>33</sup> United Nations Environment Programme. *The Stockholm Convention on Persistent Organic Pollutants (POPs)*. Geneva: UN, 1989 <[www.pops.int](http://www.pops.int)>. : a global treaty to protect human health and the environment from highly dangerous, long-lasting chemicals, by restricting and ultimately eliminating their production, use, trade, release and storage.

<sup>34</sup> World Health Organization. *Safe Management of Wastes from Health-care Activities*. Geneva: World Health Organization, 2014 <<https://www.who.int/publications/i/item/9789241548564>>.

Open burning of medical waste is widespread

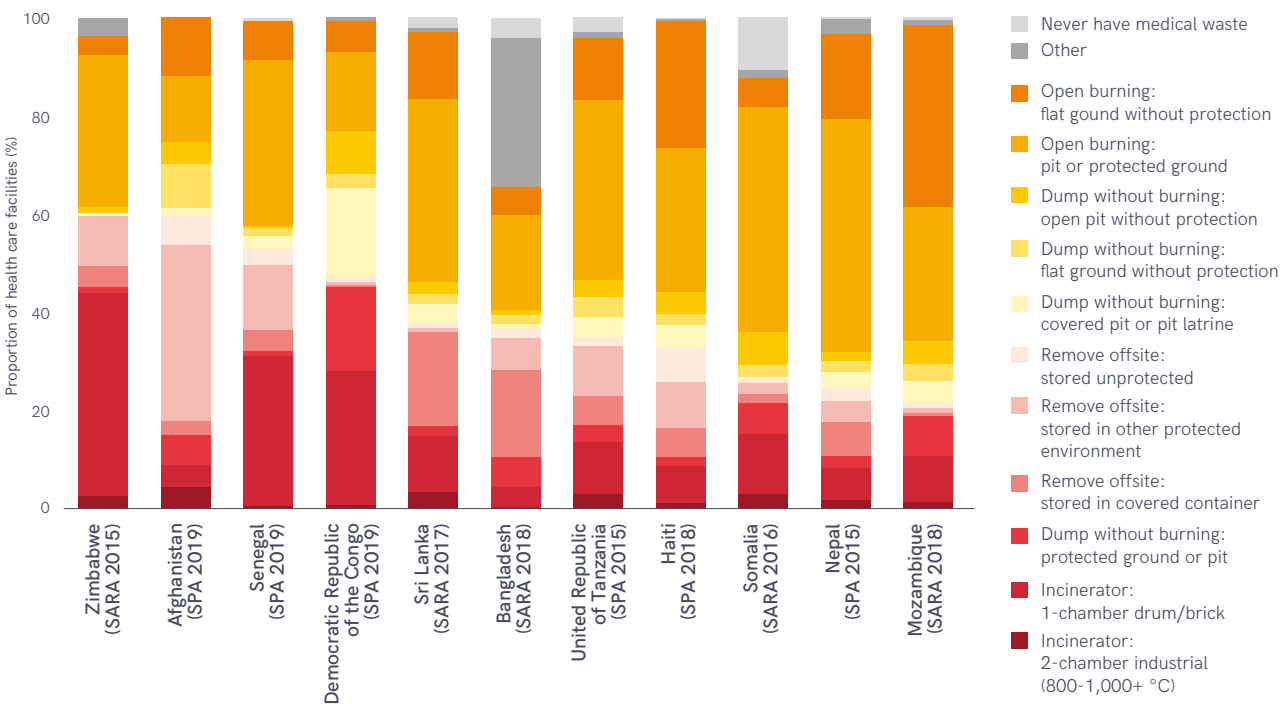
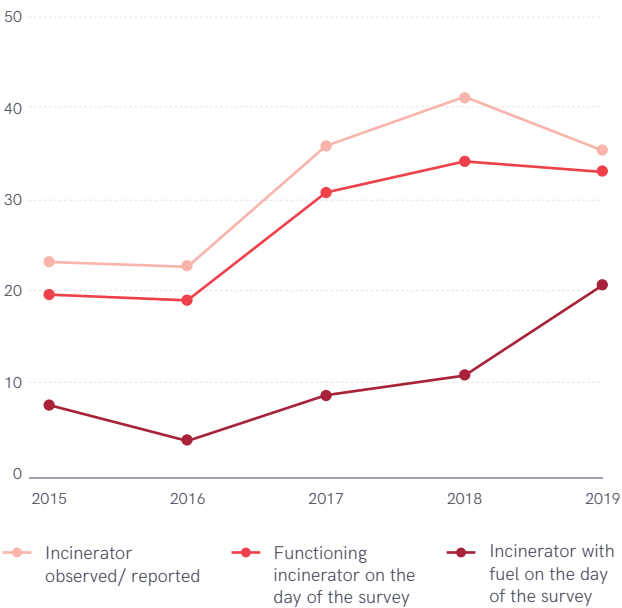


FIGURE 41 Methods used for treatment and disposal of medical waste, selected SARA and SPA surveys, 2015–2019 (%)





In Senegal, availability of incinerators and fuel has increased significantly

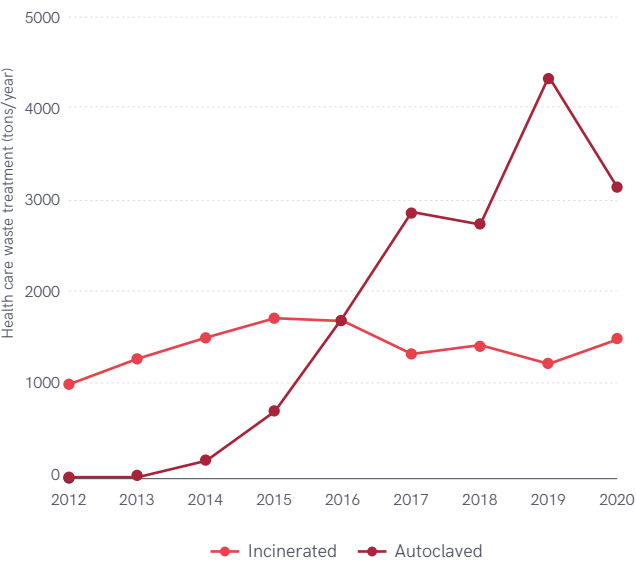


**FIGURE 42** Availability and functionality of incinerators in health care facilities, Senegal ECPSS/SPA 2015–2019 (%)

With support from the global SPA programme, Senegal conducts an annual survey (*Enquête Continue sur la Prestation des Services de Soins de Santé, ECPSS/SPA*). This survey shows that from 2015 through 2019 the proportion of health care facilities with incinerators (almost all single-stage) grew steadily, and that upon inspection the great majority of incinerators were functional, through in many cases fuel was not available on the day of the visit. However, fuel availability was found to increase rapidly from year to year (Figure 42).

In 2012, the Oman Ministry of Health gave the responsibility for managing the country’s health care waste to the Oman Environmental Service Holding Company (be’ah). The company has expanded the treatment capacity of existing plants, built two new treatment facilities that rely exclusively on autoclave sterilization rather than incineration, and shut down traditional open dumpsites that didn’t provide safe disposal for treated waste. Be’ah now treats over 99% of health care waste generated annually. Pharmaceutical waste, cytotoxic and genotoxic waste, and highly infectious waste are mainly incinerated, while less hazardous wastes are shredded and autoclaved before disposal. By 2016 more waste was being autoclaved than incinerated, with positive impacts on the environment as well as reportedly lower operational costs (Figure 43). The company works with health care facilities to improve waste segregation, and to reduce the amount of waste generated.

In Oman, health care waste is increasingly treated with autoclaves



**FIGURE 43** Health care waste incinerated or autoclaved in Oman, tons/ year 2012–2020. Source: be’ah Efforts in Health Care Waste Management <<https://www.beah.om/Knowledge-Center/Report>>





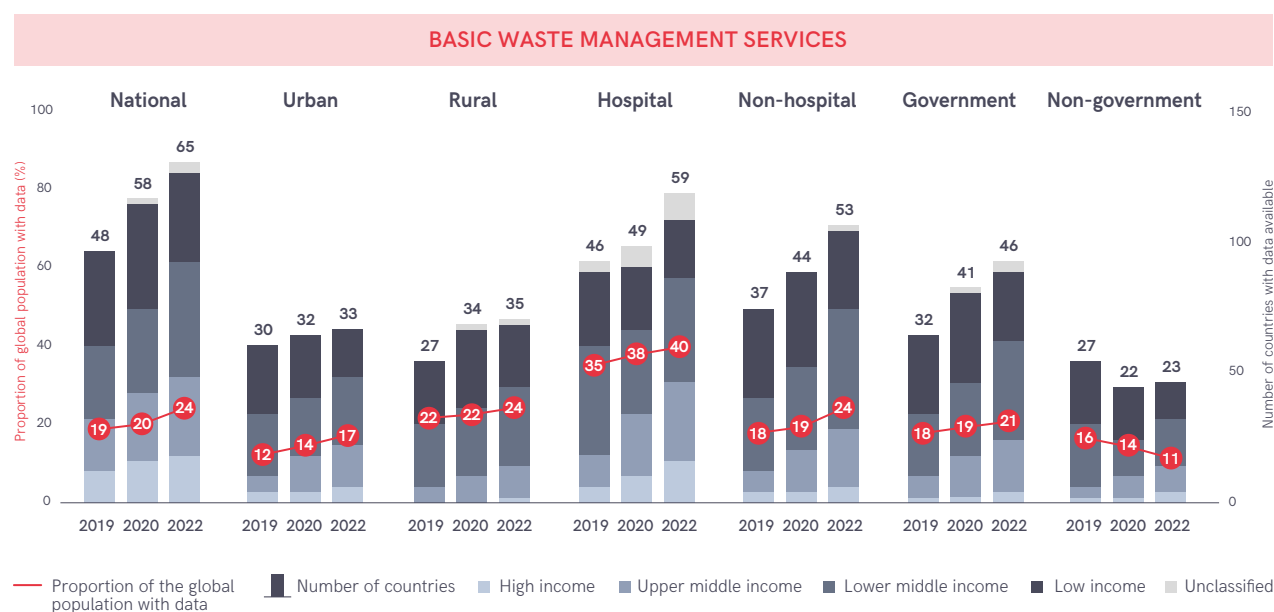


## DATA COVERAGE

Since the 2019 JMP global baseline report, the number of countries with national estimates of basic hygiene services in health care facilities has increased by a third (from 48 to 65), but still only represents a quarter (24%) of the global population (Figure 44). Data coverage is higher for hospitals, as several countries – notably India

– have conducted assessments that included hospitals but not smaller facilities like clinics and health posts. Disaggregated data is least available for non-government facilities, and the number of countries that can report separately on government and non-government settings has dropped since 2019, due to aging data.

### Data coverage on basic waste management services has grown slowly



**FIGURE 44** Proportion of population (%) and number of countries with data on basic waste management services in JMP progress updates 2019–2022, nationally and by type of facility (%)

# Water services in health care facilities



## BASIC WATER SERVICES

Reliable water supplies are essential in health care facilities to allow washing of hands, environmental surfaces and medical equipment. Health care workers and patients also need access to water for their own personal needs, including drinking, washing and personal hygiene. It is impossible to deliver safe health care without abundant water, which is only possible when water supplies are available on the premises, and ideally piped through the facility. While individual health care facilities will have different water requirements, depending on the size of the facility and the types of health services provided, the minimum requirements for IPC apply in all settings.

The JMP definition of a basic water service requires that water is available from an improved source that is located on the premises (Figure 45). Health care facilities are classed as having a limited service

	IPC RECOMMENDATIONS
PRIMARY CARE	Water should always be available from an improved source on the premises to perform basic IPC measures, including hand hygiene, environmental cleaning, laundry, decontamination of medical devices, and health care waste management.
SECONDARY AND TERTIARY CARE	A safe and sufficient quantity of water should be available for all required IPC measures and specific medical activities, including for drinking, and piped inside the facility at all times, at a minimum to high-risk wards (e.g. maternity ward, operating room(s), intensive care unit).

Source: Minimum requirements for infection prevention and control programmes, WHO, 2019





if they use improved sources within 500 metres that do not meet all the requirements for a basic service, and no service if they have improved sources beyond 500 metres, unimproved sources or no water source at all. While the basic service indicator is universally relevant and appropriate for global monitoring, it does not address all of the aspects of water services that are considered important for IPC and quality of care, including having sufficient quality and quantity to carry out specific medical activities in different settings.

By 2021, estimates for basic water services were available for 59 countries and three out of eight SDG regions, representing 37% of the global population. On this basis it is estimated that nearly four out of five health care facilities (78%) had a basic water service in 2021 (88% of hospitals and 77% of non-hospitals).

WATER	
<b>BASIC SERVICE</b>	Water is available from an improved source* on the premises
<b>LIMITED SERVICE</b>	An improved water source is within 500 metres of the premises, but not all requirements for basic service are met
<b>NO SERVICE</b>	Water is taken from unprotected dug wells or springs, or surface water sources; or an improved source that is more than 500 metres from the premises; or there is no water source

\* Improved water sources are those which by nature of their design and construction have the potential to deliver safe water. These include piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water.

**FIGURE 45** Water service ladder for health care facilities

# Water service levels varied widely between countries and regions in 2021

• Low income •• Lower middle income ••• Upper middle income •••• High income Basic Limited No service Insufficient data

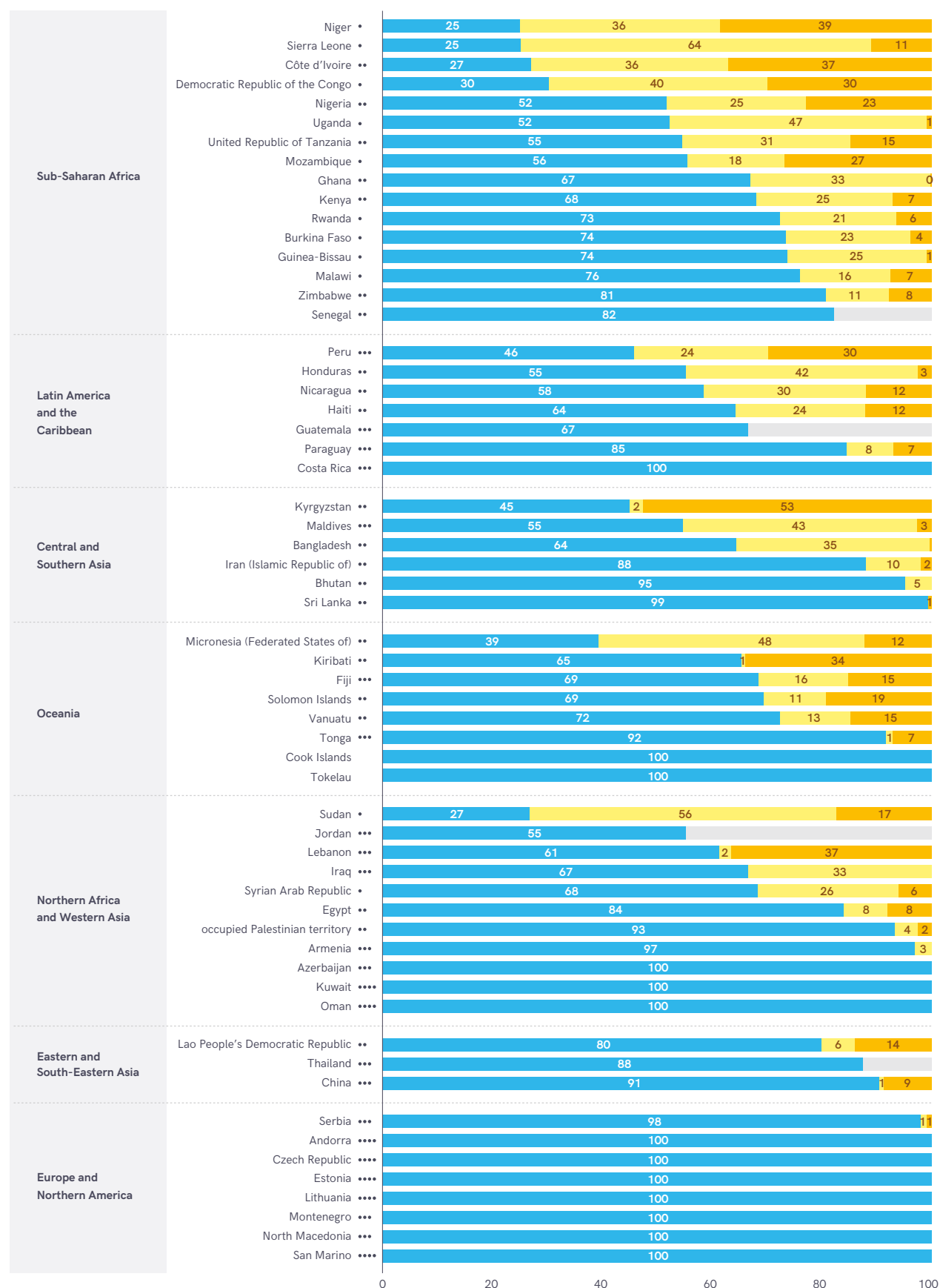


FIGURE 46 Water services in health care facilities, by country, SDG region and income group, 2021 (%)



This means that 1.7 billion people still lacked a basic water service at their health care facility, including 880 million whose health care facility had an improved water source that did not have water available or was not on the premises and therefore counted as a limited service, and 857 million whose health care facility either had an improved source more than 500 metres away, an unimproved source or no water source at all and were therefore classed as having no water service.

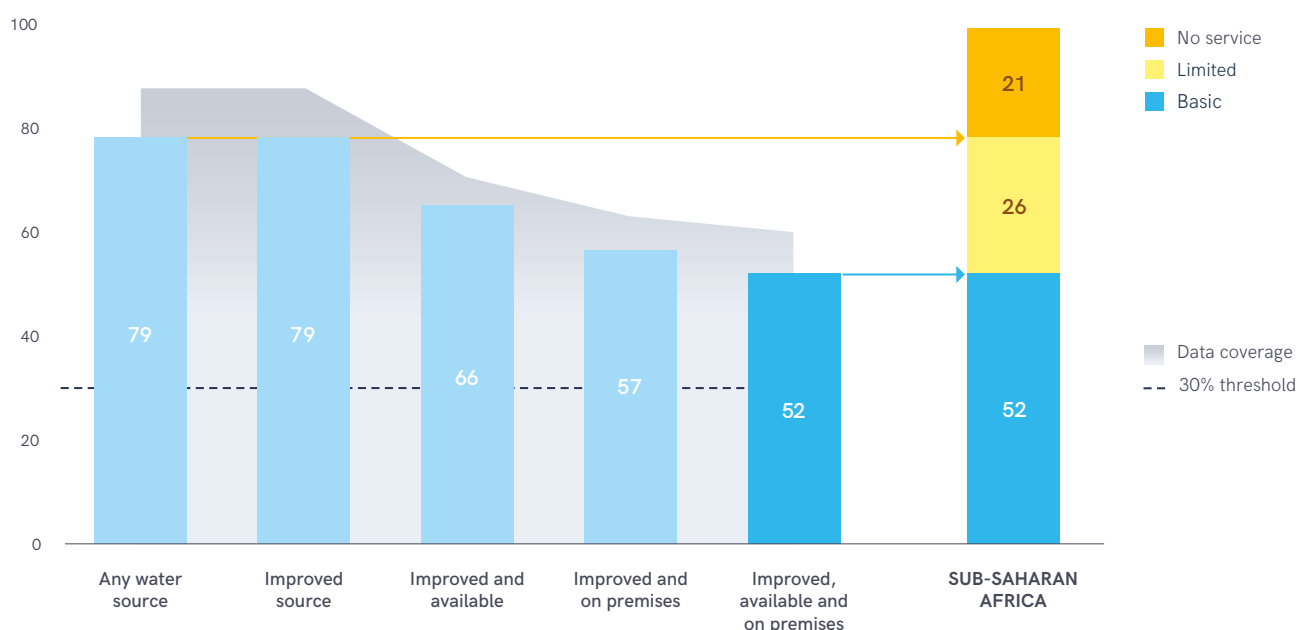
Among the three SDG regions with sufficient data available to calculate regional estimates in 2021, coverage of basic services ranged from 90% in Eastern and South-Eastern Asia to just 52% in sub-Saharan Africa. In LDCs and in fragile contexts only half the health care facilities had a basic water service and one in five had no service at all. While two thirds of facilities in landlocked developing countries (LLDCs) had a basic service, one in four still had no service in 2021.

Water service levels also varied widely among the 59 countries with national estimates available in 2021. While 28 countries had exceeded 75% coverage of basic services, including 14 that had already achieved universal access (>99%), 8 countries were still below 50% coverage (Figure 46). There were also significant differences within SDG regions; Latin America and the Caribbean, Central and Southern Asia, Oceania, and Northern Africa and Western Asia all had countries below 50% coverage as well as countries

with universal access (>99%). In many countries a significant proportion of health care facilities had a limited service, and in 8 countries more than a quarter of health care facilities still had no water service at all in 2021.

Figure 47 shows how data on different aspects of water services are combined to construct the water service ladder in sub-Saharan Africa. The JMP produces regional estimates if data are available for at least 30% of the relevant population. Data coverage is shown in grey behind the bars showing the proportion of health care facilities meeting each of the service criteria. It is estimated that 79% of facilities in sub-Saharan Africa had an improved water source in 2021 and the remaining 21% were classed as having no service (data on facility types were available for 89% of the regional population). However only 66% of facilities had improved sources with water available and just 57% had improved sources located on the premises (data coverage was 71% for availability and 64% for on premises). 52% of facilities meet all three criteria (improved, available and on premises) and were therefore classed as having a basic service. While the proportion of the population for which data were available for all elements of a basic service (61%) was much lower than for any facility (89%) it was still sufficient to produce a regional estimate for sub-Saharan Africa in 2021, of 52% of health care facilities having a basic water service.

### Constructing the water service ladder in sub-Saharan Africa



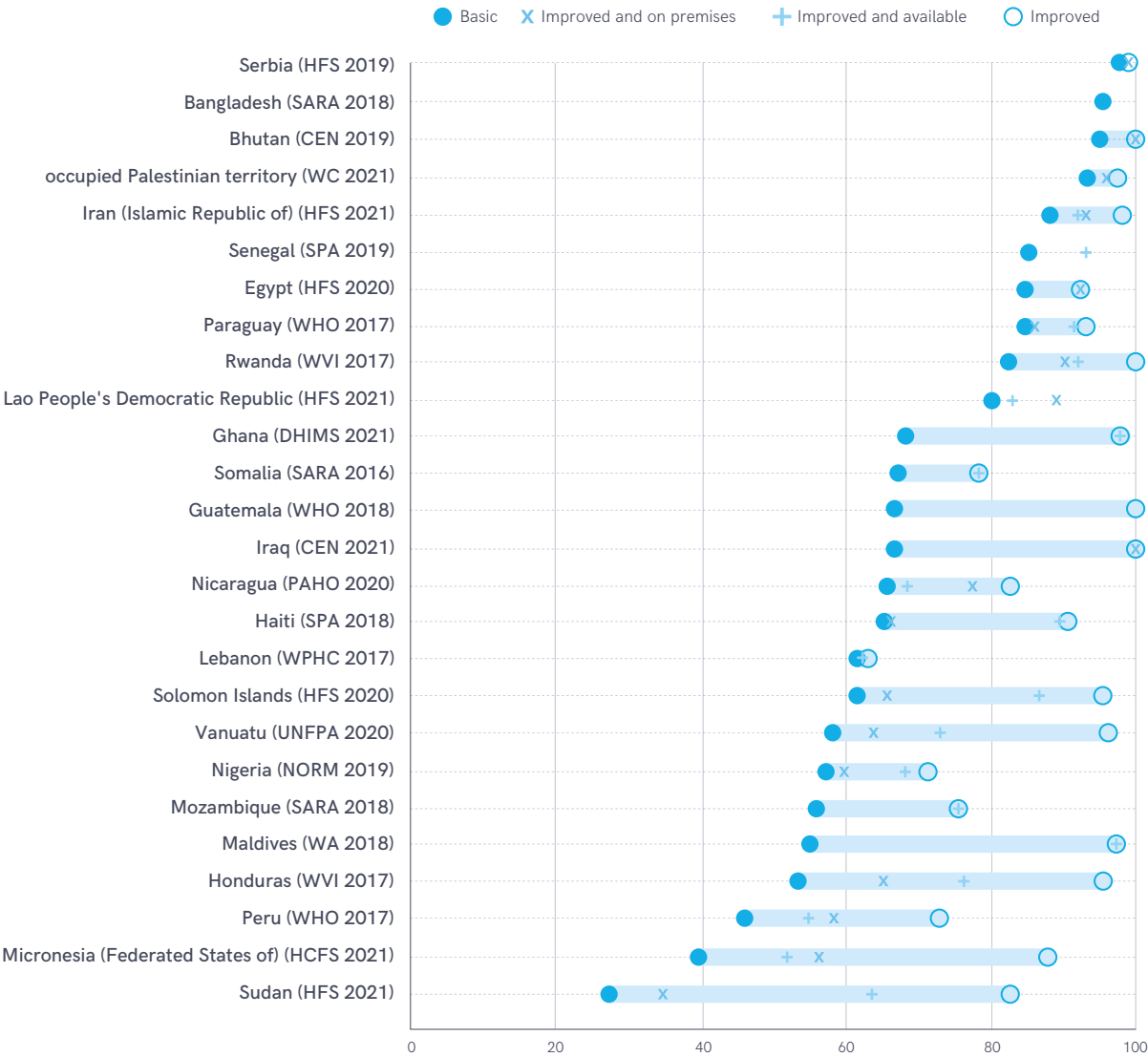
**FIGURE 47** Proportion of health care facilities by type of water service and data coverage, sub-Saharan Africa, 2021 (%)

In countries with disaggregated data available it is possible to analyse the limiting factor for provision of basic water services in health care facilities (Figure 48). In Serbia, almost all health care facilities (99%) had an improved water source and 98% had an improved source with water available on the premises. By contrast in Sudan, while 83% had an improved source, only 63% had water available, 34% were located on the premises, and just 27% met all the criteria for a basic service. While there were similarly large gaps between improved and basic in other countries, the limiting factor varied. Having a water supply on the premises was also the limiting factor in Honduras, Nigeria, Vanuatu and Paraguay, while in Guinea-Bissau, Nicaragua, Peru and Micronesia health care facilities were less likely to actually have water available. In Iraq, all health care facilities had an

improved water source on the premises, but just 67% had water available at the time of the survey.

In many of the countries with disaggregated data for health care facilities in rural and urban areas, coverage of basic water services is higher in the latter (Figure 49). Oman and the Cook Islands have achieved universal coverage in both settings and in the Federated States of Micronesia, Sri Lanka, Serbia and the Solomon Islands differences are relatively small, but in all other countries basic water coverage is at least 10 percentage points higher in urban areas. The urban-rural coverage gap exceeds 30 percentage points in Sudan, Nicaragua, Ghana, Burkina Faso and Mozambique, while in Senegal there is a 46 percentage point gap between basic water coverage in urban (90%) and rural (44%) health care facilities.

### Many health care facilities have an improved water supply but lack a basic water service



**FIGURE 48** Proportion of health care facilities meeting different criteria for a basic drinking water service, selected surveys 2016–2021 (%)



Basic water services are more common in urban than in rural areas

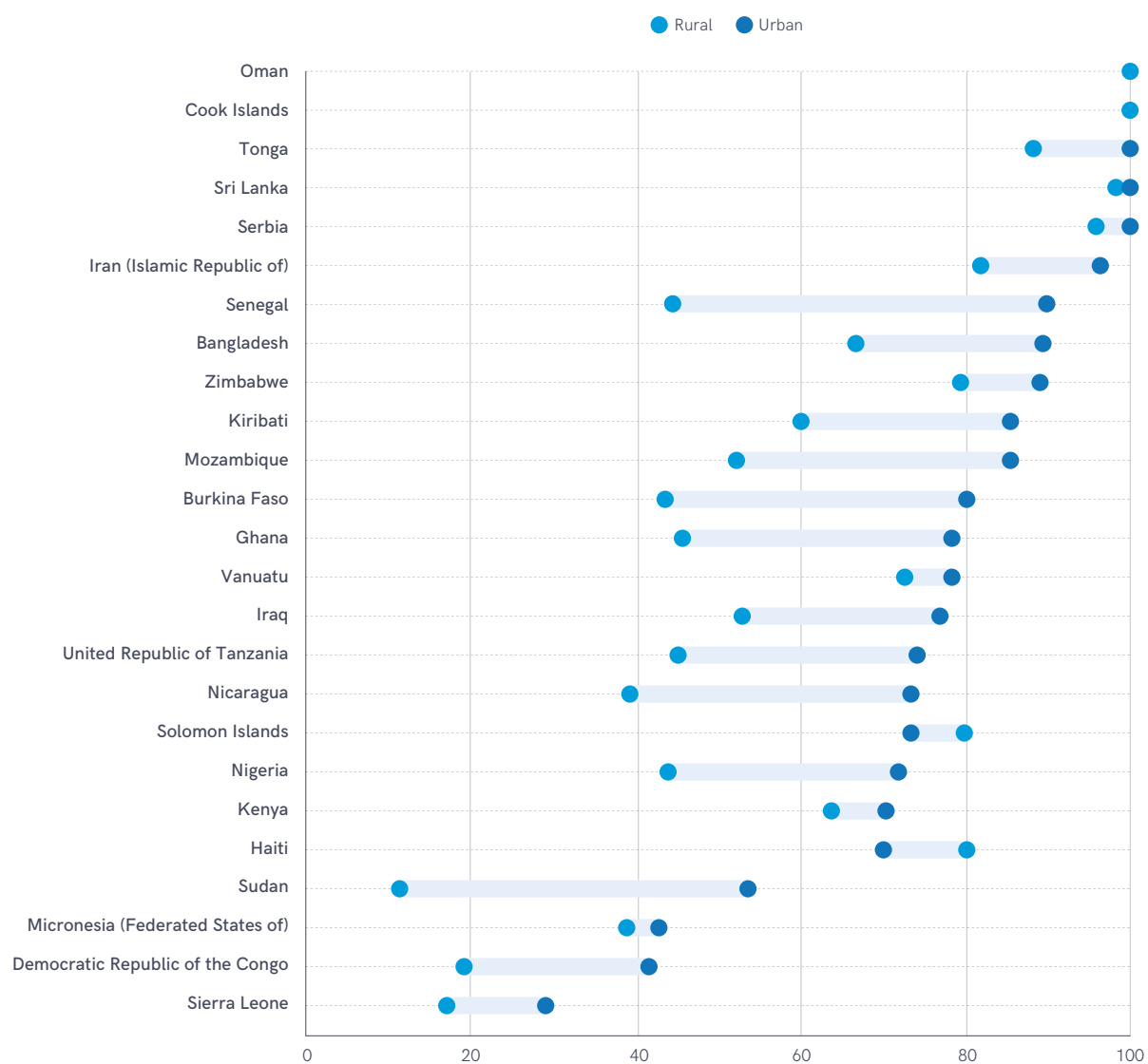
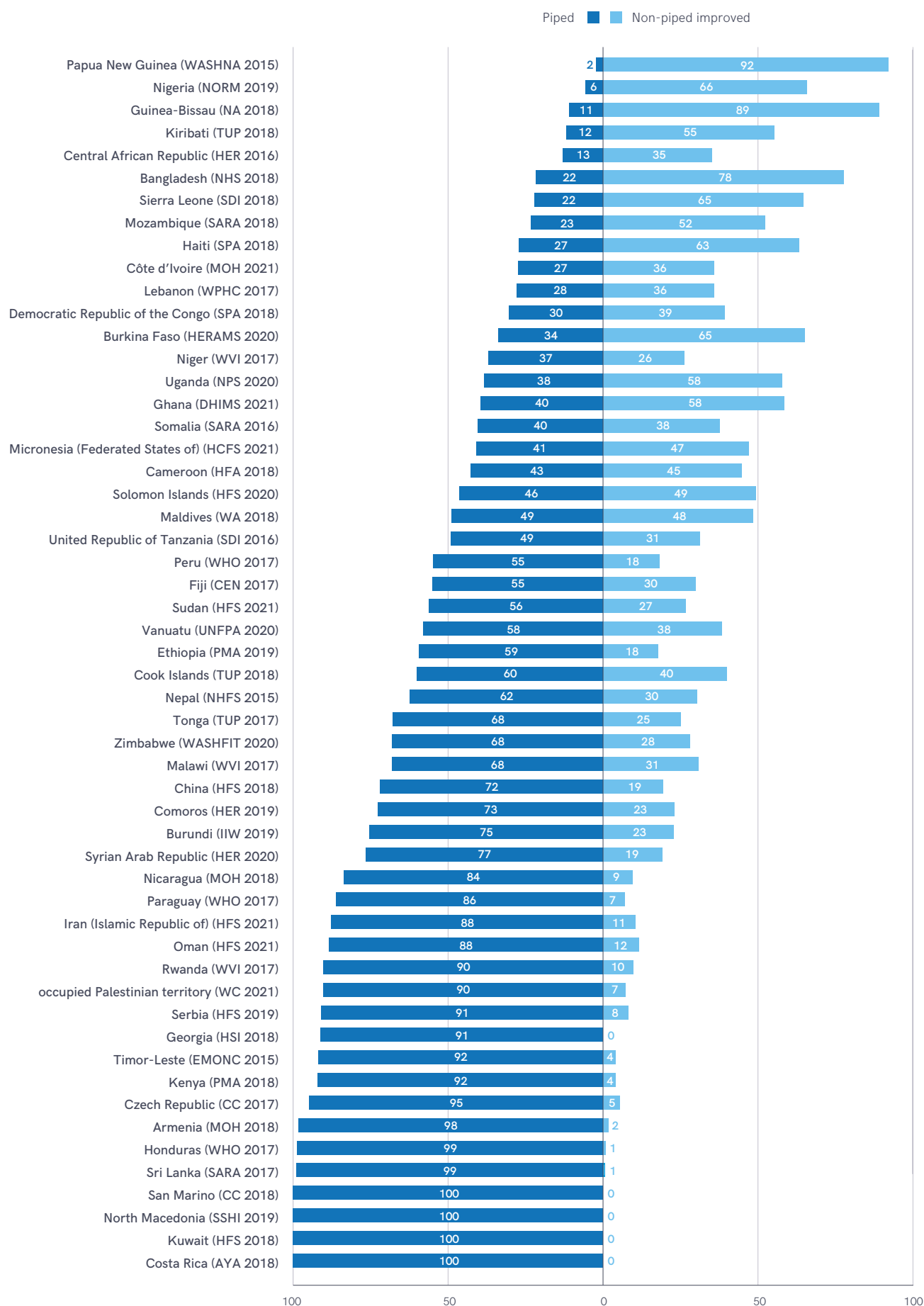


FIGURE 49 Proportion of urban and rural health care facilities with basic water services, 2021 (%)

# Many health care facilities lack piped water



**FIGURE 50** Proportion of health care facilities with piped and non-piped improved water supplies, selected surveys, 2012–2021 (%)



## OTHER ELEMENTS OF WATER SERVICES

In addition to the global indicator for a basic service, some countries collect additional information on water services that is relevant for IPC and quality of care, including accessibility, availability and quality of water for staff and for patients.

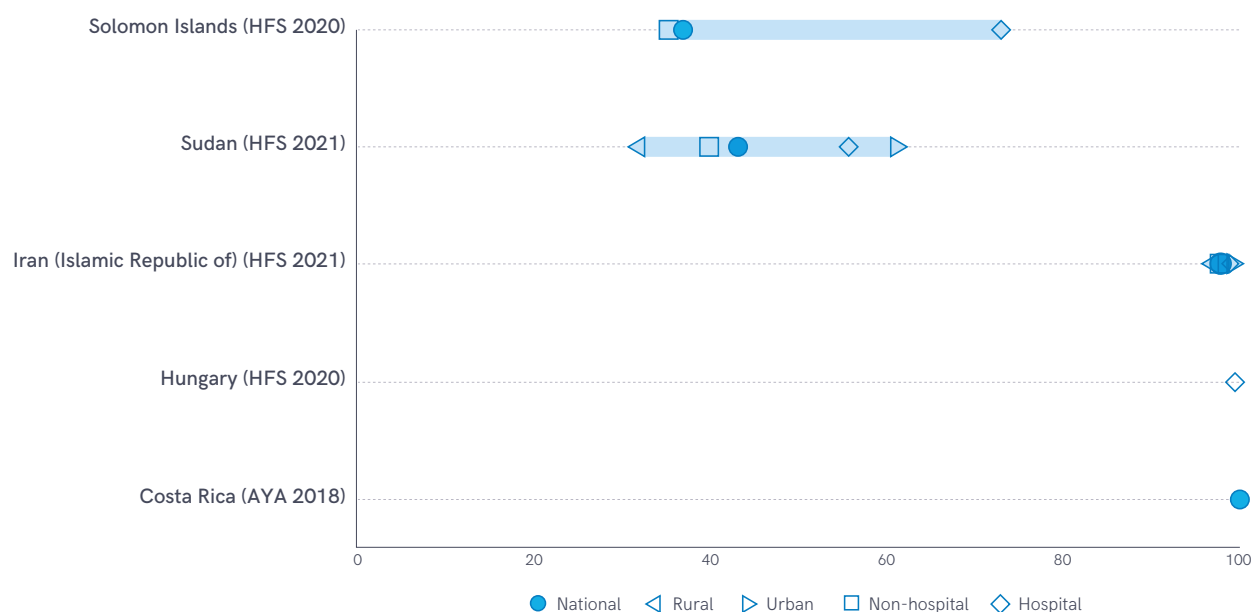
For example, health care facilities should ideally have a continuous supply of running water, but this is difficult to achieve unless water is piped into the building or the compound. Figure 50 shows that in many countries a significant proportion of health care facilities rely on other improved sources, such as boreholes, protected wells and springs, or rainwater collection. While all health care facilities in Costa Rica, Kuwait, North Macedonia and Sri Lanka have piped supplies, 9 out of 10 facilities in Papua New Guinea and Guinea-Bissau and two thirds of facilities in Nigeria have non-piped supplies. In Malawi, two thirds of health care facilities have piped supplies and one third have non-piped supplies, but in Sierra Leone the reverse is true.



It is important that water supplied to health care facilities is free from contamination, but relatively few countries have national data on water quality. Emerging data suggest that water supplies in health care facilities may be contaminated and that the risk of contamination varies depending on the type of facility (Figure 51). For example, a 2018 survey in Costa Rica and a 2020 survey of hospitals in Hungary found that almost all health care facilities were free from faecal contamination, while a 2021 health

facility assessment in Iran found high rates of compliance in both hospitals (99%) and non-hospitals (97%). But recent surveys found that only 43% of health care facilities in Sudan and 37% of those in the Solomon Islands used supplies that were free from faecal contamination. In Sudan, compliance was much higher in urban than in rural facilities (61% compared with 32%), while in the Solomon Islands, hospitals were more than twice as likely to be compliant (73%) as non-hospitals (35%).

### Water supplies in health care facilities may be faecally contaminated



**FIGURE 51** Proportion of health care facilities with water free from faecal contamination, by setting, selected surveys 2018-2021 (%)

The 2020 health facility survey in Hungary tested for several other water quality parameters known to present health risks. In addition to faecal contamination (*E. coli*) the survey assessed whether supplies were compliant with national standards for *Pseudomonas aeruginosa*, lead, nitrate and arsenic. Among the 155 facilities surveyed, 5 were non-compliant for *Pseudomonas* and 3 were non-compliant for nitrate, but results for around a third of facilities surveyed were not known (Figure 52).

The 2019 IPCAF survey asked health care facilities to report on whether drinking water stations were accessible to staff, patients and families at all times and in all locations/wards. Data collected from 4,400 health care facilities show that only half the facilities in low income countries met this standard, compared with 9 out of 10 facilities in high income countries. However, primary, secondary and tertiary facilities were equally likely to have drinking water stations accessible at all times (Figure 53). In some countries, health care facilities are not able to provide drinking water for patients. For example, in 2020 a census of WASH in health care facilities in Fiji found that 1 in 10 hospitals and 1 in 5 non-hospitals required patients to bring their own drinking water (Figure 54).

Health care facilities may test for multiple water quality parameters

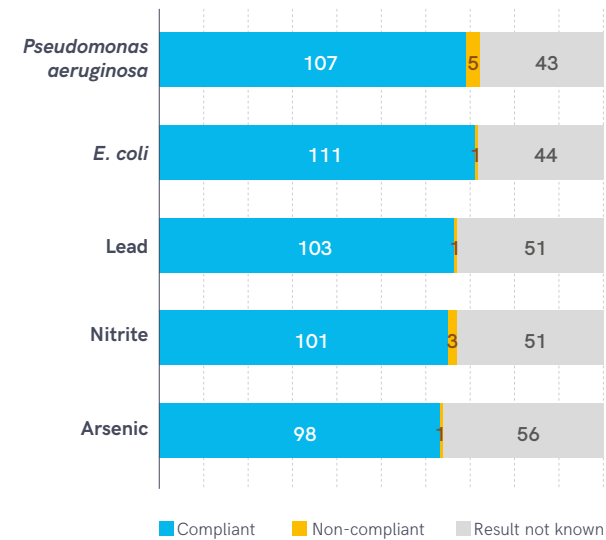


FIGURE 52 Proportion of health care facilities compliant with national standards for selected water quality parameters in Hungary, 2020 (%)

Only half the health care facilities in low income countries report having drinking water accessible to staff, patients and families at all times

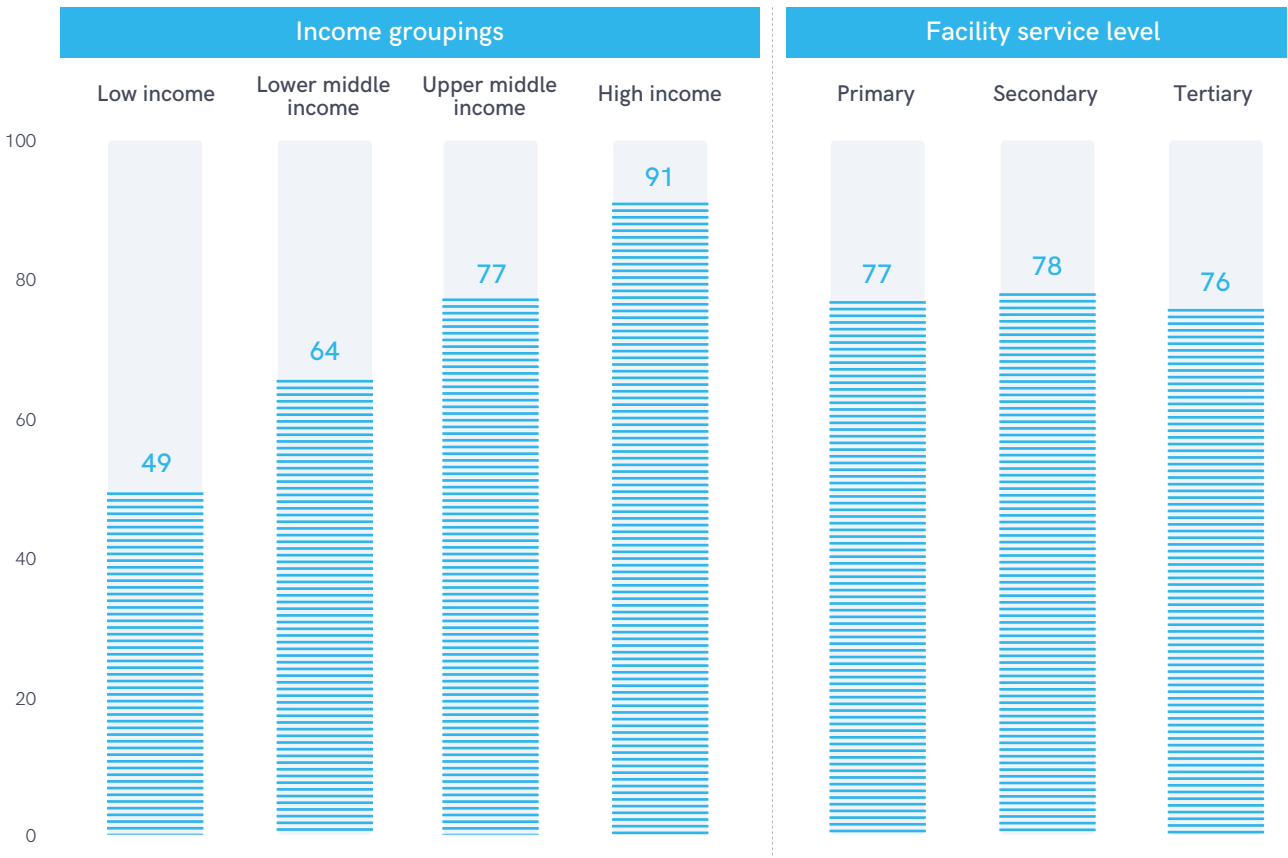
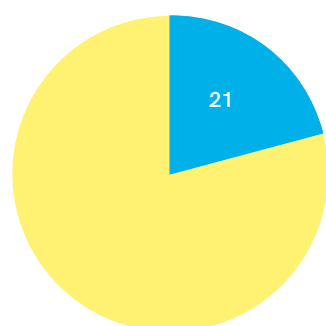
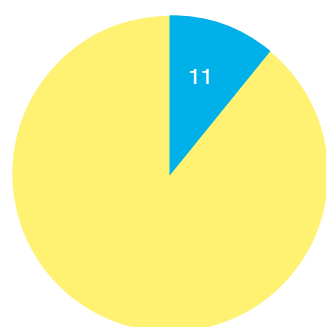


FIGURE 53 Availability of drinking water stations accessible for staff, patients and families at all times and in all locations/wards, IPCAF survey 2019 (%)

## Health care facilities don't always have drinking water for patients



Non-hospital



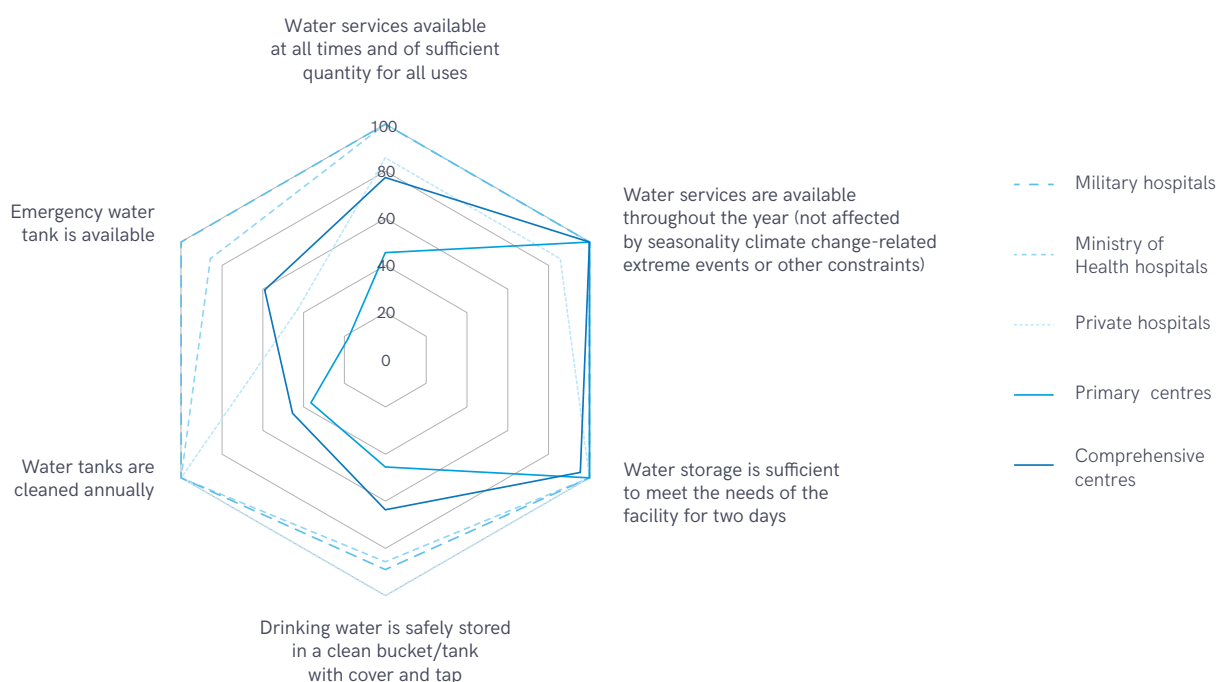
Hospital

**FIGURE 54** Proportion of health care facilities in Fiji where patients are required to bring their own drinking water, 2020 (%)

In situations where water is scarce, health care facilities may need to store water to cope with shortages. For example, a 2020 assessment of WASH and IPC in primary health care facilities in Jordan included additional questions about the availability of water at different times of the year and whether facilities were able to safely store sufficient water to meet their needs (Figure 55). Water services were 'available at all times in sufficient quantities for all uses' in all hospitals run by the military and by the Ministry of Health (100%), but in only three quarters (77%) of comprehensive centres, and less than half (46%) of primary centres.

Only 86% of private hospitals had water services 'available throughout out the year (not affected by seasonality, climate change-related extreme events or other constraints)', compared with 100% of facilities in all other categories. While almost all had sufficient storage to meet the needs of the facility for two days there was considerable variation in safe storage and cleaning. Drinking water was 'safely stored in a clean bucket/tank with cover and tap' in all private hospitals (100%), but only two thirds of comprehensive centres (64%) and less than half the primary centres (46%), and only one third of the latter (36%) reported cleaning water tanks annually. Emergency water tanks were available in all military hospitals and 86% of Ministry of Health hospitals, compared with 59% of comprehensive centres, 43% of private hospitals and just 18% of primary centres.

## Less than half of primary centres in Jordan had water available at all times in sufficient quantities for all uses



**FIGURE 55** Proportion of health care facilities meeting criteria for water sufficiency and storage, Jordan 2020 (%)

A 2020 assessment of WASH in primary health care units and centres in Egypt collected similar information on sufficiency and storage and found that while 85% of health care facilities had improved water sources inside or within the grounds of the facility, only 67% had reliable drinking water stations present and accessible for staff, patients and those with disabilities at all times. Furthermore, while 27% of facilities were equipped with water tanks, only 21% had cleaned and disinfected their tanks according to a standard schedule.

DATA COVERAGE

Between 2019 and 2022, the number of countries with national estimates available for basic water services in health care facilities increased from 38 to 59, and data coverage increased slightly from 36% to 37% of the global population, but disaggregation remains a challenge (Figure 57). While most of these countries have estimates for hospitals (51) and for non-hospitals (54), far fewer have data for urban (29) than for rural (37) health care facilities. Since 2019, the number of countries with estimates for government facilities has more than doubled from 21 to 45, representing 34% of the global population, but there has been little improvement in data availability for non-government facilities, which has risen from 14 to 18 countries but still only represents 10% of the global population.

In Egypt three quarters of health care facilities had sufficient storage to meet their needs for two days in 2020

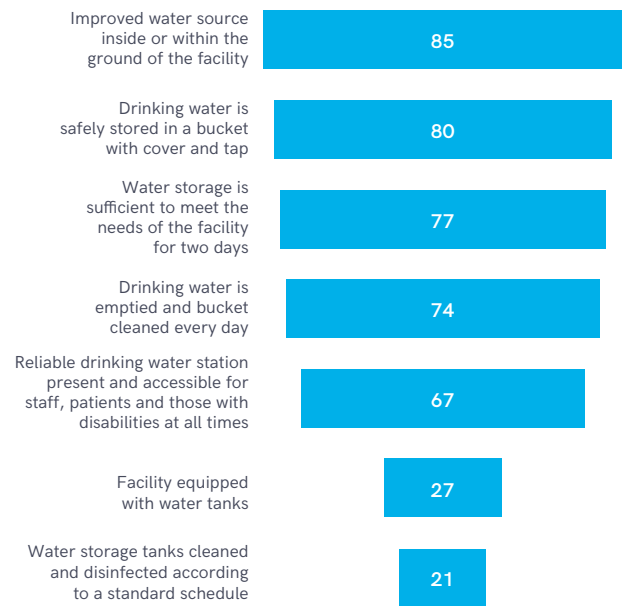
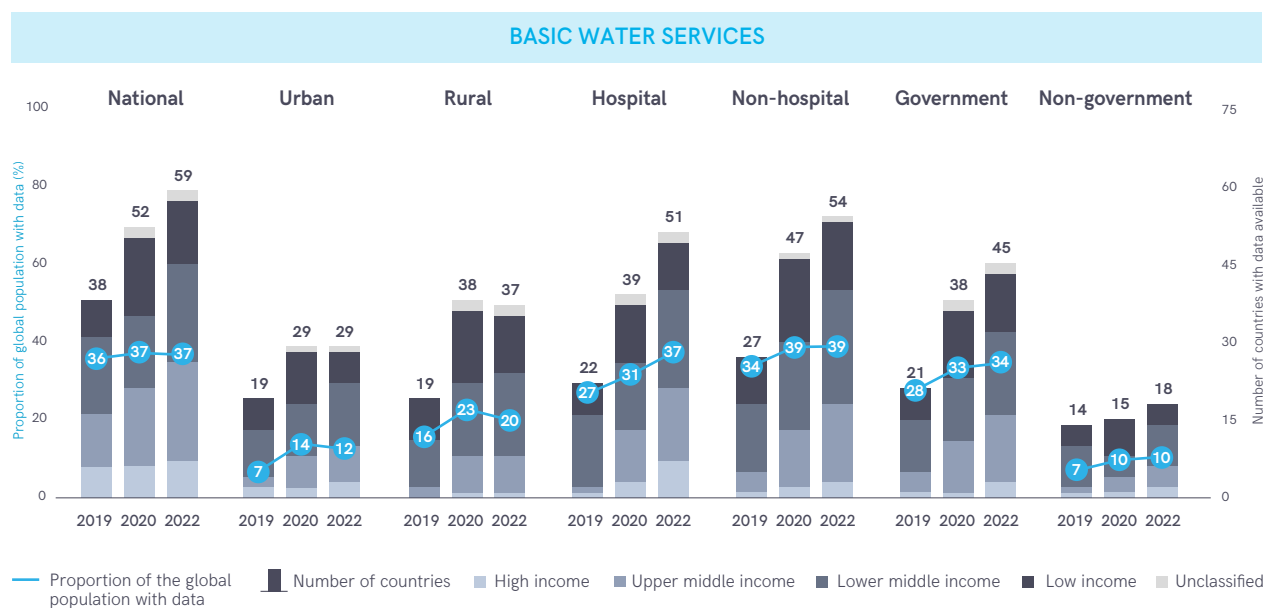


FIGURE 56 Different indicators of water storage in health care facilities in Egypt, 2020 (%)





While more countries have data on basic water services, the population living in countries with data has changed little



**FIGURE 57** Proportion of population (%) and number of countries with data on basic water services in JMP progress updates 2019–2022, nationally and by type of facility (%)



# Sanitation services in health care facilities



## BASIC SANITATION SERVICES

All patients, visitors and staff need to be able to safely use toilets while at health care facilities. Many patients will have infections that could potentially be spread through faecal routes, and sanitation infrastructure (toilets, bathroom plumbing, sewer connections, on-site storage and treatment systems) need to safely isolate excreta from human contact and ensure faecal pathogens do not contaminate the health care facility environment.

To meet the criteria for a basic sanitation service, health care facilities must have improved sanitation facilities that are usable, with at least one toilet dedicated for staff, at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility (Figure 58). This is consistent with the minimum requirements for IPC programmes, which include more detailed guidance on the appropriate number of toilets per number of beds in inpatient wards. Health care facilities that have improved sanitation facilities but do not meet all the other requirements for a basic service are classed as a limited service, and those

	IPC RECOMMENDATIONS
PRIMARY CARE	A minimum of two functional, improved sanitation facilities should be available on-site, one for patients and one for staff; both should be equipped with menstrual hygiene facilities.
SECONDARY AND TERTIARY CARE	A minimum of two functional, improved sanitation facilities that safely contain waste should be available for outpatient wards and one per 20 beds for inpatient wards should be available; all should be equipped with menstrual hygiene facilities.

Source: Minimum requirements for infection prevention and control programmes, WHO, 2019





with unimproved toilet facilities or no toilets at all are classed as having no service.

In 2021, estimates for basic sanitation services were available for 41 countries and three out of eight SDG regions. These countries only represented 19% of the global population, which is not sufficient to calculate global coverage of basic sanitation services. However, it is estimated that globally 1 in 10 health care facilities, and 780 million people, had no sanitation service in 2021.

Among the three SDG regions with sufficient data available to calculate regional estimates, basic sanitation coverage was higher in Northern Africa and Western Asia (49%) than in Latin America and the Caribbean (38%), and lowest in sub-Saharan Africa (13%). The proportion of health care facilities with no sanitation service ranged from 3% in Latin America and the Caribbean as well as Eastern and South-Eastern Asia to 22% in sub-Saharan Africa. In LDCs and in fragile contexts only one in five health care facilities had basic sanitation and a fifth had no service in 2021.

## SANITATION

### BASIC SERVICE

Improved sanitation facilities\* are usable, with at least one toilet dedicated for staff, at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility

### LIMITED SERVICE

At least one improved sanitation facility is available, but not all requirements for basic service are met

### NO SERVICE

Toilet facilities are unimproved (e.g. pit latrines without a slab or platform, hanging latrines, bucket latrines) or there are no toilets

\* Improved sanitation facilities are those designed to hygienically separate human excreta from human contact. These include wet sanitation technologies – such as flush and pour-flush toilets connecting to sewers, septic tanks or pit latrines – and dry sanitation technologies – such as dry pit latrines with slabs, and composting toilets.

**FIGURE 58** Basic sanitation service ladder for health care facilities



## Sanitation service levels varied widely between countries and regions in 2021

• Low income •• Lower middle income ••• Upper middle income •••• High income Basic Limited No service Insufficient data



**FIGURE 59** Sanitation services in health care facilities, by country, SDG region and income group, 2021 (%)



In sub-Saharan Africa, coverage of basic sanitation services was four times higher in urban health care facilities (24%) than in rural (7%) but there was little difference between government (11%) and non-government (14%) facilities. By contrast, in fragile contexts coverage in non-government facilities (25%) was nearly twice that in government facilities (13%).

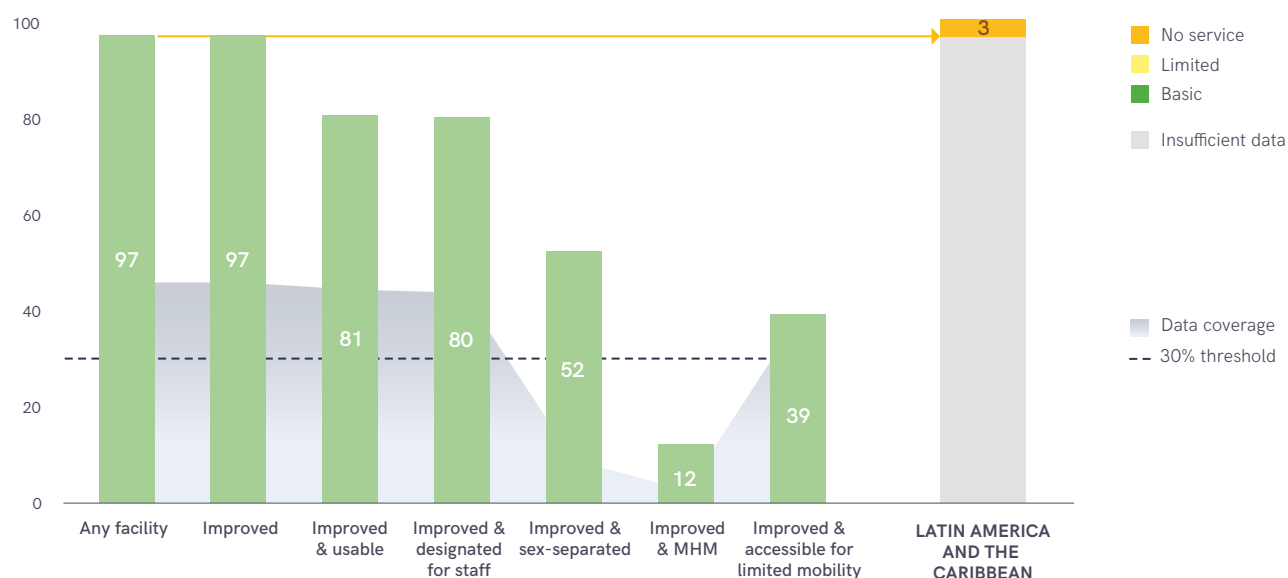
Among the 41 countries with national estimates available in 2021, sanitation service levels varied widely. While North Macedonia, Kuwait and Tokelau had already achieved universal access (>99%), none of the health care facilities in Niger and Honduras met the criteria for a basic sanitation service. Only one in five (8) countries had reached 50% coverage and in over half the countries with estimates available (25) coverage remained below 25%. In Northern Africa and Western Asia, basic coverage ranged from universal access in Kuwait to just 4% in the occupied Palestinian territories, and coverage remained below 50% in all countries with estimates available in sub-Saharan Africa, Latin America and the Caribbean, and Central and Southern Asia. In many countries a large proportion of health care facilities had a limited service. In 29 countries, at least 1 in 10 facilities had no service at all, and in Niger (26%) and Nigeria (32%) more than a quarter of facilities had no service in 2021 (Figure 59).

Figure 60 shows how the JMP estimates different levels of sanitation service in health care facilities, using the example of Latin America and the

Caribbean. The JMP only produces regional estimates when data for the relevant domain are available for at least 30% of the regional population. Data coverage is shown in grey behind the bars showing the proportion of health care facilities meeting each of the criteria for a basic sanitation service.

By 2021, 97% of health care facilities in Latin America and the Caribbean had some kind of improved sanitation facility and the remaining 3% were therefore classed as having no service (data on any facility were available for 46% of the regional population). But additional information is needed to estimate the proportion meeting the criteria for a basic sanitation service. In 2021, it is estimated that 81% of health facilities in the region had improved toilets that were usable, and 80% had improved toilets designated for staff (data for usable facilities were available for 45% of the population and but data coverage for staff was 44%). But far fewer health care facilities had toilets that were improved and sex-separated (52%), improved with facilities for menstrual hygiene (12%), and improved and accessible for users with limited mobility (39%). Data coverage was also low for sex-separated (9%) and for menstrual hygiene facilities (3%) but higher for limited mobility (39%). As such, there were insufficient data available to estimate the proportion of health care facilities in Latin America and the Caribbean with limited and basic services in 2021.

### Constructing the sanitation service ladder in Latin America and the Caribbean



**FIGURE 60** Proportion of health care facilities by type of sanitation service, and data coverage in Latin America and the Caribbean, 2021 (%)

An important component of the definition of a basic sanitation service is that health care facility toilets should be usable at the time of the survey. The global definition of usable is that toilets should be available, functional and private. If toilets exist but are inaccessible or locked, and therefore not available to patients and staff at all times, they are not usable. If toilets are broken, blocked, overflowing or lacking water, and therefore not functioning, they are not usable. And if toilets are not private because they lack lockable doors or have gaps in the walls allowing others to see in, they are not usable.

National definitions may vary, which makes cross-country comparison challenging, but recent health facility surveys show that usability varies widely (Table 4). In Lebanon and Haiti over 4 out of 5 health care facilities had 'functional' toilets while in Sudan, Pakistan and Morocco over 7 out of 10 toilets were 'available, functional and private'. Fiji and the Solomon Islands used more detailed definitions of privacy, but in the former, 2 out of 3 facilities had improved and usable toilets compared with just 1 in 20 facilities in the latter. Niger specified that there should be no barriers on the path/opening blocking access to the toilet, while Bangladesh specified that there should be no cracks, leaks or blockages. Based on these stricter definitions, only a third of health care facilities in Niger and a fifth of facilities in Bangladesh were found to have improved and usable toilets in 2017.

Disaggregated data can be used to examine the different reasons that health care facility toilets are not usable in each country. For example, in Bangladesh 78% of health care facilities had toilets that were lockable from the inside, compared with just 53% in the Solomon Islands. In the former, health care facilities were more than twice

as likely to have toilets with no major holes in the walls than the latter (58% vs 26%). Two thirds of facilities (68%) in the Solomon Islands had functional toilets, while in Bangladesh three quarters (75%) had toilets with water available but just over half (54%) had no cracks or leaks and less than half were not blocked (46%).

To meet the criteria for a basic sanitation service, health care facility toilets should not only be improved and usable but also: designated for staff, separated by sex, equipped with menstrual hygiene facilities, and accessible to those with limited mobility. This means that all health care facilities must therefore have at least two toilets: one dedicated for staff, and one gender-neutral toilet for patients that has menstrual hygiene facilities and is accessible for people with limited mobility.

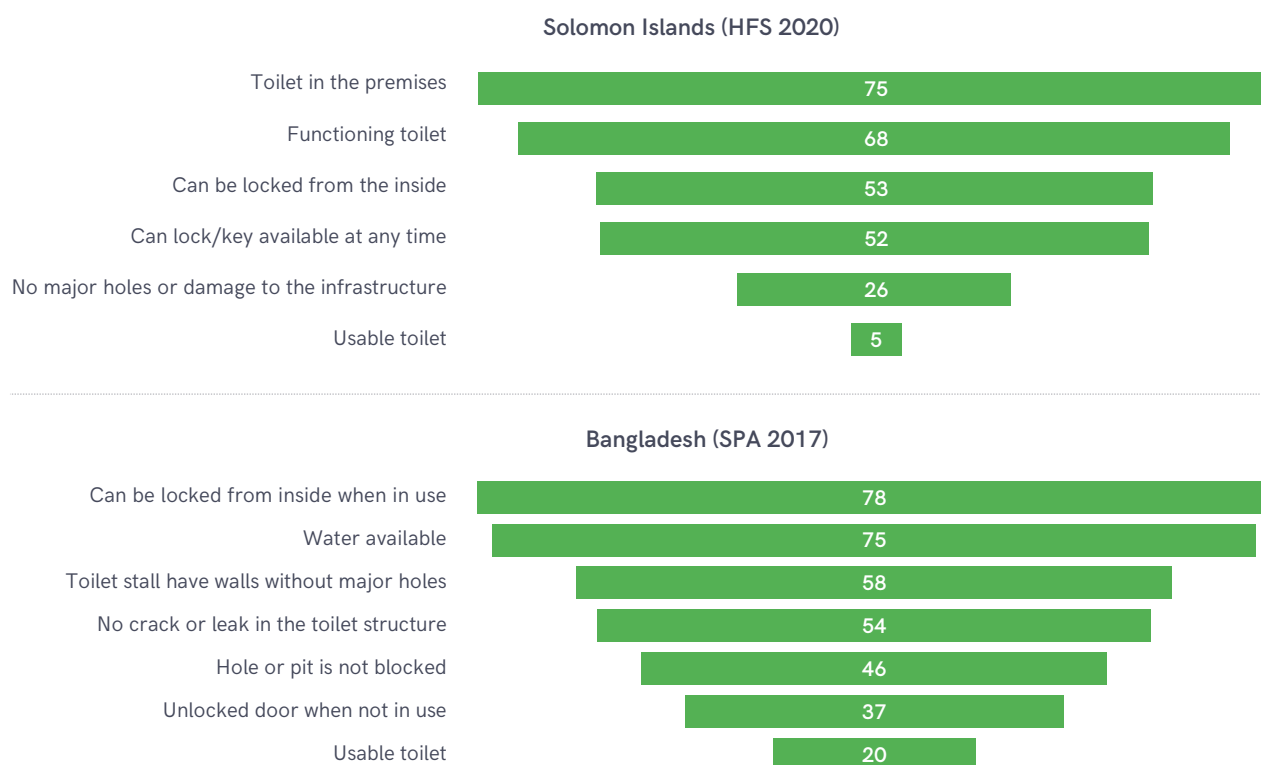
Figure 62 shows that in most countries with disaggregated data available, hospitals are more likely to meet the criteria for a basic sanitation service than non-hospitals. For example, a 2021 assessment of WASH in health facilities in the Islamic Republic of Iran found that hospital toilets were four times as likely to be sex-separated and provide menstrual hygiene facilities and five times as likely to be accessible to those with limited mobility. 98% of hospitals had toilets designated for staff, compared with just 58% of non-hospitals. The 2019 census in Bhutan found that hospital toilets were twice as likely to be sex-separated and provide menstrual hygiene facilities than non-hospital toilets. But coverage of toilets accessible to those with limited mobility was nearly three times higher in non-hospitals (34%) than in hospitals (12%). Zimbabwe was the only country where non-hospitals (91%) were more likely than hospitals (76%) to have toilets designated for staff.

#### National health facility surveys often use different definitions of usable toilets

Country	Source	Year	Definition	Health care facilities with improved and usable toilets
Lebanon	WASH in Public Health Centers	2017	Functional	83%
Haiti	Service Provision Assessment	2018	Functioning	88%
Sudan	National Health Facility Survey	2021	Available, functional and private	71%
Pakistan	Analytical assessment report	2021	Usable, functional and private	78%
Morocco	Health Facility Survey	2021	Disponibles, en état de marche, privées	92%
Fiji	Census	2017	Doors which can lock (or for which a key is available), no major holes in the infrastructure and functioning	62%
Solomon Islands	Health Facility Survey	2020	Toilets on premises, functioning, which can lock (with key available at all times), which can be locked from inside, with no major holes/damages to the infrastructure	5%
Niger	World Vision International	2017	Unlocked door or key always available, door which can be closed from inside, no barriers on path/opening that block the use, no holes	32%
Bangladesh	Service Provision Assessment	2017	Unlocked when not in use, can be locked from inside when used, toilet stall have walls without major holes, water available, no crack or leak in the toilet structure and hole or pit is not blocked	20%

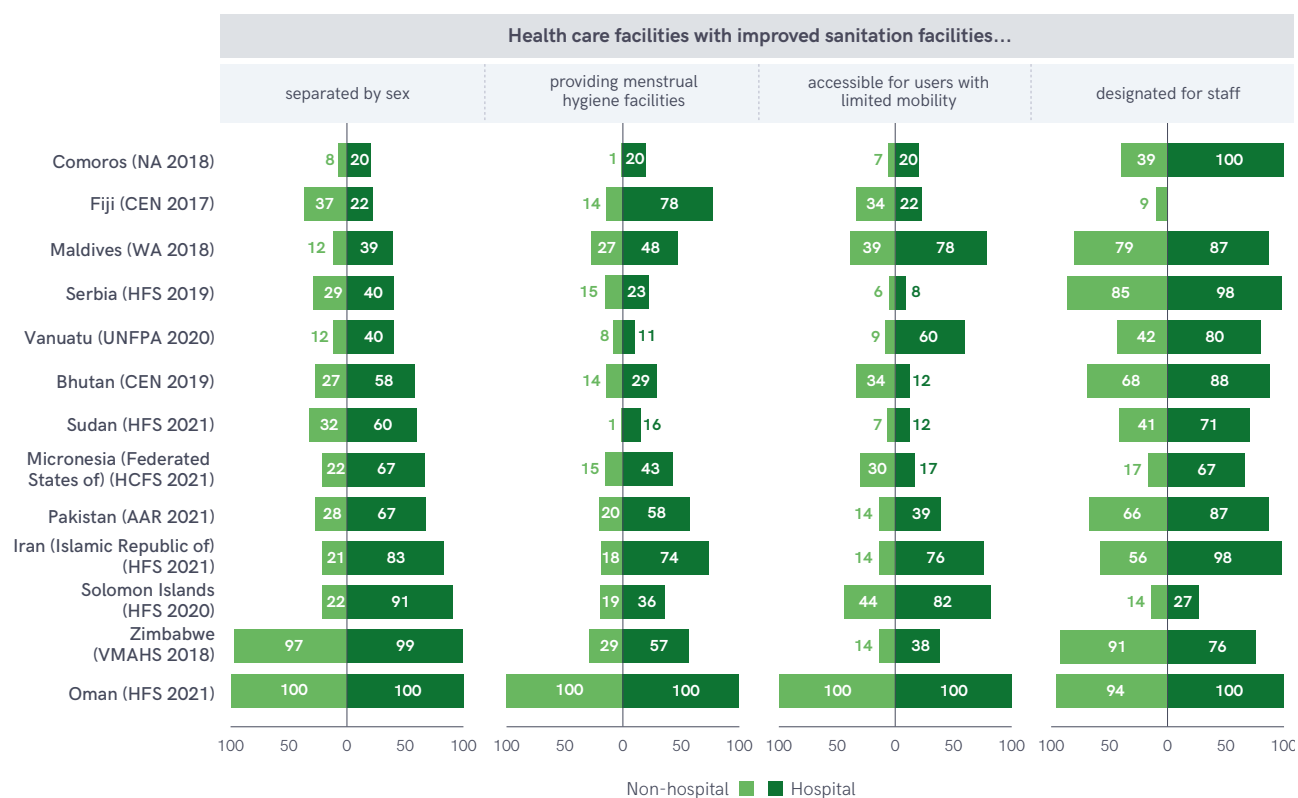
**TABLE 4** Definitions of usable toilets in health care facilities, selected national data sources 2017–2021

## 1 in 20 health care facility toilets in the Solomon Islands had usable toilets in 2020



**FIGURE 61** Proportion of health care facilities meeting different criteria for usable toilets, Bangladesh 2017 and Solomon Islands 2020 (%)

## Hospitals are more likely to meet the criteria for a basic sanitation service than non-hospitals



**FIGURE 62** Proportion of hospitals and non-hospitals meeting different criteria for a basic sanitation service, selected surveys 2017–2021 (%)

Many countries do not yet have national data available on all the elements of a basic sanitation service. The JMP will make a national estimate for basic sanitation services if data are available on improved and usable toilets, and at least two of the four remaining criteria (designated for staff, sex-separated, menstrual hygiene, limited mobility). As these data may come from different sources, the basic service level is calculated as the minimum of these values.

Figure 63 shows that among the 41 countries with sufficient data available to produce national estimates for basic sanitation services in 2021, health care facility toilets were significantly less likely to meet the criteria for menstrual hygiene and for limited mobility. In Sierra Leone, nearly all health care facilities (96%) had improved and usable toilets, but less than half (43%) were sex separated and only 15% were accessible for limited mobility, so this value is used to estimate basic sanitation. Nigeria has data available for all five

### The limiting factor for basic sanitation services varies across countries

Country	Any sanitation facility	Improved sanitation facility	Improved and usable sanitation facility	Improved and dedicated for staff	Improved and sex-separated	Improved and providing menstrual hygiene facilities	Improved and accessible to those with limited mobility	Basic sanitation services
Kuwait	100	100	100	100	100	100	100	100
North Macedonia	100	100	100	100	100			100
Tokelau	100	100	100	100		100		100
Oman	100	100	100	95	100	100	100	95
Montenegro	100	100	100	100	100	100	85	85
Thailand			96	92		81	97	81
Egypt	94	94	94	74	68			68
Cook Islands		80	80	60		80		60
Burundi			73	72	48			48
Azerbaijan	100	100	98	48	100	100		48
Brazil	100	100	84	82			45	45
Mozambique	99		72	43	62			43
Jordan		86	68	77	71	63	41	41
Armenia		81	62	87	42	42	41	41
Bangladesh	97	94	36	98	93	31	38	31
Paraguay	100	88	63	31	26			26
Iran (Islamic Republic of)	98	84	79	62	29	26	22	22
Micronesia (Federated States of)	89	85	77	21	26	18	29	18
Zimbabwe	100	99	64	89	97	32	17	17
Guinea Bissau		100	48	68	32	17	24	17
Bhutan	100	99	84	73	31	16	31	16
Lebanon	96	83	83	70	59	31	16	16
Pakistan		86	78	67	30	22	16	16
Maldives	100	100	99	80	15	30	44	15
Sierra Leone	100	96	96		43		15	15
Nigeria	81	81	65	69	35	22	14	14
Fiji	99	88	62	9	37	17	33	9
Vanuatu		76	68	43	13	9	11	9
Peru	97	90	83	86	66		7	7
Sudan	91	81	71	47	38	7	8	7
Serbia	99	98	78	87	48	27	6	6
Rwanda	100	99	91	16	31	6	6	6
United Republic of Tanzania	73	73	73		55		6	6
Solomon Islands	81	79	5	14	24	20	46	5
Honduras	100	96	80	59	46	4	18	4
occupied Palestinian territory	100	97	83	44	38		4	4
Lao People's Democratic Republic	100		93	5	14		4	4
Kenya	99	86	86		62	15	4	4
Malawi		91	77	20	40	3	44	3
Comoros	97	92	38	43	9	2	7	2
Niger		74	29	30	31	0	27	0

**FIGURE 63** Proportion of health care facilities meeting the criteria for a basic sanitation service, among countries with national estimates in 2021 (%)

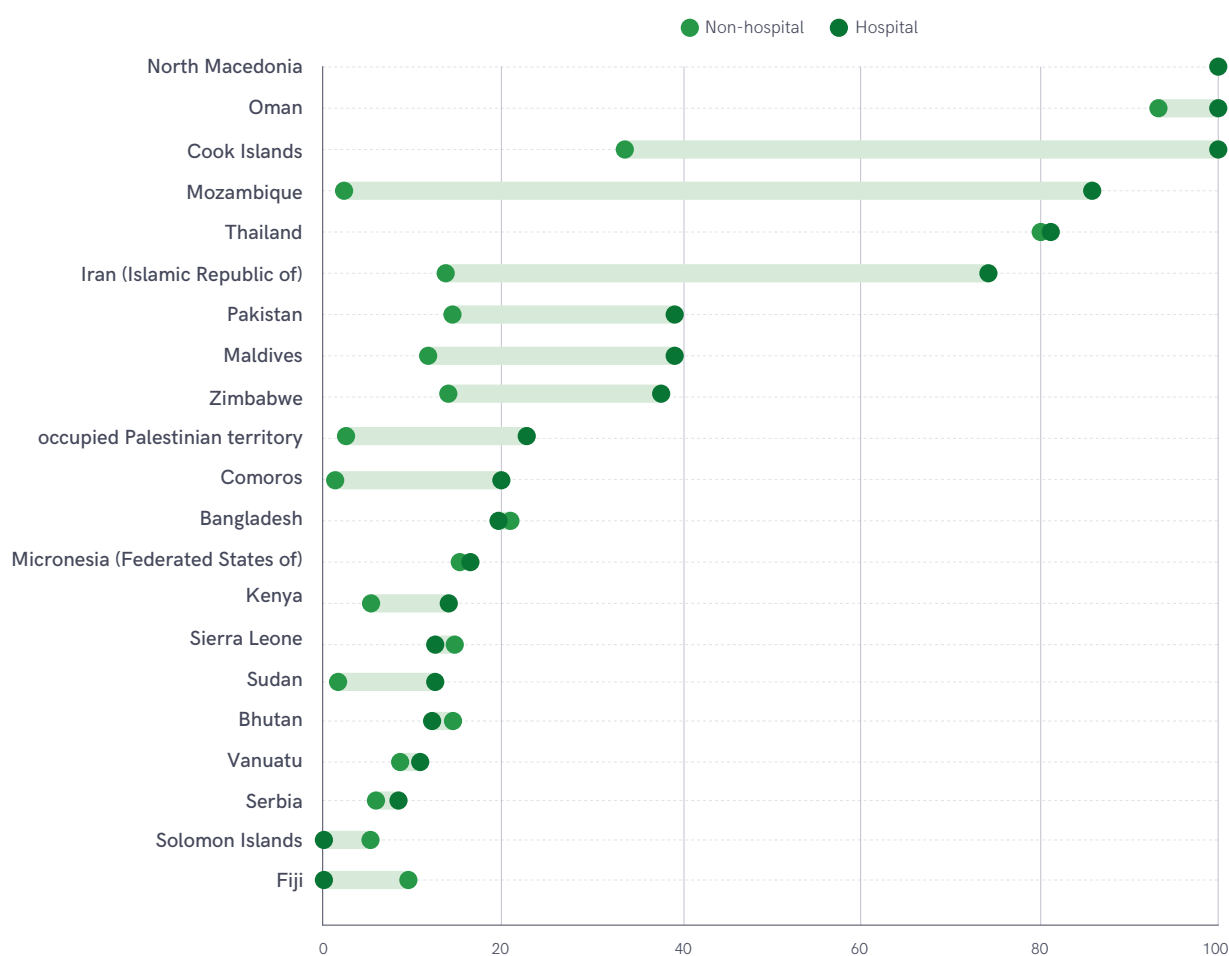


elements, which show that while two thirds of health care facilities have toilets that are improved and usable and dedicated for staff, a third have sex-separated toilets, a fifth have toilets with menstrual hygiene facilities, and only 14% have toilets accessible for people with limited mobility. In nine countries less than 10% of health care facilities had accessible toilets, and in seven countries less than 1 in 10 had toilets with menstrual hygiene facilities.

Disaggregated data also highlight disparities in basic sanitation coverage between hospitals and non-hospitals (Figure 64). While there is little or no difference in North Macedonia, Thailand, Bangladesh and the Federated States of Micronesia, in most countries basic sanitation coverage is higher in hospitals than in non-hospitals. In seven countries the gap in coverage exceeds 20 percentage points and in the Cook Islands, Mozambique and the Islamic Republic of Iran it exceeds 50 percentage points. In 2021, 86% of hospitals in Mozambique had a basic sanitation service, compared with just 2% of non-hospitals. In five countries, coverage was higher in non-hospitals, including in Fiji and the Solomon Islands where none of the hospitals met the criteria for a basic sanitation service in 2021.



### In most countries, sanitation coverage is higher in hospitals than in non-hospitals



**FIGURE 64** Proportion of hospitals and non-hospitals with a basic sanitation service, 2021 (%)

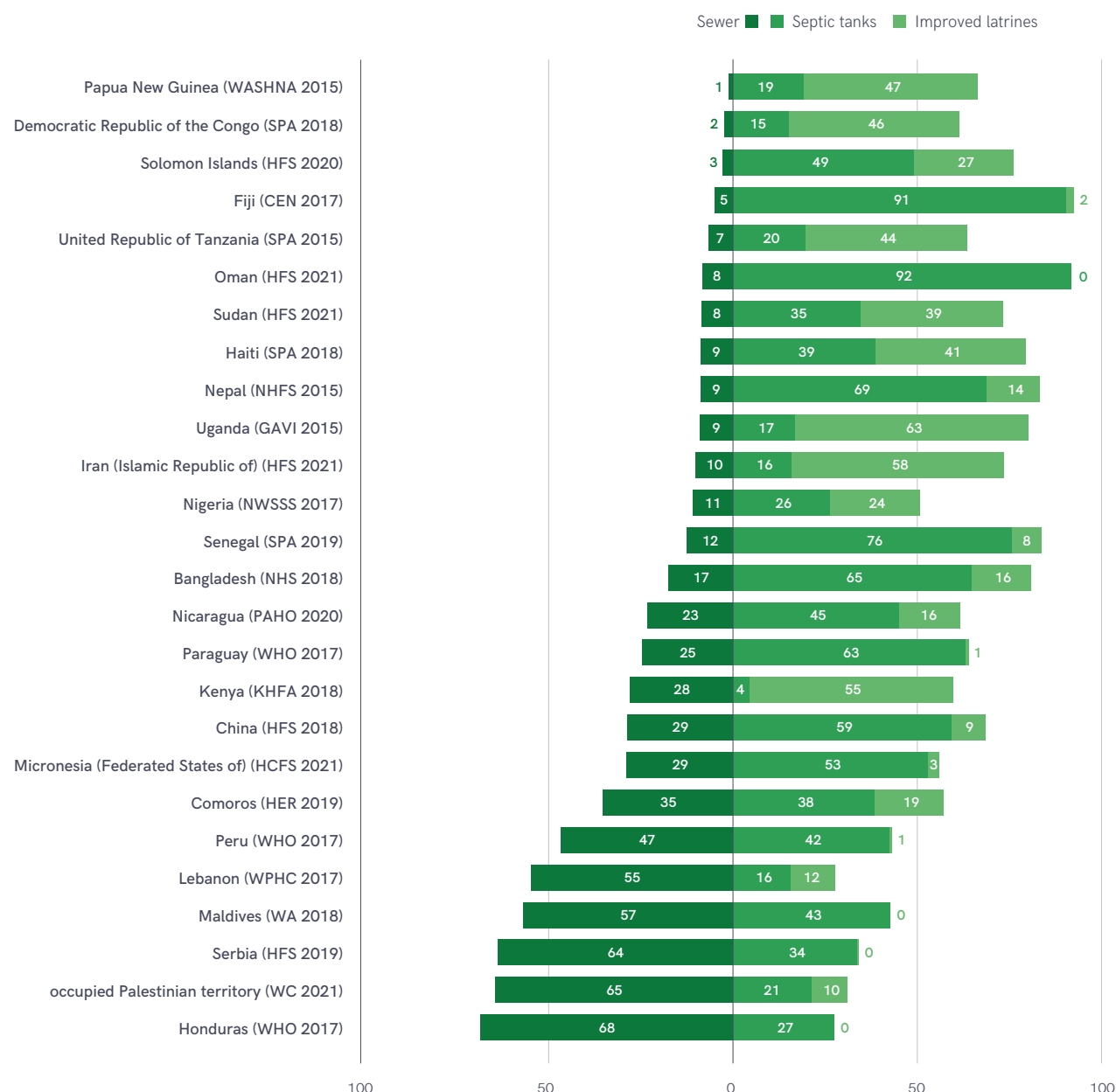
## OTHER ELEMENTS OF SANITATION SERVICES

There are many other aspects of sanitation services that are not included in the global indicator for a basic service but are relevant for national monitoring. In particular, safe management of excreta is not considered in the basic service indicator, and approaches to safe management will vary depending on the type of sanitation facility used. Figure 65 shows that in many countries with disaggregated data available only a small proportion of health care facilities are connected to sewers while the rest rely on either septic tanks or improved latrines. For example, in Oman 92% of health care facilities have septic tanks and only 8% have sewer connections. In the United Republic of Tanzania 7% of

facilities have sewers, 20% have septic tanks and 44% have improved latrines, whereas in Senegal coverage of sewers is equally low (12%) but more facilities use septic tanks (76%) than improved latrines (8%). Peru has similar levels of coverage of sewers and on-site sanitation, while in Serbia around two thirds of health care facilities have sewers and one third have septic tanks.

The 2019 IPCAF survey asked health care facilities whether they had a wastewater system available (either on or offsite) and functioning reliably. Data from more than 4,000 facilities show that health care facilities in high income countries are much more likely to have wastewater treatment systems than upper-middle, lower-middle and low income countries (Figure 66).

### Many health care facilities are not connected to sewers



**FIGURE 65** Proportion of health care facilities by type of improved sanitation facility, selected surveys, 2015–2021 (%)

Availability of functioning wastewater systems was much higher in high income countries in 2019

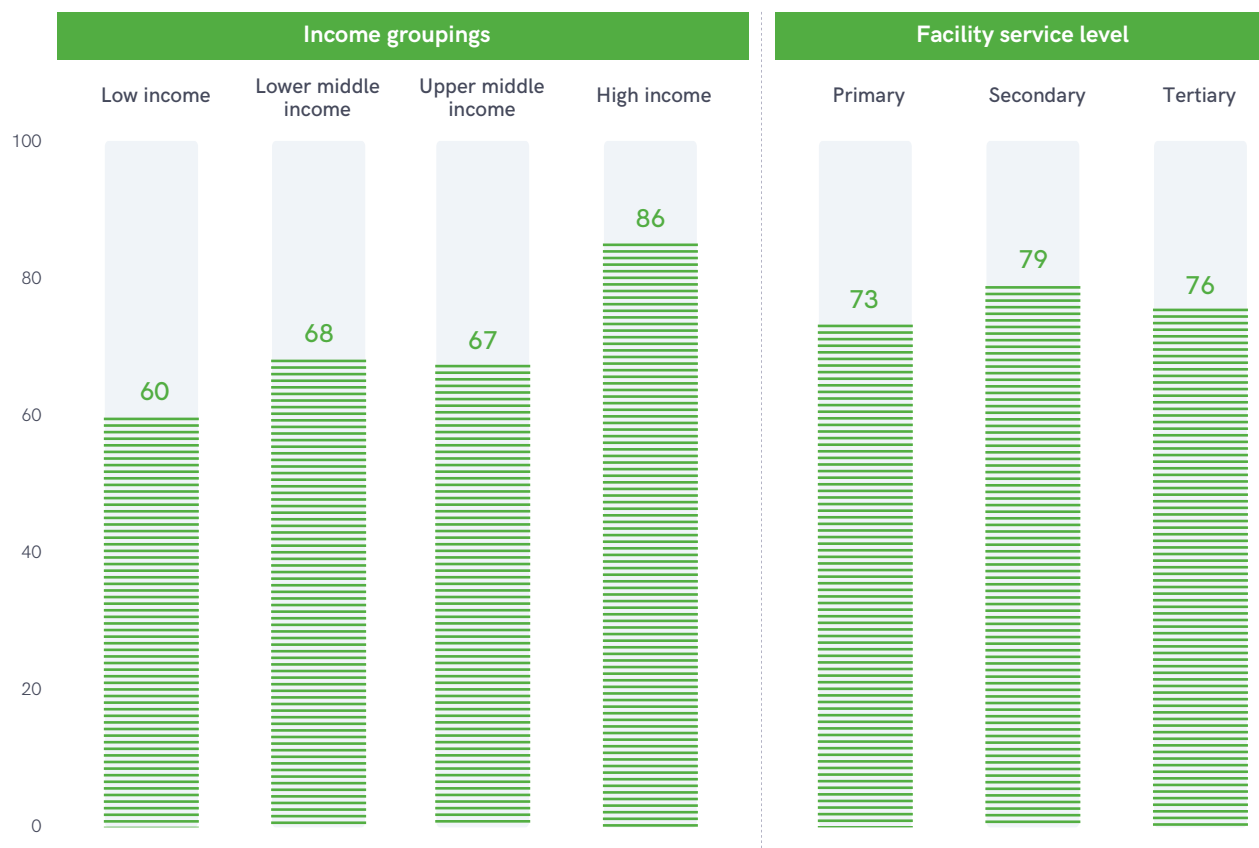


FIGURE 66 Wastewater treatment system (either on or off site) is available and functioning reliably, IPCAF survey 2019 (%)



In 2021, relatively few countries had data on disposal of waste from health care facility on-site sanitation systems such as septic tanks and pit latrines. In Oman, all tanks are safely emptied and waste is either buried in-situ or delivered to a treatment plant. In the Islamic Republic of Iran and in Pakistan, wastes were twice as likely to be safely emptied from hospitals than from non-hospitals but there was little difference in Sudan. In Nigeria and Sudan, 28% of health care facilities in urban areas unsafely emptied waste, compared with just 13% and 3% of rural facilities respectively (Figure 67).

The Federated States of Micronesia collects additional information on whether on-site facilities to treat

wastewater are present and whether they are functioning properly. A national survey conducted in 2021 found that three out of five health care facilities had treatment facilities present and functioning, but a quarter had no treatment facility present, and there were significant differences between facility types. Over 9 out of 10 hospitals had facilities present and functioning compared with just a third of non-hospitals, of which half had no facility at all. Half of non-government health care facilities had functioning facilities, compared with less than a third of government facilities, of which the majority had wastewater treatment facilities present but not functioning (Figure 68).

Hospitals are most likely to safely empty wastes from on-site sanitation facilities

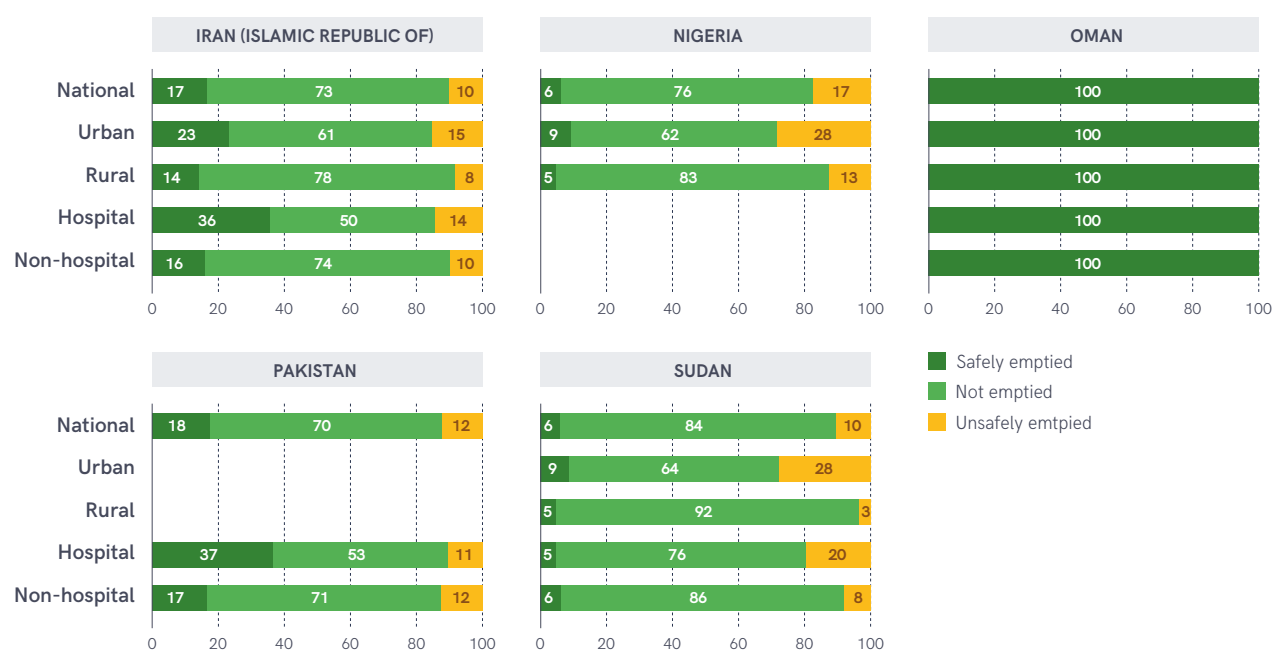


FIGURE 67 Proportion of health care facilities practising emptying of on-site sanitation containments, selected surveys 2019-2021 (%)

In the Federated States of Micronesia, 9 out of 10 hospitals had on-site treatment systems to safely manage wastewater in 2021

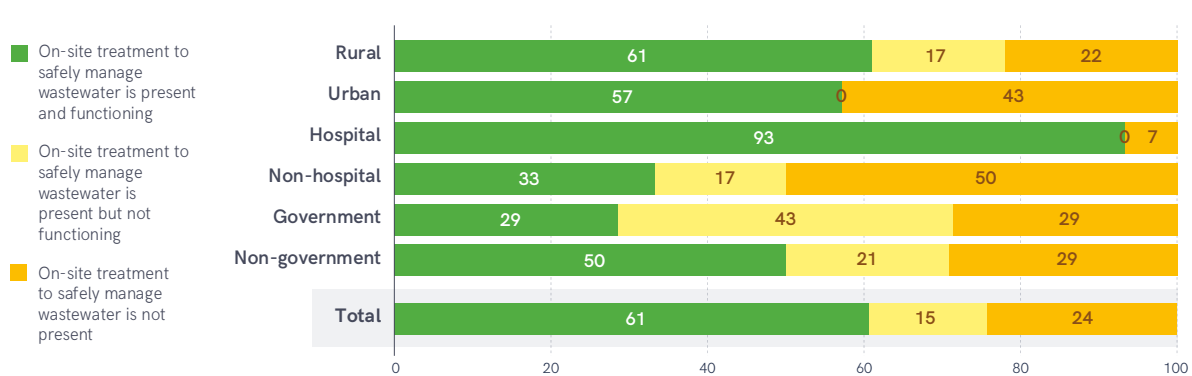


FIGURE 68 On-site treatment of safely managed wastewater in health care facilities, Federated States of Micronesia, 2021 (%)



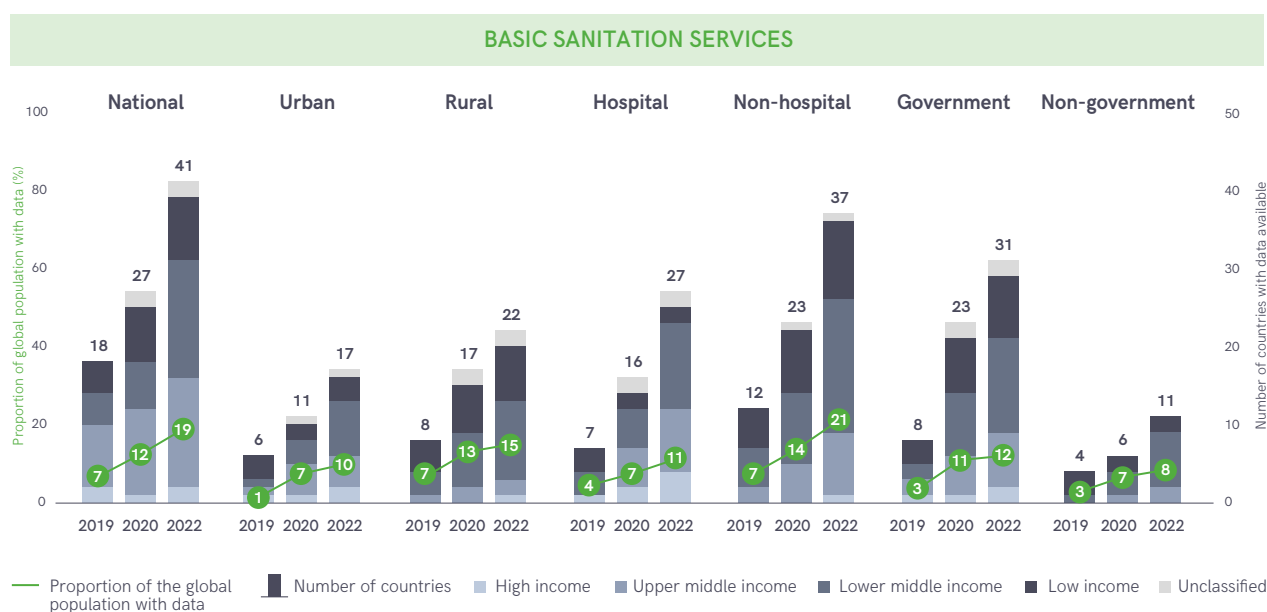


## DATA COVERAGE

Global availability of data on sanitation remains low but has increased steadily with each JMP progress update (Figure 69). Since 2019, the number of countries with national estimates has more than doubled from 18 to 41. The proportion of the population for which estimates are available has increased from 7% to 19%, but this is not sufficient to make a global estimate. The fastest growth has been among lower-middle income

countries, rising from 5 countries in the 2019 baseline report to 16 countries in this 2022 progress update. More countries have estimates for non-hospitals (37) than for hospitals (27) and for rural (22) than for urban facilities (17). In 2022, 31 countries had estimates for government facilities, but only 11 countries had estimates for non-government facilities, representing just 8% of the global population.

Data coverage is growing rapidly for basic sanitation, but remains too low to produce global estimates



**FIGURE 69**

Proportion of population (%) and number of countries with data on basic sanitation services in JMP progress updates 2019–2022, nationally and by type of facility (%)

# Universal access to WASH services in health care facilities



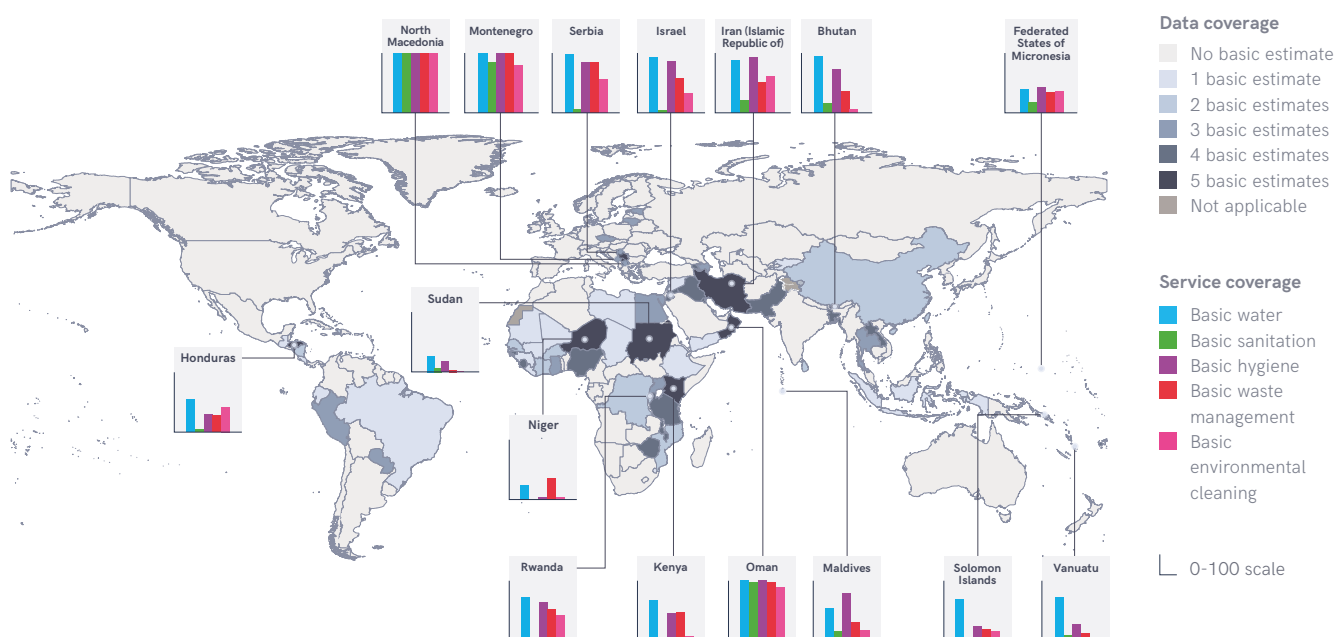
Previous chapters have highlighted national level coverage of the five basic WASH indicators, and also inequalities between urban and rural areas, hospitals and smaller facilities, and health care facilities under government and non-government management. However even within an individual health care facility there can be inequalities between different wards and units, and different users – patients with disabilities may find it particularly difficult to access WASH as well as general services in health care facilities. Finally, health care facilities operating in emergency settings, including refugee camps, face additional difficulties in ensuring universal access to basic WASH services, and therefore in implementing effective IPC programmes.

In 2021, 78 countries had national estimates for at least one basic WASH service indicator. In 21 countries data were available for only one indicator – usually waste management services, since there are assessments focusing exclusively on waste management. But in 16 countries all five service

levels could be measured (Figure 70). In 11 of these countries, basic sanitation had the lowest coverage of the five indicators, in some cases by large margins; in Serbia only 6% of health care facilities had basic sanitation, 50 percentage points below the next lowest service, environmental cleaning (56%). This is because the basic sanitation indicator includes some elements that represent significant challenges, especially the accessibility of toilets to people with limited mobility, and the availability of menstrual hygiene facilities in toilets (Figure 63). Environmental cleaning coverage was also relatively low, and in Bhutan, Montenegro, Sudan and Vanuatu was the lowest of the five basic WASH services. In contrast, coverage of water services was relatively high, and in 10 of the countries with data on all five services, water had the highest coverage. In the Solomon Islands, 7 out of 10 (69%) health care facilities had basic water but less than 1 in 4 had each of the other four basic WASH services.



### Sixteen countries had national data on all five basic WASH indicators



**FIGURE 70** Number of basic estimates by country, and proportion of health care facilities with different levels of all five WASH service ladders, 2021 (%)



Similarly, a sub-national assessment in Morocco, covering 95 health care facilities in the region of Rabat-Salé-Kénitra, found that basic water services were consistently high in the seven provinces and prefectures assessed, ranging from 80% in Sidi Kacem to universal (>99%) in Skhirat Tamara (Figure 71). But in three provinces and one prefecture not even one health care facility met all the requirements for basic sanitation; only eight facilities in the entire assessment did. The requirements for a basic water service are simply less difficult to meet than those for a basic sanitation service. Accordingly, many countries have set targets for higher levels of service for water and other WASH indicators, but not for sanitation services (e.g. Serbia – see Box 2).

In northern Morocco, health care facilities have higher coverage of water than other basic WASH services

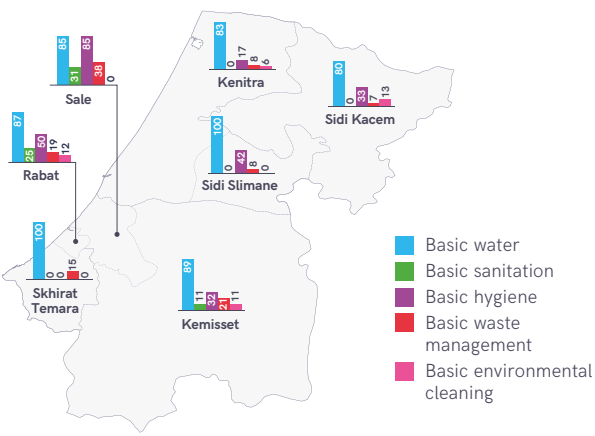


FIGURE 71 Proportion of health care facilities with basic WASH services in provinces and prefectures of Rabat-Salé-Kénitra region, Morocco, 2019 (%)

BOX 2

Advanced levels of service in Serbia

In 2019 the Ministry of Health in Serbia undertook a comprehensive national assessment of WASH in health care facilities<sup>35</sup>. Data were collected from 320 health care facilities, including all service levels, in rural and urban settings, and from all administrative regions in the country. The survey found very high basic water coverage, but that basic sanitation and basic environmental cleaning were not yet universally available. Most facilities provided three or four of the basic WASH services (Figure 72).

Following the survey, a team of experts at the Network of Institutes of Public Health suggested a set of indicators and definitions of advanced levels of WASH services in health care facilities, which are considered as priorities for the time being. The team did not propose an advanced indicator for sanitation because of the complexity of the existing basic service indicator and the efforts still needed to achieve this level of service.

<sup>35</sup> National Situational Analysis of Water, Sanitation and Hygiene in Health Care Facilities in Serbia. Copenhagen: WHO Regional Office for Europe, 2020 <[https://www.euro.who.int/\\_data/assets/pdf\\_file/0005/460823/National-situation-analysis-WASH-Serbia.pdf](https://www.euro.who.int/_data/assets/pdf_file/0005/460823/National-situation-analysis-WASH-Serbia.pdf)>.

Basic WASH services in health care facilities in Serbia

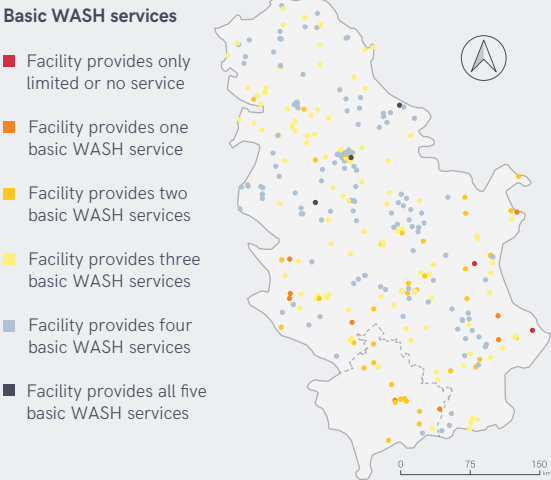


FIGURE 72 Number of basic WASH services provided by health care facilities in Serbia, 2019

Advanced water	Drinking water is chemically and microbiologically compliant with national regulations; a hygiene plan, including water operation and maintenance, is in place; and an IPC team is responsible for regular monitoring of water services.
Advanced sanitation	No advanced indicator.
Advanced hygiene	Hand hygiene facilities are provided with both soap and disinfectant; all health care staff have received training on IPC; and hand hygiene facilities at critical points are provided with reminders or instructions for promotion of good hand hygiene practice.
Advanced waste management	A health care waste management protocol is in place, and infectious waste is picked up daily or safely stored for a maximum of three days before treatment and/or disposal.
Advanced environmental cleaning	Cleaning of toilets and critical surfaces is performed at least twice per day and whenever soiled, and linen or disposable bed sheets are used and replaced between patients and whenever soiled.

TABLE 4 Proposed indicators of advanced WASH services in Serbia



Due to continued low data coverage for environmental cleaning, there are no SDG regions with estimates for all five WASH indicators. However, regional estimates were available for four out of five services in LDCs in 2021 (Figure 73). LDC coverage is around a third lower than global average for basic water (53% versus 78%) and basic hygiene services (32% versus 51%). Among the 1.08 billion people living in LDCs in 2021, 510 million lacked access to basic water at their health care facilities, including 206 million who had no water service (either an unimproved water supply, or no water source available). 858 million lacked basic sanitation, 731 million lacked basic hygiene, and 710 million lacked a basic waste management service.

### WASH services are lacking in many health care facilities in LDCs

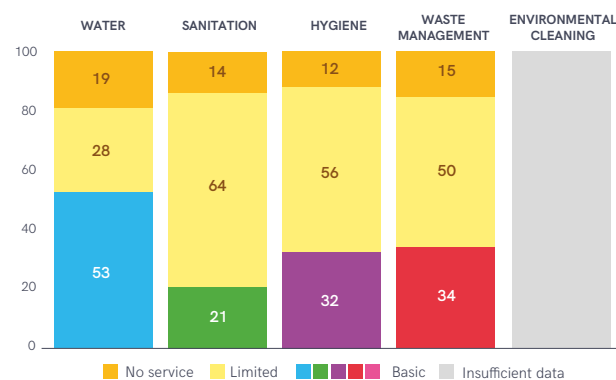
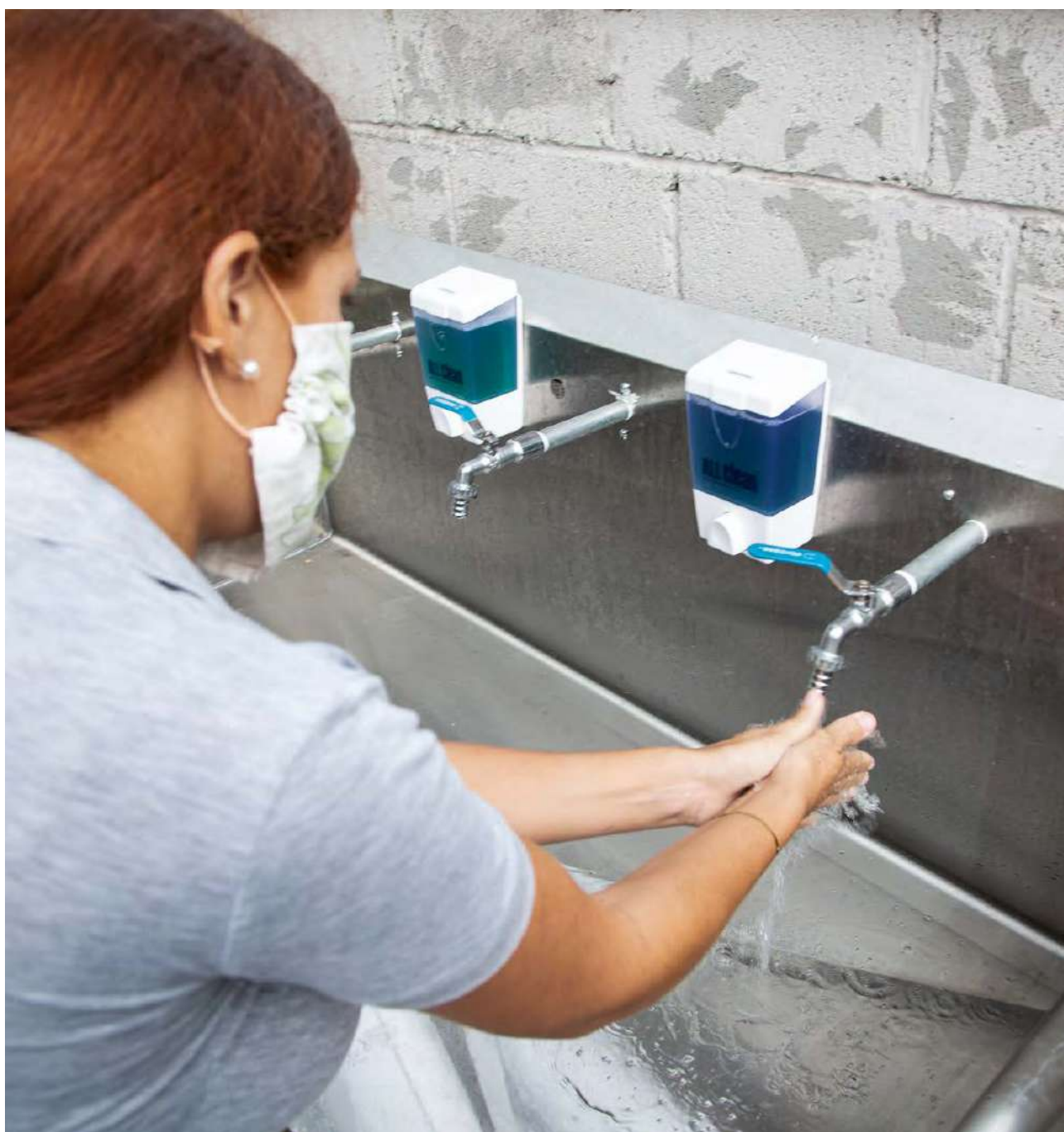


FIGURE 73 WASH service ladders in LDCs, 2021 (%)



WASH and IPC in delivery rooms

Globally there has been a substantial increase in the proportion of women who give birth at health care facilities. Whereas in 2000 just half (51%) of women globally gave birth in a health care facility, in 2021 four out of five (80%) women did. In many countries, the shift from home deliveries to facility deliveries has been a key objective of the health sector, with the aim to improve delivery outcomes and the quality of maternal and newborn care.

It is estimated that almost one in four births globally take place in LDCs, and that each year 16.6 million women in these countries give birth in health care facilities with inadequate water, sanitation and hygiene. In 2021, basic hygiene services were available in just one third (32%) of health care facilities in these countries, and only 37% of the population had a handwashing facility with water and soap at home.

For example in 2021, almost all women (99.7%) in Fiji gave birth at a health care facility, of which 69% had a basic water service but just 42% had basic hygiene and only 9% had basic sanitation. By contrast, less than half of all women (44%) gave birth at a health care facility in Niger, where only a quarter of health care facilities had a basic water service, 4% had basic hygiene and almost none (<1%) had basic sanitation in 2021.

Delivery rooms require tailored WASH services to ensure a safe and dignified delivery and minimize the risks of infections including sepsis, a leading cause of both maternal and neonatal mortality. Basic WASH services in the delivery room

include: running water, a usable toilet accessible to women during labour, handwashing facilities, sterile equipment, a shower or bath for women, systems for waste segregation and placenta disposal, and protocols and training for cleaning the delivery room. Related IPC precautions include sterile gloves, a cord tie and blade to cut the umbilical cord, and a clean surface or material for women to deliver on – these are often available together as part of a ‘clean birth kit’.

The WHO/UNICEF JMP has developed draft core questions and indicators for monitoring WASH and related IPC in delivery rooms<sup>36</sup>. These are recommended for use in health care facility assessments, which include visits to areas where different services are offered, as well as dedicated emergency obstetric and newborn care surveys.

Many facility assessments, like the SARA and SPA surveys, collect information from multiple locations within a health care facility, including in the maternity ward or other area where delivery services are provided. Data from eight recent national surveys show that delivery kits are often available where delivery services are provided, but that other elements are often lacking (Figure 74). Delivery rooms were much more likely to have soap than alcohol-based hand rub available, and sharps containers were more common than other waste receptacles such as pedal bins with colour-coded liners. In all eight surveys less than half of delivery rooms had all the WASH and IPC materials on the checklist.

<sup>36</sup> <<https://washdata.org/report/jmp-2019-core-questions-delivery-rooms-draft-sept-2019>>.

Standard WASH and IPC measures are often missing in delivery rooms



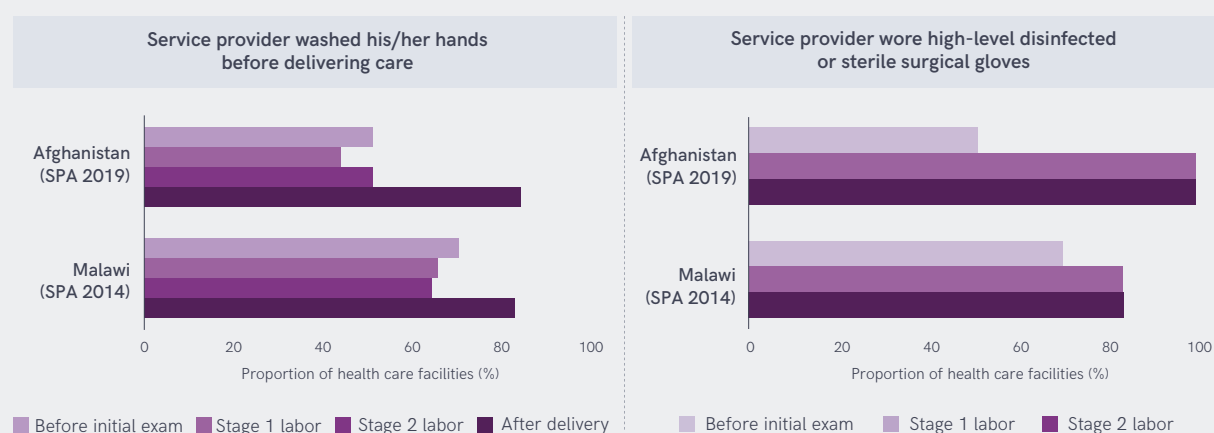
FIGURE 74 Availability of WASH and standard IPC precautions where delivery services are provided, selected SPA and SARA surveys 2015–2019 (%)

A small number of SPA surveys have included observations of health care workers during medical procedures. Surveys in Afghanistan (2019, subnational) and Malawi (2014) have comparable data available about observed handwashing at different stages in labour and delivery: before the initial exam, during the first stage of labour, during the second and third stages of labour, and after delivery (Figure 75). Handwashing with soap and water or use of a disinfectant was not universal either before the initial exam, or during labour; in Afghanistan, about half of service providers did so, while in Malawi in 2014, about two thirds of service providers did. However, hand hygiene after the delivery was much more common, at about 85% in both assessments. While handwashing and use of disinfectants was not universal, all

service providers in Afghanistan, and 84% of those in Malawi, were observed to wear high-level disinfected or sterile surgical gloves during labour and delivery.

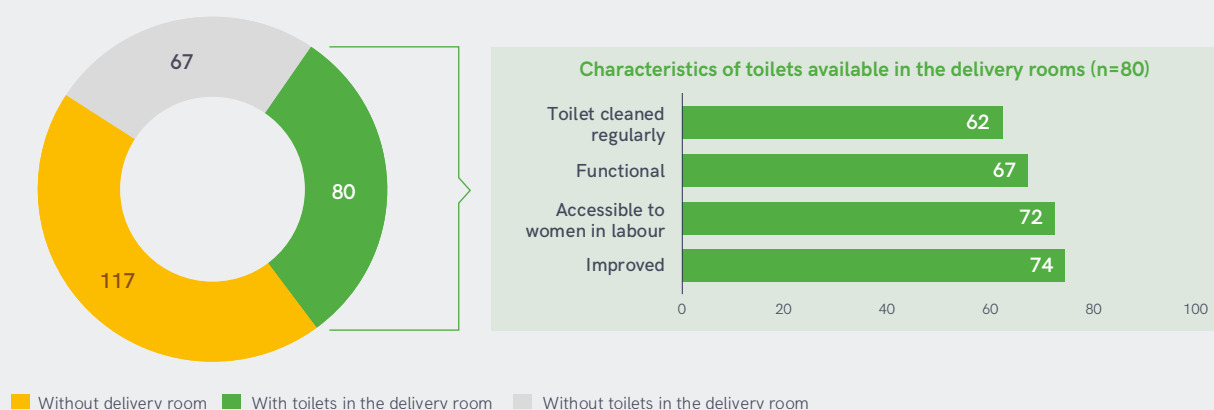
A recent health care facility survey in the Solomon Islands included an assessment of sanitation facilities in delivery rooms. Among 264 health care facilities surveyed, 197 had delivery rooms but only 80 of these were found to have toilets. The survey found that while three quarters of the toilets in delivery rooms were improved, only two thirds were functional. Furthermore, while 7 out of 10 had toilets accessible to women in labour, only 6 out of 10 had toilets that were regularly cleaned (Figure 76).

### In Afghanistan and Malawi, many service providers wore gloves but didn't wash hands or use antiseptics during deliveries



**FIGURE 75** Observed handwashing and glove use by service providers during labour and delivery, selected SPA surveys, 2010–2019 (%)

### In 2020, less than half of delivery rooms in Solomon Islands had toilets and only two thirds of these were functional



**FIGURE 76** Proportion of health care facilities with delivery rooms having toilets that meet different criteria, Solomon Islands, 2020 (%)

WHO's Health Resources and Services Availability Monitoring System (HeRAMS) initiative supports countries to collect core information on health resources. HeRAMS assessments are often nationally representative, and typically implemented in emergencies, but can also form part of routine data collection<sup>37</sup>. The assessments collect some information on WASH services, but the indicators are often composite indicators that can't be disaggregated, and contain elements that are not part of the global indicators used by the JMP. For example, the HeRAMS hand hygiene indicator calls for facilities with water and soap or alcohol-based hand rub to be available at points of care, and also for staff to be trained in good hygiene practice. But it doesn't include assessments of handwashing facilities at toilets. Since the indicator can't be disaggregated into its components (facilities, materials and training) these data are not comparable with other national data in the JMP database that are used for global monitoring.

HeRAMS data nevertheless allow for interesting comparisons within and between countries (Figure 77). In Afghanistan, in 2022 all the WASH indicators had similar coverage, of 75 to 80%, while in Burkina Faso in 2020 only 29% of health care facilities had hand hygiene facilities (including trained staff) but 97% of facilities reported having cleaning equipment (sufficient equipment and supplies available, cleaning protocols in place, and staff adequately trained). Some HeRAMS assessments are subnational; a 2021 assessment in Cabo Delgado province of Mozambique found water, sanitation and hygiene indicators to be relatively higher than

cleaning and waste management indicators, while a 2021 assessment in Tigray, Ethiopia, found low coverage for all WASH indicators, with a maximum of 14% for water (water available in sufficient quantities and qualities, either from an improved source or treated on-site following national guidelines).

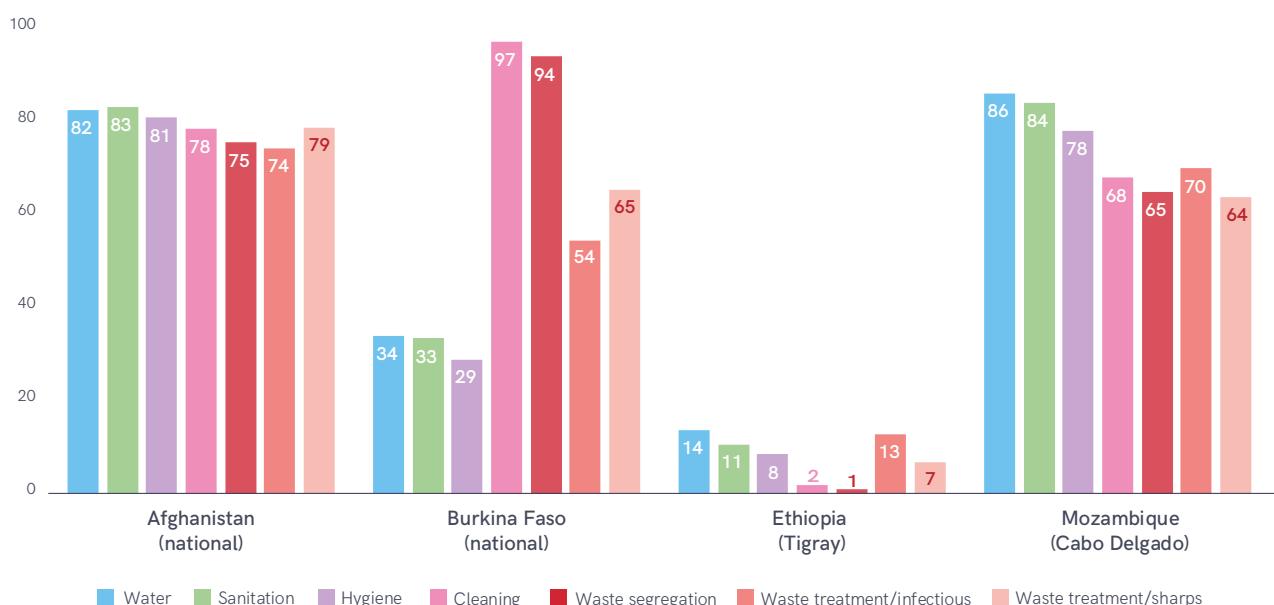
UNHCR, the UN Refugee Agency, produces guidance about WASH conditions in refugee settings, including in health care facilities. The UNHCR WASH Manual notes that while the health sector is responsible for WASH-related activities that take place within refugee health care facilities, they may request support from WASH colleagues regarding the design and construction of WASH facilities within health care facilities<sup>38</sup>. Furthermore, the WASH sector may include refugee camps in routine monitoring of WASH in health care facilities. UNHCR maintains a WASH monitoring system which draws upon the JMP core questions and indicators for monitoring WASH in health care facilities. Data are collected with paper checklists or with mobile data collection systems, using Kobo toolbox, and can be navigated through an online dashboard<sup>39</sup>. Among the four camps in northern Tanzania with a population of over 200,000 people, 17 health care facilities were assessed in 2020 and 2021 (Figure 78). All had access to an improved water source, but only three quarters (76%) had an improved water source located on the premises with water available, thereby meeting the criteria for a basic water service. Two out of five (41%) health care facilities had a basic hygiene service, with

<sup>37</sup> Health Resources and Services Availability Monitoring System (HeRAMS): <https://www.who.int/initiatives/herams>.

<sup>38</sup> UNHCR WASH Manual: Practical guidance for refugee settings. 7th edition. Geneva: UNHCR, 2020 <https://wash.unhcr.org/>.

<sup>39</sup> UNHCR WASH Monitoring System - Health Facilities: <https://wash.unhcr.org/wash-dashboard-for-refugee-settings/>.

### In emergency responses, many health care facilities do not meet HeRAMS criteria for WASH services



**FIGURE 77** Proportion of health care facilities meeting HeRAMS criteria for WASH services, selected countries, 2020–2022 (%)



higher coverage of handwashing facilities at toilets than at points of care. And two thirds of facilities (65%) had a basic environmental cleaning service, with training rather than the availability of protocols being the limiting factor. While not all elements of the basic sanitation indicator were collected, only one facility had toilets providing for menstrual hygiene management (MHM), and another had disability-accessible toilets, meaning that none of the facilities would meet the requirements for a basic sanitation service.

It is to be expected that many people in health care facilities will have difficulty in walking independently, either because of a temporary or long-term infirmity. WASH and IPC services, should therefore be accessible to all, including those with limited mobility. Recent

health care facility assessments in Vanuatu (2020) and Kenya (2018) have highlighted very low access to a range of services to people with limited mobility (Figure 79). In Vanuatu all five of the services assessed were inaccessible to people with reduced mobility in 85% or more of health care facilities assessed, while in Kenya three of the services assessed (soap and water at toilets, functional toilets for handicapped laboratory patients, and grab bars on walls) were available in just 4 to 7% of health care facilities. However, in Kenya 40% of health care facilities had at least one area where services could be provided to a person in a wheelchair. In both countries, hospitals were more likely to meet accessibility criteria than non-hospitals, and in Vanuatu, services tended to be more accessible in non-government and urban health care facilities.

### WASH indicators in health care facilities in refugee camps, United Republic of Tanzania

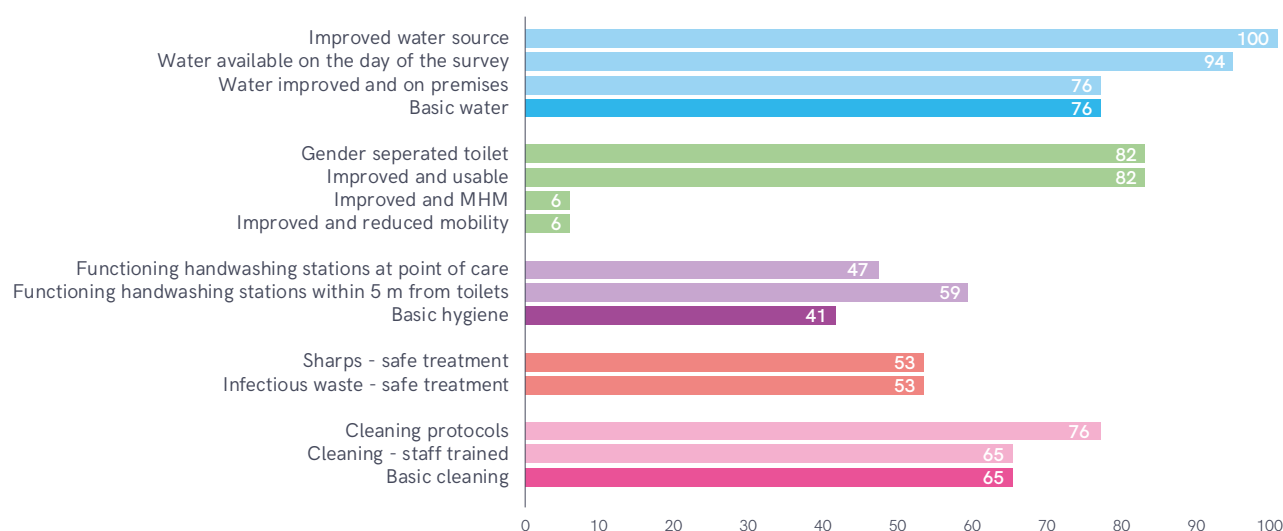


FIGURE 78 Proportion of health care facilities in refugee camps with WASH services, United Republic of Tanzania, 2020-21 (%)

### In Vanuatu, less than 1 in 5 health care facilities met accessibility criteria for people with limited mobility in 2020

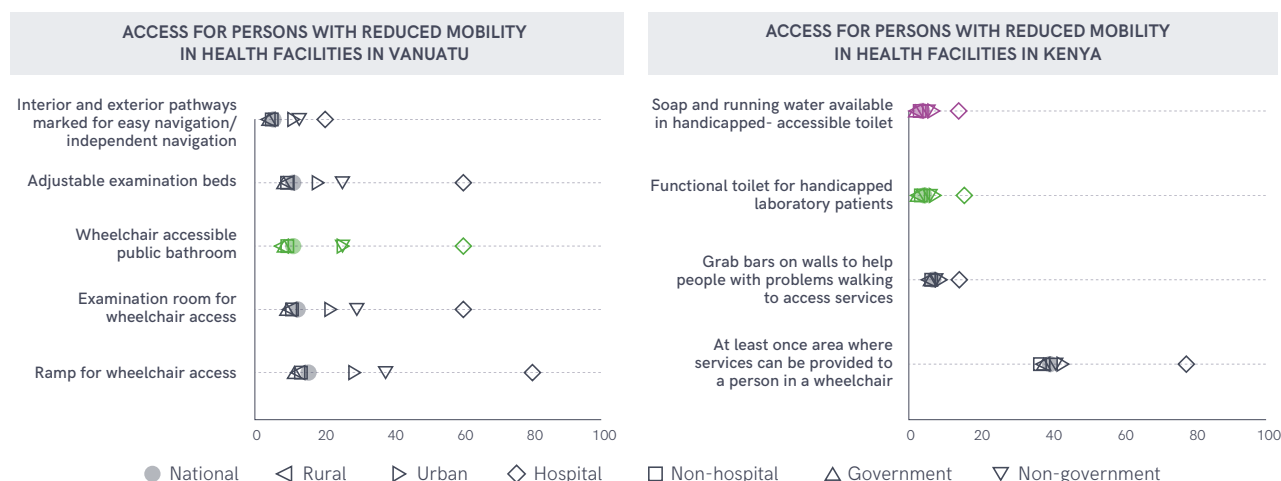


FIGURE 79 Proportion of health care facilities with services accessible by people with reduced mobility in the Vanuatu Health Facility Survey (2020) and Kenya Harmonized Health Facility Assessment (2018) (%)

# Annexes



## ANNEX 1

### JMP METHODS

Since it was established in 1990, the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) has been instrumental in developing norms and standards for global monitoring of drinking water, sanitation and hygiene (WASH) in households. WHO and UNICEF, through the JMP, are the global custodian agencies for the WASH indicators within Sustainable Development Goal (SDG) Targets 6.1 and 6.2. These targets refer to 'universal' access to water, sanitation and hygiene 'for all', which implies access to WASH services in household but also in non-household settings. Following the establishment of the SDGs, the scope of JMP global monitoring was expanded to include WASH in schools and WASH in health care facilities.

Achieving and maintaining WASH services in health care facilities is a critical element for a number of health aims, including those linked to quality universal health coverage, infection prevention and control (IPC), patient safety, and child and maternal health – in particular the time around child delivery. WASH also extends beyond health impacts to issues of dignity and respect, staff morale, and performance and safety. While there are no specific SDG indicators for WASH services in health care facilities, basic WASH services are essential in order to achieve many of the targets under SDG 3, particularly targets 3.1, 3.2 and 3.8.

In 2016, an Expert Group Meeting reviewed, modified and endorsed a set of draft harmonized indicators for monitoring WASH in health care facilities. The group recommended that in addition to water, sanitation and hygiene, global monitoring of WASH in health care facilities should also include health care waste management and environmental cleaning, which are closely related to hygiene in health care facilities.



Accordingly, in 2018, the JMP developed and published core questions and indicators for monitoring WASH services (water, sanitation, hygiene, waste management, and environmental cleaning) in health care facilities. This was followed by the publication of a global baseline report in 2019, presenting definitions and country, regional and global estimates for WASH services in health care facilities. In 2020, the JMP updated the global database and contributed a chapter to a global progress report, containing harmonized national, regional and global estimates.

The following is a brief summary of the JMP methodology for monitoring WASH in health care facilities, which builds on established methods for monitoring WASH in households and will continue to be refined over time. For more detailed information on JMP definitions and methods please refer to the resources listed in Table A3.

## DATA COLLECTION AND VALIDATION FOR WASH IN HEALTH CARE FACILITIES

The JMP updates the global database on WASH in health care facilities every two years. The first step is to compile national data sources containing information about WASH services in health care facilities, by systematically visiting the websites of national statistical offices, sector institutions such as ministries of health, water and sanitation, and other regional and global databases. UNICEF and WHO regional and country offices also provide support to identify newly available datasets in consultation with national authorities. Data are then extracted, cleaned, analysed and added to JMP country files<sup>40</sup> for WASH in health care facilities.

<sup>40</sup> JMP country files can be downloaded from the JMP website: <https://washdata.org/data/downloads>. Note that the "World file" contains estimates for all countries with data available.

The second step is to verify draft national estimates. The JMP country files contain a complete list of national data sources and show how information from each source has been used to generate internationally comparable estimates for each year in the reference period (from 2000 to the year prior to publication). In the last quarter of the year before publication, draft estimates are shared with national authorities, via WHO and UNICEF country offices, for a two-month period of country consultation and technical feedback.

The primary purpose of global monitoring is to generate internationally comparable estimates that can be used to benchmark and compare progress across countries. The JMP uses a standard methodology to generate estimates for all countries, and these sometimes differ from national statistics which may use different definitions and/or methods. The purpose of the consultation is not to compare JMP estimates and national statistics but to review the completeness or correctness of the datasets in the JMP country file and to verify the interpretation of national data in the JMP estimates.

The JMP also extracts information on other relevant indicators included in national monitoring systems that are not part of the existing JMP service ladders. These data are used for additional analysis on issues of interest, such as menstrual health, disability and infection prevention and control, but are not included in JMP country files due to limited data availability and a lack of commonly agreed indicator definitions and methods for producing national, regional and global estimates.

## DATA DISAGGREGATION

In order to identify groups that have better or worse levels of service, it is useful to disaggregate national data by different stratifiers. Sub-national disaggregation (e.g. by administrative boundaries) is important for national programming, but sub-national differences are difficult to compare from one country to another. In this report, three high-level stratifiers are used, which are included in many assessments and data sets:

- **Health care facility type.** Health facilities can range from advanced training hospitals with thousands of staff who perform complex procedures to rural outpatient clinics with only one or two staff who have minimal training and resources. Different types of facilities offer different types of health services, and coverage of WASH and other basic services may differ widely by facility type. National assessments and monitoring systems do not use a consistent classification of facility types but many do record if facilities being assessed are hospitals or not. Accordingly, the JMP has produced estimates separately for hospitals and other types of facilities, classified as non-hospitals.

- **Managing authority.** In most countries, health care services are delivered through a mix of government health care facilities (e.g. public hospitals, health centres, clinics) and non-government facilities, which may include facilities managed by for-profit private corporations, not-for-profit providers (including faith-based organisations) and individual health care providers. Some assessments collect information only on government facilities, while others assess different types of non-government facilities. Relatively few countries have a single national database covering all health care facility management authorities.
- **Geography.** Health care facilities are not evenly distributed throughout countries, and facilities in remote areas may be more likely to lack basic services. Most assessments record the location of health care facilities by sub-national region, district or other administrative unit. While data on sub-national areas are important for national planning, they cannot easily be aggregated to regional and global scales. Some assessments record whether health care facilities are located in urban or rural areas, which is a more useful distinction for regional and global analysis.

## DATA SOURCES

The primary sources of national data are routine Health Management Information Systems (HMIS) and periodic (non-HMIS) health care facility censuses and health care facility assessment surveys. Other sources of national data include regional and global monitoring initiatives such as the Service Availability and Readiness Assessments (SARA), Service Provision Assessments (SPA), Service Delivery Indicators (SDI), and Performance Monitoring and Accountability (PMA). Where available, the JMP uses primary sources rather than secondary sources and uses original microdata or tabulations provided by national authorities rather than summary reports.

The 2022 JMP update on WASH in health care facilities used data from a total of 504 data sources, from 153 countries, to generate national estimates<sup>41</sup>. Figure A1 shows that more data sources were used for drinking water (375) and waste management (337) than for sanitation (291) or hygiene (261); all of these had approximately doubled since the 2019 baseline report. Only 52 data sources were available for environmental cleaning, but this represented a five-fold increase from the 2019 report, which drew upon just 10 data sources.

The data sources used in the 2022 report represented assessments of over 900,000 health care facilities

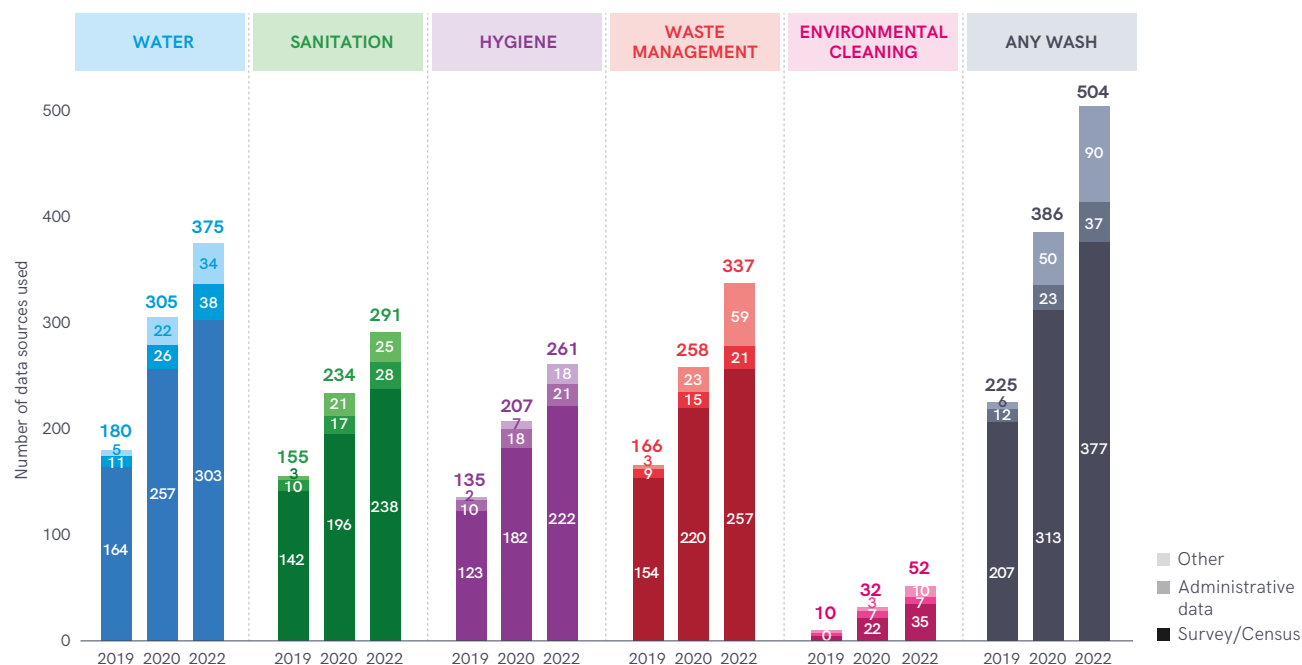
<sup>41</sup> For the purposes of this report, 'countries' refers to countries, areas and territories included in the United Nations Population Division World Population Prospects, 2019 revision.



(Figure A2). Surveys and censuses represented the great majority of this number, though many administrative sources didn't indicate the number of facilities assessed during data collection, so the total number of facilities assessed is an underestimate. Most data sources in the

"Other" category also didn't indicate how many facilities were assessed, with the exception of reports from the Russian Audit Chamber in 2016 and 2018, which assessed water and sanitation facilities in approximately 117,000 health care facilities.

### Availability of national data sources on WASH in health care facilities has doubled since 2019



**FIGURE A1** Number of national data sources used in the JMP 2019 baseline report, 2020 and 2022 progress updates, by domain and data source type

Note: 'Any WASH' indicates if data sources included statistics for any of the five basic WASH service areas.

### Surveys and censuses account for the majority of facilities assessed



**FIGURE A2** Number of health care facilities assessed in national data sources used in the JMP 2019 baseline report, 2020 and 2022 progress updates, by domain and data source type

The JMP extracts data that are representative of national, urban and rural health care facilities, hospitals, non-hospitals, and government or non-government health care facilities. The JMP relies on official data published by national authorities, but detailed information on the overall distribution by location and by type of health care facility is not always available. Some datasets cover only government (or public) facilities; others cover only certain types of facilities (e.g. hospitals, primary health centres).

If data are available from different wards or areas in a facility, data from the general consultation or outpatient department areas are prioritized for extraction. If data from general consultation areas and outpatient departments are not available, the availability of the WASH service in any of the other available locations is recorded for use in calculating global indicators.

All official, available and accessible information is recorded in the JMP country files but not all datasets in the country files are used to produce estimates. Datasets are only used to produce estimates if they meet minimum standards for quality and coverage. For example, HMIS or census data are only used if the response rate is at least a third (33%). Survey data are only used if they cover at least 50 health care facilities

per domain, or if they represent at least 30% of health care facilities in a relevant domain.

Access to microdata and complete reports is crucial for evaluating comparability of definitions, data coverage, and reliability of the available information. In some cases, a dataset can be used for some but not all indicators because of variable data availability and quality. For example, a health care facility survey might yield reliable data on 'improved sanitation' but unreliable data on the 'usability' of those facilities, because of ambiguous question wording or inadequate training of survey teams. In other cases, one dataset might yield data that are markedly different from other datasets from a similar timeframe. In such cases, and following the country consultation, those data may be shown in the country files but not used to produce estimates. In these cases, the reason for not using a dataset is recorded in the country file notes.

### JMP DEFINITIONS

The JMP classifies drinking water and sanitation technologies into improved and unimproved types. Improved drinking water sources are designed to protect against contamination, while improved sanitation facilities are designed to hygienically separate excreta from human contact (Table A2).

	DRINKING WATER	SANITATION
Improved facilities	<b>Piped supplies</b> <ul style="list-style-type: none"> <li>• Tap water in the dwelling, yard, or plot, including piped to a neighbour</li> <li>• Public taps or standpipes</li> </ul> <b>Non-piped supplies</b> <ul style="list-style-type: none"> <li>• Boreholes/tubewells</li> <li>• Protected wells and springs</li> <li>• Rainwater</li> <li>• Packaged water, including bottled water and sachet water</li> <li>• Delivered water, including tanker trucks and small carts/tanks/drums</li> <li>• Water kiosks</li> </ul>	<b>Networked sanitation</b> <ul style="list-style-type: none"> <li>• Flush and pour-flush toilets connected to sewers</li> </ul> <b>On-site sanitation</b> <ul style="list-style-type: none"> <li>• Flush and pour-flush toilets or latrines connected to septic tanks or pits</li> <li>• Ventilated improved pit (VIP) latrines</li> <li>• Pit latrines with slabs (constructed from materials that are durable and easy to clean)</li> <li>• Composting toilets, including twin pit latrines with slabs and container-based systems</li> </ul>
Unimproved facilities	<b>Non-piped supplies</b> <ul style="list-style-type: none"> <li>• Unprotected wells and springs</li> </ul>	<b>Networked sanitation</b> <ul style="list-style-type: none"> <li>• Flush and pour-flush toilets flushed to open drain or elsewhere*</li> </ul> <b>On-site sanitation</b> <ul style="list-style-type: none"> <li>• Flush and pour-flush toilets or latrines flushed to open drain or elsewhere*</li> <li>• Pit latrines without slabs</li> <li>• Open pits</li> <li>• Hanging toilets/latrines</li> <li>• Bucket latrines, including pans, trays, or other unsealed containers</li> </ul>
No facility	<b>Surface water</b> <ul style="list-style-type: none"> <li>• Open water sources located above ground including rivers, lakes, ponds, streams, canals, reservoirs, irrigation channels</li> </ul>	<b>Open defecation</b> <ul style="list-style-type: none"> <li>• Defecation in the bush or field or ditch</li> <li>• Defecation into surface water, including beaches, rivers, streams, drainage channels, seas or oceans</li> </ul>

\* 'Flush/pour-flush to elsewhere' suggests that excreta are not being discharged into a sewer, septic tank or pit latrine but into the local environment, and that the facility should therefore be classified as unimproved.

**TABLE A1** JMP classification of improved and unimproved water and sanitation facility types



The basic hygiene service indicator calls for functional hand hygiene facilities (with water and soap and/or alcohol-based hand rub) to be available at points of care, and within five metres of toilets. A handwashing facility may be fixed or mobile and include sinks with tap water, buckets with taps, tippy-taps, and jugs or basins designated for handwashing. Soap includes bar soap, liquid soap, powder detergent and soapy water but does not include ash, soil, sand or other handwashing agents.

For the basic waste management indicator, waste should be segregated at the point of generation, and adequately treated and disposed of. Treatment and disposal methods considered to meet the basic service level include autoclaving; incineration; burial in a lined, protected pit; and collection for medical waste disposal off-site. Open burning is not considered adequate.

The basic environmental cleaning indicator calls for protocols for cleaning to be available, and for staff with cleaning responsibilities to have all received training. Protocols should include step-by-step techniques for specific tasks, such as cleaning a floor, cleaning a sink, cleaning a spillage of blood or body fluids, and a cleaning roster or schedule specifying responsibility for cleaning tasks and frequency at which they should be performed. The term for protocols may differ according to local practice; they may be referred to as standard operating procedures (SOPs), guidelines, instructions, and so on.

DATA ANALYSIS AND COUNTRY ESTIMATES

The JMP uses simple linear regression to generate estimates from all the available data points for each of the primary indicators shown in Table A2<sup>42</sup>. The basic service indicators are all composite indicators, drawing on two or more of these primary indicators. Data on different primary indicators may come from different data sources, so it is not always possible to combine them at the level of an individual health care facility. However, some data sources report the basic service level without disaggregation into the constituent primary indicators. Accordingly, the JMP produces estimates for basic services by taking the minimum of each available primary indicator (or of the basic service, if available) for any given year. The basic sanitation indicator comprises five primary indicators, and many countries lack data on one or more of these. To make the most use of the available data, for this report the JMP produces estimates of basic sanitation services when data are available on improved and usable toilets, and at least two of the remaining four elements (staff, sex-separated, menstrual hygiene, and limited mobility). Unlike other basic services, basic sanitation is not a primary indicator: regression is not made on this indicator, but on the seven primary sanitation indicators in Table A2.

These estimates of basic services are then used to calculate the remaining health care facilities with no facility or unimproved facilities and with a limited service.

<sup>42</sup> These indicators are shown in the 'Data Summary' tab of the country files.

Proportion of health care facilities with:				
WATER	SANITATION	HYGIENE	WASTE MANAGEMENT	ENVIRONMENTAL CLEANING
<ul style="list-style-type: none"><li>Any water source</li><li>Improved</li><li>Improved and available</li><li>Improved and on premises</li><li>Basic (improved, available and on premises)</li></ul>	<ul style="list-style-type: none"><li>Any sanitation facility</li><li>Improved</li><li>Improved and usable</li><li>Improved and designated for women</li><li>Improved and designated for menstrual health management</li><li>Improved and designated for staff</li><li>Improved and meeting needs for limited mobility</li></ul>	<ul style="list-style-type: none"><li>Any hand hygiene facility</li><li>Station with basin, soap and water</li><li>Station with alcohol-based hand rub</li><li>Station with basin, soap, and water OR alcohol-based hand rub</li><li>Station within 5m of toilets with water and soap</li><li>Basic (station with basin, soap and water OR alcohol-based hand rub AND within 5m of toilets)</li></ul>	<ul style="list-style-type: none"><li>Any waste segregation or treatment facility</li><li>Waste segregated in the consultation area</li><li>Waste treatment/disposal</li><li>Infectious waste disposed of safely</li><li>Sharps waste disposed of safely</li><li>Basic (waste segregated in the consultation area, infectious waste disposed of safely, and sharps waste disposed of safely)</li></ul>	<ul style="list-style-type: none"><li>Any cleaning measure</li><li>Written policies and protocols</li><li>Training of non-health care providers</li><li>Training of health care providers</li><li>Basic (written policies and protocols, and training of health care and non-health care providers)</li></ul>

TABLE A2 JMP primary indicators for WASH in health care facilities



Linear regressions are calculated if two or more data points are available spanning at least four years. If the data points span fewer than four years, an average is used. Separate regressions are made for national, urban and rural settings, and for hospital, non-hospital, government and non-government health care facilities where data are available. While the regression models produce estimates for multiple years, this report presents only the estimates for 2021, since the number of data sources per country is still considered insufficient to produce reliable trend data.

In most countries there are more primary health care centres and other small facilities (non-hospitals) than hospitals. Therefore, if data are available for smaller health care facilities but not for hospitals, the data on non-hospitals are used to produce national estimates. Likewise, if data are only available for rural (or urban) health care facilities, these data are used for national estimates where the population living in rural (or urban) areas comprise more than 80% of the national population. In some countries government facilities greatly outnumber non-government facilities. In such cases, data from government facilities can be used to produce national estimates.

## REGIONAL AND GLOBAL ESTIMATES FOR WASH IN HEALTH CARE FACILITIES

Regional estimates are made by summing up country estimates for each of the classes of health care facilities. Ideally, estimates from each country should be weighted by the total number of health care facilities in that class for the country. However, complete statistics on the number of each class of health care facility are not available for all countries. Accordingly, the JMP uses national, urban and rural populations to weight estimates from individual countries, using the most recent data from the UN Population Division<sup>43</sup>. Regional estimates are made when data are available from countries with a combined population of at least 30% of the total regional population. No imputed values are used to prepared regional estimates. Global estimates are also only made when there are data for countries representing at least 30% of the global population. However, to prevent a few large countries having a disproportionate influence, especially when many countries still lack estimates, global estimates are calculated using imputed values for countries lacking data, based on the weighted averages of SDG regions.

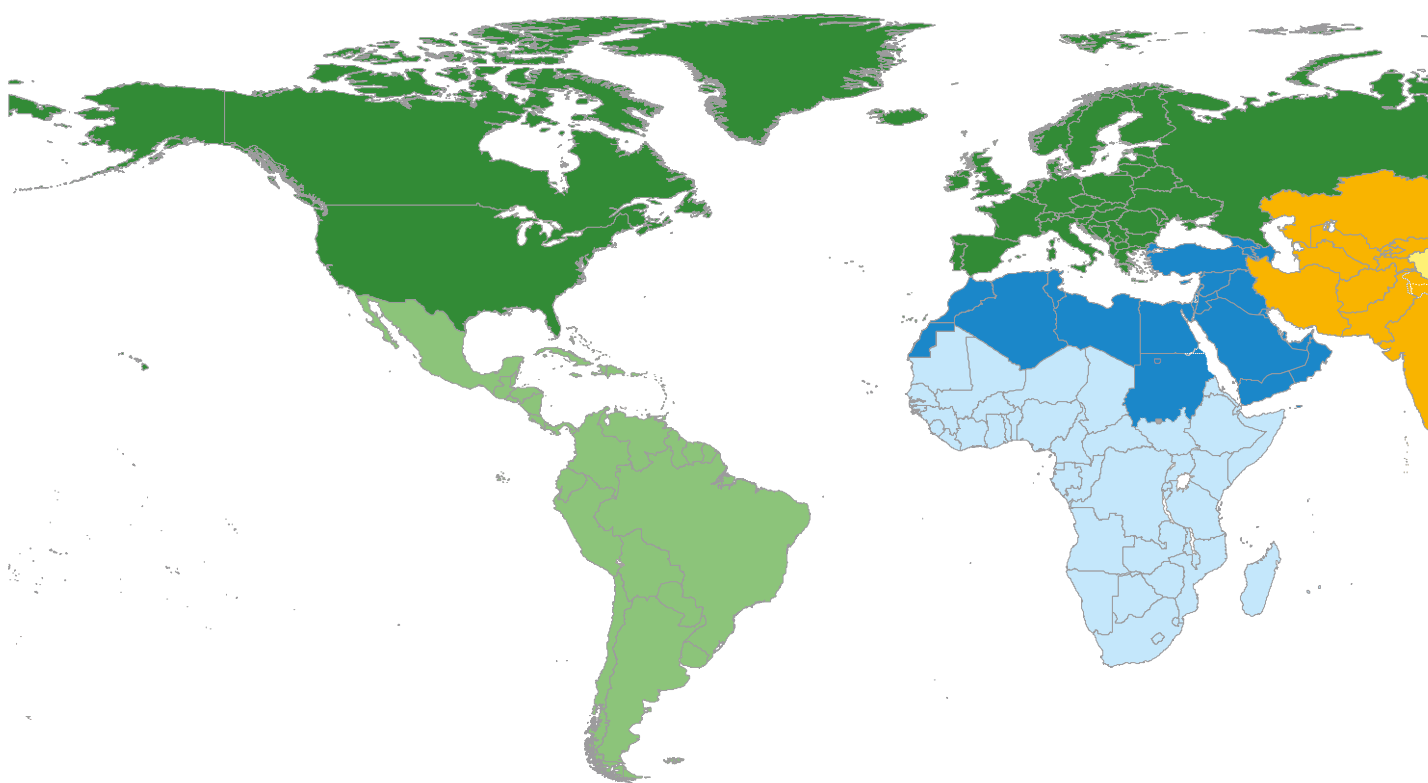
<sup>43</sup> For this report, population figures were taken from the World Population Prospects 2019 revision, while the proportion of the population living in rural and urban areas was taken from the World Urbanization Prospects 2018 revision.

<b>General</b>	<p>JMP website: <a href="https://washdata.org">https://washdata.org</a></p> <p>JMP reports: <a href="https://washdata.org/reports">https://washdata.org/reports</a></p> <p>JMP data: <a href="https://washdata.org/data">https://washdata.org/data</a></p> <p>JMP country files: <a href="https://washdata.org/data/downloads">https://washdata.org/data/downloads</a></p> <p>JMP country consultations: <a href="https://washdata.org/how-we-work/jmp-country-consultation">https://washdata.org/how-we-work/jmp-country-consultation</a></p>
<b>WASH in health care facilities</b>	<p>JMP WASH in health care facilities methodology (draft September 2022): <a href="https://washdata.org/report/jmp-2022-winhcf-methodology-draft-sep-2022">https://washdata.org/report/jmp-2022-winhcf-methodology-draft-sep-2022</a></p> <p>Core Questions and Indicators for Monitoring WASH in Health Care Facilities in the Sustainable Development Goals: <a href="https://washdata.org/report/jmp-2018-core-questions-monitoring-winhcf">https://washdata.org/report/jmp-2018-core-questions-monitoring-winhcf</a></p> <p>Meeting Report – Expert group meeting on monitoring WASH in schools in the Sustainable Development Goals: <a href="https://washdata.org/report/june-2016-wins-expert-group-meeting-report">https://washdata.org/report/june-2016-wins-expert-group-meeting-report</a></p> <p>WASH in Health Care Facilities: Global Baseline Report 2019: <a href="https://washdata.org/report/jmp-2019-wash-hcf">https://washdata.org/report/jmp-2019-wash-hcf</a></p> <p>Global Progress Report on Water, Sanitation and Hygiene in Health Care Facilities: Fundamentals first: <a href="https://washdata.org/report/who-unicf-2020-wash-hcf">https://washdata.org/report/who-unicf-2020-wash-hcf</a></p>
<b>Relevant materials focused on WASH in households</b>	<p>JMP Methodology: 2017 update and SDG baselines: <a href="https://washdata.org/report/jmp-methodology-2017-update">https://washdata.org/report/jmp-methodology-2017-update</a></p>

**TABLE A3** Useful resources for detailed information on JMP definitions and methods

## ANNEX 2

### REGIONAL GROUPINGS<sup>44</sup>



#### SUSTAINABLE DEVELOPMENT GOALS: REGIONAL GROUPINGS

##### ■ AUSTRALIA AND NEW ZEALAND:

Australia, New Zealand.

■ **CENTRAL ASIA AND SOUTHERN ASIA:** Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Kazakhstan, Kyrgyzstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan, Uzbekistan.

■ **EASTERN ASIA AND SOUTH-EASTERN ASIA:** Brunei Darussalam, Cambodia, China (Hong Kong Special Administrative Region), China (Macao Special Administrative Region), Democratic People's Republic of Korea, Indonesia, Japan, Lao People's Democratic Republic, Malaysia, Myanmar, Mongolia, Philippines, Republic of Korea, Singapore, Thailand, Timor-Leste, Viet Nam.

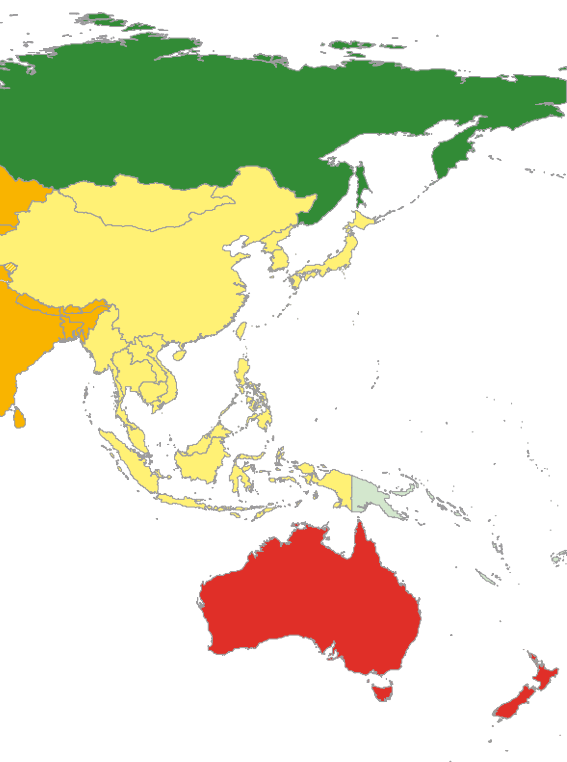
■ **EUROPE AND NORTHERN AMERICA:** Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bermuda, Bulgaria, Canada, Channel Islands, Croatia, Czech Republic, Denmark, Estonia, Faroe Islands, Finland, France, Germany, Gibraltar, Greece, Greenland, Holy See, Hungary, Ireland, Iceland, Isle of Man, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, San

Marino, Saint Pierre and Miquelon, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America.

■ **LATIN AMERICA AND THE CARIBBEAN:** Anguilla, Antigua and Barbuda, Argentina, Aruba, Bahamas, Barbados, Belize, Bolivia (Plurinational State of), Bonaire, Sint Eustatius and Saba (Caribbean Netherlands), Brazil, British Virgin Islands, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Curaçao, Dominica, Dominican Republic, Ecuador, El Salvador, Falkland Islands (Malvinas), French Guiana, Guadeloupe, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Montserrat, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Saint-Barthélemy, Saint Kitts and Nevis, Saint Lucia, Saint-Martin (French part), Saint Vincent and the Grenadines, Sint Maarten (Dutch part), Suriname, Trinidad and Tobago, Turks and Caicos Islands, United States Virgin Islands, Uruguay, Venezuela (Bolivarian Republic of).

■ **NORTHERN AFRICA AND WESTERN ASIA:** Algeria, Armenia, Azerbaijan, Bahrain, Cyprus, Egypt, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, occupied Palestinian territory including east Jerusalem, Oman, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia, Turkey, United Arab Emirates, Western Sahara, Yemen.

<sup>44</sup> SDG regional groupings, as well as classifications of landlocked developing countries, least developed countries, and small island developing States come from United Nations Statistics Division <<https://unstats.un.org/sdgs/indicators/regional-groups/>>. Fragile contexts are taken from OECD <<https://www.oecd.org/dac/states-of-fragility-fa5a6770-en.htm>>. This report additionally uses income categories as classified by the World Bank (fiscal year 2021): <<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>>.



**OCEANIA (EXCLUDING AUSTRALIA AND NEW ZEALAND):** American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna Islands.

**SUB-SAHARAN AFRICA:** Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mayotte, Mozambique, Namibia, Niger, Nigeria, Réunion, Rwanda, Saint Helena, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Togo, Uganda, United Republic of Tanzania, Zambia, Zimbabwe.

## OTHER REGIONAL GROUPINGS

### LANDLOCKED DEVELOPING COUNTRIES (LLDCs):

Afghanistan, Armenia, Azerbaijan, Bhutan, Bolivia (Plurinational State of), Botswana, Burkina Faso, Burundi, Central African Republic, Chad, Eswatini, Ethiopia, Kazakhstan, Kyrgyzstan, Lao People's Democratic Republic, Lesotho, Malawi, Mali, Mongolia, Nepal, Niger, North Macedonia, Paraguay, Republic of Moldova, Rwanda, South Sudan, Tajikistan, Turkmenistan, Uganda, Uzbekistan, Zambia, Zimbabwe.

### LEAST DEVELOPED COUNTRIES (LDCs):

Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sudan, Timor-Leste, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen, Zambia.

### SMALL ISLAND DEVELOPING STATES (SIDS):

American Samoa, Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bonaire, Sint Eustatius and Saba (Caribbean Netherlands), British Virgin Islands, Cabo Verde, Cayman Islands, Comoros, Cook Islands, Cuba, Curaçao, Dominica, Dominican Republic, Fiji, French Polynesia, Grenada, Guadeloupe, Guam, Guinea-Bissau, Guyana, Haiti, Jamaica, Kiribati, Maldives, Marshall Islands, Mauritius, Micronesia (Federated States of), Montserrat, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Puerto Rico, Saint-Barthélemy, Saint Kitts and Nevis, Saint Lucia, Saint-Martin (French part), Saint Vincent and the Grenadines, Samoa, Sao Tome and Principe, Seychelles, Singapore, Sint Maarten (Dutch part), Solomon Islands, Suriname, Timor-Leste, Tonga, Trinidad and Tobago, Turks and Caicos Islands, Tuvalu, United States Virgin Islands, Vanuatu.

### FRAGILE CONTEXTS (OECD, 2021)

Afghanistan, Angola, Bangladesh, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic People's Republic of Korea, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gambia, Guatemala, Guinea, Guinea-Bissau, Haiti, Honduras, Iran (Islamic Republic of), Iraq, Kenya, Lao People's Democratic Republic, Lesotho, Liberia, Libya, Madagascar, Mali, Mauritania, Mozambique, Myanmar, Nicaragua, Niger, Nigeria, occupied Palestinian territory including East Jerusalem, Pakistan, Papua New Guinea, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sudan, Syrian Arab Republic, Tajikistan, Tanzania, Togo, Uganda, Venezuela, Yemen, Zambia, Zimbabwe.

## ANNEX 3

## NATIONAL WATER ESTIMATES

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises
Afghanistan	2021	39 835	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Albania	2021	2 873	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
American Samoa	2021	55	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Andorra	2021	77	88	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Angola	2015	27 884	63	-	-	51	49	-	-	-	-	-	-	-	-	-	-	-
Anguilla	2021	15	100	-	-	<1	-	-	-	-	-	-	-	NA	NA	NA	NA	NA
Antigua and Barbuda	2021	99	24	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Armenia	2021	2 968	63	97	3	<1	>99	99	-	-	-	-	-	-	-	-	-	-
Austria	2021	9 043	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	2021	10 223	57	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Bangladesh	2021	166 304	39	64	35	<1	100	64	90	10	<1	>99	91	67	33	<1	100	69
Belize	2021	405	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benin	2021	12 451	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bhutan	2021	780	43	95	5	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Bolivia (Plurinational State of)	2021	11 833	70	-	-	-	-	-	-	-	-	-	-	88	5	7	93	93
Brazil	2016	206 163	86	89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Burkina Faso	2021	21 497	31	74	23	4	96	75	80	16	4	96	89	44	56	<1	99	44
Burundi	2021	12 255	14	-	-	<1	>99	66	-	-	-	-	-	-	-	-	-	-
Cambodia	2021	16 946	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cameroon	2021	27 224	58	-	-	8	92	37	-	-	-	-	-	-	-	-	-	-
Central African Republic	2021	4 920	43	-	-	48	52	-	-	-	-	-	-	-	-	-	-	-
Chad	2021	16 915	24	-	-	43	57	-	-	-	-	-	-	-	-	-	-	-
China	2021	1 468 071	63	91	<1	9	91	91	-	-	5	95	-	-	-	10	90	-
Colombia	2021	51 266	82	-	-	-	-	-	-	-	-	-	-	70	4	26	74	74
Comoros	2021	888	30	-	-	4	96	-	-	-	-	-	-	-	-	-	-	-
Congo	2018	5 244	67	37	45	18	82	64	61	29	10	90	75	9	64	27	73	51
Cook Islands	2021	18	76	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99
Costa Rica	2021	5 139	81	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Côte d'Ivoire	2021	27 054	52	27	36	37	63	27	-	-	18	82	-	-	-	-	-	-
Czech Republic	2021	10 725	74	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Democratic Republic of the Congo	2021	92 378	46	30	40	30	70	30	41	51	8	92	71	19	45	36	64	19
Djibouti	2021	1 002	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dominican Republic	2021	10 954	83	-	-	-	-	-	-	-	-	-	-	80	<1	20	80	80
Egypt	2021	104 258	43	84	8	8	92	92	-	-	-	-	-	-	-	-	-	-
El Salvador	2021	6 519	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eritrea	2012	3 250	36	-	-	14	86	77	-	-	-	-	-	-	-	-	-	-
Estonia	2021	1 325	69	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Eswatini	2021	1 172	24	-	-	8	92	-	-	-	-	-	-	-	-	-	-	-
Ethiopia	2021	117 876	22	-	-	45	55	-	-	-	17	83	-	25	26	49	51	43
Fiji	2021	903	58	69	16	15	85	79	-	-	-	-	-	-	-	-	-	-
Gabon	2014	1 884	88	-	-	3	97	97	-	-	-	-	-	-	-	-	-	-
Gambia	2021	2 487	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- = no estimate. NA = not applicable. For unrounded estimates see [www.washdata.org](http://www.washdata.org).



COUNTRY, AREA OR TERRITORY	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises
Afghanistan	2021	74	26	<1	100	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Albania	2021	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
American Samoa	2021	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Andorra	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Angola	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anguilla	2021	-	-	<1	>99	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Antigua and Barbuda	2021	-	-	<1	>99	>99	-	-	<1	>99	>99	-	-	<1	>99	>99	-	-	<1	>99	>99
Armenia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Austria	2021	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bangladesh	2021	79	21	<1	>99	79	69	24	7	93	69	71	29	<1	100	71	88	12	<1	>99	88
Belize	2021	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benin	2021	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bhutan	2021	75	25	<1	>99	>99	96	4	<1	>99	>99	95	5	<1	>99	>99	-	-	-	-	-
Bolivia (Plurinational State of)	2021	-	-	-	-	-	88	5	7	93	93	-	-	-	-	-	-	-	-	-	-
Brazil	2016	-	-	-	-	-	89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Burkina Faso	2021	92	8	<1	100	96	63	31	6	94	73	51	49	<1	100	51	-	-	3	97	80
Burundi	2021	-	-	-	-	-	-	-	<1	>99	67	-	-	-	-	-	-	-	-	-	-
Cambodia	2021	-	-	<1	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cameroon	2021	-	-	-	-	-	-	-	13	87	37	-	-	21	79	22	-	-	6	94	51
Central African Republic	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chad	2021	-	-	17	83	-	-	-	41	59	-	-	-	-	-	-	-	-	29	71	-
China	2021	-	-	-	-	-	91	<1	9	91	91	91	<1	9	91	91	-	-	-	-	-
Colombia	2021	-	-	-	-	-	70	4	26	74	74	-	-	-	-	-	-	-	-	-	-
Comoros	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Congo	2018	47	47	6	94	75	36	45	19	81	62	28	49	23	77	57	53	38	9	91	75
Cook Islands	2021	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
Costa Rica	2021	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
Côte d'Ivoire	2021	79	21	<1	>99	>99	24	37	39	61	24	27	36	37	63	27	-	-	-	-	-
Czech Republic	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Democratic Republic of the Congo	2021	37	48	15	85	43	17	37	46	54	17	21	40	40	60	21	39	47	13	87	46
Djibouti	2021	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Dominican Republic	2021	-	-	-	-	-	80	<1	20	80	80	-	-	-	-	-	-	-	-	-	-
Egypt	2021	-	-	<1	>99	-	84	8	8	92	92	-	-	-	-	-	-	-	<1	100	-
El Salvador	2021	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eritrea	2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Estonia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eswatini	2021	-	-	<1	>99	-	-	-	8	92	-	-	-	51	49	-	-	-	8	92	-
Ethiopia	2021	-	-	4	96	-	27	46	27	73	43	-	-	49	51	-	-	-	12	88	-
Fiji	2021	96	4	<1	>99	>99	67	12	21	79	70	69	16	15	85	79	-	-	-	-	-
Gabon	2014	-	-	-	-	-	-	-	-	-	-	-	-	3	97	97	-	-	-	-	-
Gambia	2021	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises
Georgia	2021	3 980	60	-	-	9	91	78	-	-	-	-	-	-	-	-	-	-
Germany	2021	83 900	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ghana	2021	31 732	58	67	33	<1	100	89	79	12	9	91	91	46	42	13	87	50
Grenada	2021	113	37	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Guatemala	2021	18 250	52	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Guinea	2021	13 497	37	-	-	64	36	-	-	-	35	65	-	-	-	68	33	-
Guinea-Bissau	2021	2 015	45	74	25	<1	99	97	-	-	-	-	-	-	-	-	-	-
Guyana	2016	771	26	-	-	23	77	52	-	-	-	-	-	-	-	-	-	-
Haiti	2021	11 542	58	64	24	12	88	66	70	25	5	95	72	81	8	12	88	81
Honduras	2021	10 063	59	55	42	3	97	82	-	-	-	-	-	53	47	<1	>99	77
Hungary	2021	9 634	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
India	2021	1 393 409	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indonesia	2021	276 362	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iran (Islamic Republic of)	2021	85 029	76	88	10	2	98	93	97	2	1	99	97	82	16	2	98	90
Iraq	2021	41 179	71	67	33	<1	>99	>99	77	23	<1	>99	>99	53	47	<1	>99	>99
Israel	2021	8 790	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jordan	2021	10 269	92	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kenya	2021	54 986	28	68	25	7	93	68	71	27	3	97	71	64	32	4	96	64
Kiribati	2021	121	56	65	<1	34	66	65	86	<1	14	86	86	60	<1	40	60	60
Kuwait	2021	4 329	100	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
Kyrgyzstan	2021	6 628	37	45	2	53	47	47	-	-	-	-	-	45	2	53	47	47
Lao People's Democratic Republic	2021	7 379	37	80	6	14	-	89	-	-	-	-	-	-	-	-	-	-
Lebanon	2021	6 769	89	61	2	37	64	-	-	-	-	-	-	-	-	-	-	-
Lesotho	2021	2 159	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liberia	2021	5 180	53	-	-	49	51	-	-	-	44	56	-	-	-	55	46	-
Libya	2021	6 959	81	-	-	28	72	-	-	-	-	-	-	-	-	-	-	-
Lithuania	2021	2 690	68	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Madagascar	2021	28 427	39	-	-	11	89	-	-	-	-	-	-	-	-	-	-	-
Malawi	2021	19 648	18	76	16	7	93	80	-	-	3	97	-	75	14	11	89	81
Maldives	2021	544	41	55	43	3	97	55	-	-	-	-	-	-	-	-	-	-
Mali	2021	20 856	45	-	-	26	74	-	-	-	5	95	-	82	<1	18	82	82
Malta	2021	443	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mauritania	2020	4 650	55	-	-	11	89	-	-	-	-	-	-	-	-	-	-	-
Mexico	2021	130 262	81	-	-	<1	100	100	88	10	3	97	88	-	-	-	-	-
Micronesia (Fed. States of)	2021	116	23	39	48	12	88	56	43	43	14	86	71	39	49	12	88	54
Mongolia	2021	3 329	69	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	2021	628	68	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Mozambique	2021	32 163	38	56	18	27	73	56	86	4	11	89	86	52	29	19	81	52
Myanmar	2018	53 708	31	-	-	8	92	-	-	-	1	99	-	-	-	14	86	-
Namibia	2021	2 587	53	-	-	<1	100	-	-	-	-	-	-	-	-	-	-	-
Nepal	2021	29 675	21	-	-	6	94	-	-	-	7	93	-	-	-	5	95	-
Nicaragua	2021	6 702	59	58	30	12	88	81	74	25	<1	99	96	39	35	26	74	71
Niger	2021	25 131	17	25	36	39	61	27	-	-	2	98	-	25	31	44	56	27
Nigeria	2021	211 401	53	52	25	23	77	55	72	23	5	95	75	44	23	33	67	47
North Macedonia	2021	2 083	59	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
occupied Palestinian territory*	2021	5 223	77	93	4	2	98	96	-	-	-	-	-	-	-	-	-	-

\*Including east Jerusalem. UNICEF reports and the Global SDG Indicators Database refer to 'State of Palestine'.

COUNTRY, AREA OR TERRITORY	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises
Georgia	2021	-	-	-	-	-	-	-	-	-	-	-	-	<1	>99	91	88	7	5	95	88
Germany	2021	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ghana	2021	91	8	1	99	91	47	49	5	95	47	77	23	<1	>99	95	-	-	-	-	-
Grenada	2021	-	-	<1	>99	>99	-	-	<1	>99	>99	-	-	<1	>99	>99	-	-	<1	>99	>99
Guatemala	2021	81	-	-	-	-	53	-	-	-	-	67	-	-	-	-	-	-	-	-	-
Guinea	2021	-	-	33	67	-	-	-	63	37	-	-	-	65	35	-	-	-	32	69	-
Guinea-Bissau	2021	-	-	-	-	-	73	26	<1	99	97	-	-	-	-	-	-	-	-	-	-
Guyana	2016	-	-	18	82	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haiti	2021	74	12	13	87	74	64	32	4	96	66	64	25	11	89	65	66	20	14	86	67
Honduras	2021	-	-	-	-	-	53	47	<1	>99	94	55	42	3	97	82	-	-	-	-	-
Hungary	2021	99	<1	<1	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
India	2021	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indonesia	2021	-	-	2	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iran (Islamic Republic of)	2021	99	<1	1	99	99	87	11	2	98	92	87	11	2	98	92	97	2	2	98	98
Iraq	2021	87	13	<1	>99	>99	63	37	<1	>99	>99	67	33	<1	>99	>99	-	-	-	-	-
Israel	2021	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jordan	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kenya	2021	75	22	2	98	75	65	27	8	92	65	64	31	5	95	64	68	21	10	90	68
Kiribati	2021	100	<1	<1	100	>99	64	<1	36	64	64	65	<1	35	65	65	-	-	-	-	-
Kuwait	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kyrgyzstan	2021	-	-	5	95	70	45	2	53	47	47	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	2021	90	6	4	-	-	78	15	7	-	-	80	6	14	-	89	-	-	-	-	-
Lebanon	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lesotho	2021	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liberia	2021	-	-	<1	>99	-	-	-	48	52	-	-	-	53	47	-	-	-	40	60	-
Libya	2021	-	-	14	86	-	-	-	39	61	-	-	-	-	-	-	-	-	-	-	-
Lithuania	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Madagascar	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malawi	2021	-	-	<1	100	-	77	14	9	91	82	71	17	12	88	76	-	-	4	96	-
Maldives	2021	44	52	4	96	44	56	41	2	98	56	-	-	-	-	-	-	-	-	-	-
Mali	2021	-	-	-	-	-	88	7	5	95	91	85	<1	15	85	85	-	-	12	88	-
Malta	2021	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mauritania	2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	2021	86	11	3	97	86	-	-	<1	100	100	-	-	<1	100	100	-	-	<1	100	100
Micronesia (Fed. States of)	2021	33	50	17	83	50	40	48	12	88	57	-	-	-	-	-	-	-	-	-	-
Mongolia	2021	-	-	2	98	95	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mozambique	2021	94	5	2	98	94	57	25	18	82	57	58	29	14	86	62	-	-	-	-	-
Myanmar	2018	-	-	<1	99	-	-	-	17	83	-	-	-	10	90	-	-	-	-	-	-
Namibia	2021	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nepal	2021	-	-	<1	99	-	-	-	6	94	-	-	-	6	94	-	-	-	1	99	-
Nicaragua	2021	75	16	10	90	87	58	28	14	86	80	-	-	-	-	-	-	-	-	-	-
Niger	2021	-	-	-	-	-	25	39	36	64	27	24	36	41	59	26	-	-	-	-	-
Nigeria	2021	-	-	-	-	-	52	36	12	88	63	49	19	32	68	52	64	34	1	99	66
North Macedonia	2021	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99
occupied Palestinian territory*	2021	85	5	10	90	87	94	4	2	98	97	93	4	3	97	96	93	5	2	98	98

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises
Oman	2021	5 223	87	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99
Pakistan	2021	225 200	37	-	-	18	82	-	-	-	-	-	-	-	-	-	-	-
Panama	2020	4 315	68	-	-	-	-	-	-	-	-	-	-	67	<1	33	67	67
Papua New Guinea	2019	8 776	13	70	24	6	94	88	-	-	-	-	-	-	-	-	-	-
Paraguay	2021	7 220	62	85	8	7	93	86	-	-	-	-	-	-	-	-	-	-
Peru	2021	33 359	79	46	24	30	70	55	-	-	5	95	91	-	-	16	84	55
Philippines	2021	111 047	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Republic of Moldova	2014	4 073	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Romania	2021	19 128	54	-	-	<1	99	-	-	-	-	-	-	-	-	-	-	-
Russian Federation	2021	145 912	75	-	-	15	85	69	-	-	-	-	-	-	-	-	-	-
Rwanda	2021	13 277	18	73	21	6	94	94	-	-	-	-	-	73	26	1	99	90
Saint Kitts and Nevis	2021	54	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Saint Vincent and the Grenadines	2021	111	53	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Samoa	2021	200	18	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-
San Marino	2021	34	98	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
Senegal	2021	17 196	49	82	-	-	-	82	90	10	<1	-	90	44	54	2	-	44
Serbia	2021	8 698	57	98	<1	<1	99	98	>99	<1	<1	>99	>99	96	2	2	98	96
Seychelles	2021	99	58	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Sierra Leone	2021	8 141	43	25	64	11	89	28	29	55	16	84	29	17	75	8	92	27
Solomon Islands	2021	704	25	69	11	19	81	71	73	16	11	89	73	80	<1	20	80	80
Somalia	2020	15 893	46	67	22	11	-	-	80	14	6	-	-	48	34	18	-	-
South Africa	2021	60 042	68	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-
South Sudan	2021	11 381	21	-	-	-	-	74	-	-	-	-	-	-	-	-	-	-
Sri Lanka	2021	21 497	19	99	<1	<1	99	99	>99	<1	<1	>99	>99	99	<1	<1	99	99
Sudan	2021	44 909	36	27	56	17	83	34	54	41	5	95	63	11	64	25	75	18
Syrian Arab Republic	2021	18 276	56	68	26	6	94	87	-	-	-	-	-	-	-	-	-	-
Tajikistan	2021	9 750	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thailand	2021	69 951	52	88	-	-	-	100	-	-	-	-	-	-	-	-	-	-
Timor-Leste	2021	1 344	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Togo	2021	8 478	43	-	-	-	-	-	-	-	<1	>99	-	-	-	-	-	-
Tokelau	2021	1	0	>99	<1	<1	>99	>99	NA	NA	NA	NA	NA	>99	<1	<1	>99	>99
Tonga	2021	107	23	92	1	7	93	93	>99	<1	<1	>99	>99	88	<1	12	88	88
Trinidad and Tobago	2021	1 403	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tunisia	2020	11 819	70	-	-	5	95	95	-	-	-	-	-	-	-	-	-	-
Uganda	2021	47 124	26	52	47	<1	99	78	-	-	-	-	-	-	-	-	-	-
United Republic of Tanzania	2021	61 498	36	55	31	15	85	66	74	23	2	98	85	45	29	26	74	59
Uzbekistan	2021	33 936	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanuatu	2021	314	26	72	13	15	85	74	79	21	<1	>99	79	73	12	15	85	75
Venezuela (Bolivarian Republic of)	2021	28 705	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Viet Nam	2018	95 546	36	51	46	3	97	51	-	-	-	-	-	-	-	-	-	-
Zambia	2021	18 921	45	-	-	16	84	-	-	-	5	95	-	75	25	<1	>99	83
Zimbabwe	2021	15 092	32	81	11	8	92	-	89	5	5	95	-	80	14	6	94	-



COUNTRY, AREA OR TERRITORY	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises
Oman	2021	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
Pakistan	2021	93	5	2	98	98	-	-	19	81	-	-	-	-	-	-	-	-	-	-	-
Panama	2020	-	-	-	-	-	67	<1	33	67	67	-	-	-	-	-	-	-	-	-	-
Papua New Guinea	2019	-	-	-	-	-	71	24	5	95	88	-	-	-	-	-	-	-	-	-	-
Paraguay	2021	-	-	-	-	-	-	-	-	-	-	85	8	7	93	86	-	-	-	-	-
Peru	2021	-	-	-	-	-	45	39	16	84	57	46	27	27	73	58	-	-	-	-	-
Philippines	2021	>99	<1	<1	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Republic of Moldova	2014	-	-	24	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Romania	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian Federation	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rwanda	2021	-	-	-	-	-	72	27	<1	100	99	82	18	<1	>99	94	-	-	<1	100	-
Saint Kitts and Nevis	2021	-	-	-	-	-	-	-	<1	>99	>99	-	-	-	-	-	-	-	<1	>99	>99
Saint Vincent and the Grenadines	2021	-	-	-	-	-	-	-	-	-	-	-	-	<1	>99	>99	-	-	-	-	-
Samoa	2021	-	-	<1	>99	-	-	-	<1	>99	-	-	-	<1	>99	-	-	-	-	-	-
San Marino	2021	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99
Senegal	2021	96	4	<1	>99	96	82	-	-	-	82	79	-	-	-	79	97	2	<1	99	99
Serbia	2021	>99	<1	<1	>99	>99	98	1	1	99	98	98	<1	<1	99	98	-	-	-	-	-
Seychelles	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sierra Leone	2021	71	28	1	99	71	22	67	11	89	29	22	68	10	90	27	-	-	-	-	-
Solomon Islands	2021	66	16	17	83	66	76	6	18	82	77	69	12	19	81	70	-	-	-	-	-
Somalia	2020	86	12	2	-	-	66	23	12	-	-	65	22	13	-	-	73	22	5	-	-
South Africa	2021	-	-	-	-	-	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-
South Sudan	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sri Lanka	2021	100	<1	<1	>99	100	99	<1	<1	99	99	99	<1	<1	99	99	>99	<1	<1	>99	>99
Sudan	2021	43	55	2	98	49	23	56	21	79	31	22	59	19	81	28	53	40	7	93	63
Syrian Arab Republic	2021	80	14	6	94	84	67	26	6	94	87	68	26	6	94	87	65	22	13	87	74
Tajikistan	2021	24	76	<1	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thailand	2021	93	-	-	-	>99	82	-	-	-	100	88	-	-	-	100	-	-	-	-	-
Timor-Leste	2021	50	23	27	73	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Togo	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Tokelau	2021	>99	<1	<1	>99	>99	-	-	-	-	-	>99	<1	<1	>99	>99	-	-	-	-	-
Tonga	2021	>99	<1	<1	>99	>99	91	1	8	92	92	92	1	7	93	93	-	-	-	-	-
Trinidad and Tobago	2021	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tunisia	2020	-	-	-	-	-	-	-	5	95	95	-	-	5	95	95	-	-	-	-	-
Uganda	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
United Republic of Tanzania	2021	63	27	10	90	72	58	31	11	89	72	45	35	20	80	58	73	23	4	96	82
Uzbekistan	2021	-	-	-	-	-	57	23	20	80	-	-	-	-	-	-	-	-	-	-	-
Vanuatu	2021	70	30	<1	>99	80	73	13	14	86	75	72	13	15	85	74	63	38	<1	>99	63
Venezuela (Bolivarian Republic of)	2021	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Viet Nam	2018	46	53	1	99	46	52	44	4	96	52	-	-	-	-	-	-	-	-	-	-
Zambia	2021	-	-	2	98	-	68	20	12	88	80	71	17	12	88	76	-	-	4	96	-
Zimbabwe	2021	90	6	5	95	-	80	14	6	94	-	81	14	6	94	-	81	13	6	94	<1

# ANNEX 3

## NATIONAL SANITATION ESTIMATES

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable
Afghanistan	2021	39 835	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Albania	2021	2 873	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Andorra	2021	77	88	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Antigua and Barbuda	2021	99	24	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Armenia	2021	2 968	63	41	40	19	81	62	-	-	-	-	-	-	-	-	-	-
Austria	2021	9 043	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	2021	10 223	57	48	52	<1	>99	98	-	-	-	-	-	-	-	-	-	-
Bangladesh	2021	166 304	39	31	63	6	94	36	28	69	3	97	28	29	66	5	95	48
Benin	2021	12 451	49	-	-	9	91	-	-	-	9	91	-	-	-	8	92	-
Bhutan	2021	780	43	16	83	<1	99	84	-	-	-	-	-	-	-	-	-	-
Bolivia (Plurinational State of)	2021	11 833	70	-	-	-	-	-	-	-	-	-	-	-	-	13	87	-
Brazil	2021	213 993	87	45	55	<1	>99	84	-	-	-	-	-	-	-	-	-	-
Burkina Faso	2021	21 497	31	-	-	15	85	84	-	-	6	94	90	-	-	5	95	90
Burundi	2021	12 255	14	48	-	-	-	73	-	-	-	-	-	-	-	-	-	-
Cambodia	2021	16 946	25	-	-	-	-	>99	-	-	-	-	-	-	-	-	-	-
Chad	2021	16 915	24	-	-	17	83	79	-	-	-	-	-	-	-	-	-	-
China	2021	1 468 071	63	-	-	3	97	83	-	-	-	-	-	-	-	-	-	-
Colombia	2021	51 266	82	-	-	-	-	-	-	-	-	-	-	-	-	25	75	-
Comoros	2021	888	30	2	90	8	92	38	-	-	-	-	-	-	-	-	-	-
Congo	2021	5 657	68	-	-	-	-	-	-	-	-	-	-	-	-	<1	100	-
Cook Islands	2021	18	76	60	20	20	80	80	50	<1	50	50	50	67	33	<1	>99	>99
Côte d'Ivoire	2021	27 054	52	-	-	50	50	50	-	-	-	-	-	-	-	-	-	-
Czech Republic	2021	10 725	74	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-
Democratic Republic of the Congo	2021	92 378	46	-	-	36	64	64	-	-	17	83	81	-	-	42	58	58
Djibouti	2021	1 002	78	-	-	-	-	-	-	-	<1	>99	-	-	-	-	-	-
Dominican Republic	2021	10 954	83	-	-	-	-	-	-	-	-	-	-	-	-	24	76	-
Egypt	2021	104 258	43	68	26	6	94	94	-	-	-	-	-	-	-	-	-	-
Eritrea	2012	3 250	36	-	-	18	82	65	-	-	-	-	-	-	-	-	-	-
Estonia	2021	1 325	69	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Eswatini	2021	1 172	24	-	-	3	97	-	-	-	-	-	-	-	-	-	-	-
Ethiopia	2021	117 876	22	-	-	22	78	78	-	-	12	88	88	3	65	32	68	68
Fiji	2021	903	58	9	79	12	88	62	-	-	-	-	-	-	-	-	-	-
Gabon	2014	1 884	88	-	-	10	90	80	-	-	-	-	-	-	-	-	-	-
Georgia	2021	3 980	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	2021	83 900	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ghana	2021	31 732	58	-	-	1	99	95	-	-	-	-	-	2	82	16	84	47

- = no estimate. NA = not applicable. For unrounded estimates see [www.washdata.org](http://www.washdata.org).

COUNTRY, AREA OR TERRITORY	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable
Afghanistan	2021	-	-	5	95	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Albania	2021	61	39	<1	>99	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Andorra	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antigua and Barbuda	2021	-	-	<1	>99	>99	-	-	-	-	-	-	<1	>99	>99	-	-	<1	>99	>99	-
Armenia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Austria	2021	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bangladesh	2021	19	77	4	96	19	21	68	11	89	21	17	77	6	94	17	34	64	2	98	36
Benin	2021	-	-	-	-	>99	-	-	10	90	-	-	-	-	-	-	-	-	15	85	-
Bhutan	2021	12	88	<1	>99	96	14	85	<1	99	83	16	83	<1	99	84	-	-	-	-	-
Bolivia (Plurinational State of)	2021	-	-	-	-	-	-	-	13	87	-	-	-	-	-	-	-	-	-	-	-
Brazil	2021	-	-	-	-	-	32	65	3	97	84	-	-	-	-	-	-	-	-	-	-
Burkina Faso	2021	-	-	<1	>99	92	-	-	7	93	90	-	-	5	95	89	-	-	6	94	93
Burundi	2021	-	-	-	-	-	48	-	-	-	73	48	-	-	-	74	26	-	-	-	84
Cambodia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>99	-	-	-	-	-
Chad	2021	-	-	7	93	-	-	-	16	84	-	-	-	20	80	-	-	-	32	68	-
China	2021	-	-	-	-	-	-	-	3	97	83	-	-	3	97	83	-	-	-	-	-
Colombia	2021	-	-	-	-	-	-	-	25	75	-	-	-	-	-	-	-	<1	100	-	-
Comoros	2021	20	-	-	-	60	1	-	-	-	36	-	-	-	-	-	-	-	-	-	-
Congo	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cook Islands	2021	>99	<1	<1	>99	>99	33	33	33	67	67	60	20	20	80	80	-	-	-	-	-
Côte d'Ivoire	2021	-	-	24	76	76	-	-	53	47	47	-	-	50	50	50	-	-	-	-	-
Czech Republic	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Democratic Republic of the Congo	2021	-	-	24	76	73	-	-	47	53	53	-	-	42	58	58	-	-	28	72	72
Djibouti	2021	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-	-	<1	>99	-	-
Dominican Republic	2021	-	-	-	-	-	-	-	24	76	-	-	-	-	-	-	-	-	-	-	-
Egypt	2021	-	-	-	-	-	68	26	6	94	94	-	-	-	-	-	-	-	-	-	-
Eritrea	2012	-	-	20	80	59	-	-	17	83	66	-	-	-	-	-	-	-	-	-	-
Estonia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eswatini	2021	-	-	<1	>99	-	-	-	3	97	-	-	-	1	99	-	-	-	4	96	-
Ethiopia	2021	-	-	5	95	95	3	70	27	73	73	-	-	24	76	76	-	-	9	91	91
Fiji	2021	<1	92	8	92	22	9	87	3	97	64	9	79	12	88	62	-	-	-	-	-
Gabon	2014	-	-	-	-	-	-	-	-	-	-	-	-	12	88	76	-	-	-	-	-
Georgia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	>99	>99	-
Germany	2021	-	-	<1	>99	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ghana	2021	-	-	<1	>99	99	2	92	6	94	92	-	-	-	-	-	-	-	-	-	-

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable
Grenada	2021	113	37	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Guatemala	2021	18 250	52	-	-	10	90	31	-	-	-	-	-	-	-	-	-	-
Guinea	2021	13 497	37	-	-	27	73	-	-	-	10	91	-	-	-	25	76	-
Guinea-Bissau	2021	2 015	45	17	83	<1	>99	48	-	-	-	-	-	-	-	-	-	-
Haiti	2021	11 542	58	-	-	9	91	91	-	-	6	94	94	-	-	12	88	88
Honduras	2021	10 063	59	4	92	4	96	80	-	-	-	-	-	4	91	5	95	76
Hungary	2021	9 634	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
India	2021	1 393 409	35	-	-	-	-	-	-	-	-	-	-	-	-	11	89	-
Indonesia	2020	273 524	57	-	-	13	87	-	-	-	<1	99	-	-	-	1	99	-
Iran (Islamic Republic of)	2021	85 029	76	22	62	16	84	79	47	43	11	89	87	3	76	20	80	74
Iraq	2020	40 223	71	22	74	4	96	92	32	67	1	99	97	8	84	7	93	86
Jordan	2021	10 269	92	41	45	14	86	68	-	-	-	-	-	-	-	-	-	-
Kenya	2021	54 986	28	4	82	14	86	86	7	84	10	90	89	2	85	12	88	83
Kuwait	2021	4 329	100	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
Kyrgyzstan	2021	6 628	37	-	-	69	31	-	-	-	-	-	-	-	-	69	31	-
Lao People's Democratic Republic	2021	7 379	37	4	96	<1	-	93	-	-	-	-	-	-	-	-	-	-
Lebanon	2021	6 769	89	16	66	18	83	83	-	-	-	-	-	-	-	-	-	-
Lesotho	2021	2 159	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liberia	2021	5 180	53	-	-	27	73	-	-	-	8	93	-	-	-	26	75	-
Libya	2021	6 959	81	-	-	5	95	-	-	-	-	-	-	-	-	-	-	-
Lithuania	2021	2 690	68	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Madagascar	2021	28 427	39	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-
Malawi	2021	19 648	18	3	87	9	91	77	-	-	8	92	-	3	82	15	85	79
Maldives	2021	544	41	15	85	<1	100	99	-	-	-	-	-	-	-	-	-	-
Mali	2021	20 856	45	-	-	5	95	-	-	-	5	95	-	2	95	3	97	78
Malta	2021	443	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mauritania	2021	4 775	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	2021	130 262	81	-	-	-	-	-	30	67	3	97	90	-	-	-	-	-
Micronesia (Fed. States of)	2021	116	23	18	67	15	85	77	17	69	14	86	86	18	66	15	85	76
Mongolia	2021	3 329	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	2021	628	68	85	15	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Mozambique	2021	32 163	38	43	-	-	-	72	67	33	<1	-	80	2	73	25	75	43
Myanmar	2021	54 806	31	-	-	-	-	-	-	-	-	-	>99	-	-	-	-	-
Namibia	2020	2 541	52	-	-	9	91	81	-	-	-	-	-	-	-	-	-	-
Nepal	2021	29 675	21	-	-	11	89	89	-	-	12	88	88	-	-	9	91	91
Nicaragua	2021	6 702	59	-	-	12	88	-	-	-	2	98	-	-	-	31	69	-
Niger	2021	25 131	17	<1	74	26	74	29	-	-	-	-	-	<1	72	28	72	26
Nigeria	2021	211 401	53	14	54	32	68	65	24	62	14	86	86	15	41	44	56	56
North Macedonia	2021	2 083	59	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
occupied Palestinian territory*	2021	5 223	77	4	93	3	97	83	-	-	-	-	-	-	-	-	-	-

\*Including east Jerusalem. UNICEF reports and the Global SDG Indicators Database refer to 'State of Palestine'.



COUNTRY, AREA OR TERRITORY	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable
Grenada	2021	-	-	<1	>99	>99	-	-	-	-	-	-	-	<1	>99	>99	-	-	-	-	-
Guatemala	2021	-	-	5	95	67	-	-	14	86	2	-	-	10	90	31	-	-	-	-	-
Guinea	2021	-	-	6	94	-	-	-	21	79	-	-	-	24	77	-	-	-	12	89	-
Guinea-Bissau	2021	-	-	-	-	-	15	85	<1	>99	45	-	-	-	-	-	-	-	-	-	-
Haiti	2021	-	-	3	97	97	-	-	10	90	90	-	-	13	87	87	-	-	8	92	92
Honduras	2021	-	-	-	-	-	4	92	4	96	79	4	92	4	96	80	-	-	-	-	-
Hungary	2021	62	38	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
India	2021	-	-	-	-	90	-	-	32	68	-	-	-	-	-	-	-	-	-	-	-
Indonesia	2020	-	-	-	-	-	-	-	13	87	-	-	-	-	-	-	-	-	-	-	-
Iran (Islamic Republic of)	2021	74	24	1	99	99	14	68	19	81	76	17	65	18	82	78	61	34	5	95	94
Iraq	2020	-	-	-	-	-	16	69	15	85	62	22	74	4	96	92	-	-	-	-	-
Jordan	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kenya	2021	14	79	7	93	93	5	83	12	88	88	3	86	11	89	89	6	79	15	85	85
Kuwait	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kyrgyzstan	2021	-	-	<1	>99	-	-	-	69	31	-	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	2021	-	-	<1	-	-	-	-	<1	-	-	4	96	<1	-	93	-	-	-	-	-
Lebanon	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lesotho	2021	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liberia	2021	-	-	5	95	-	-	-	27	73	-	-	-	25	76	-	-	-	6	94	-
Libya	2021	-	-	11	89	-	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-
Lithuania	2021	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Madagascar	2021	-	-	-	-	-	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-
Malawi	2021	-	-	4	96	-	3	84	13	87	80	4	83	14	86	73	-	-	6	94	-
Maldives	2021	39	61	<1	>99	>99	12	88	<1	99	99	-	-	-	-	-	-	-	-	-	-
Mali	2021	-	-	8	92	-	2	96	3	97	78	2	96	3	97	78	-	-	6	94	-
Malta	2021	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mauritania	2021	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	2021	30	67	3	97	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Micronesia (Fed. States of)	2021	17	67	17	83	83	15	70	15	85	77	-	-	-	-	-	-	-	-	-	-
Mongolia	2021	-	-	-	-	-	-	-	56	44	-	-	-	-	-	-	-	-	-	-	-
Montenegro	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mozambique	2021	86	14	<1	-	86	2	76	22	78	47	3	97	<1	99	22	-	-	-	-	-
Myanmar	2021	-	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Namibia	2020	-	-	13	87	74	-	-	8	92	84	-	-	-	-	-	-	-	-	-	-
Nepal	2021	-	-	2	98	98	-	-	12	88	88	-	-	11	89	89	-	-	2	98	98
Nicaragua	2021	-	-	6	94	-	-	-	20	80	-	-	-	-	-	-	-	-	-	-	-
Niger	2021	-	-	-	-	-	<1	73	27	73	32	<1	71	29	71	26	-	-	-	-	-
Nigeria	2021	-	-	-	-	-	18	48	34	66	66	17	45	37	63	63	16	80	4	96	53
North Macedonia	2021	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99
occupied Palestinian territory*	2021	23	75	3	97	96	2	94	4	96	82	3	92	5	95	81	9	89	2	98	88

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable
Oman	2021	5 223	87	95	5	<1	>99	>99	95	5	<1	>99	>99	96	4	<1	>99	>99
Pakistan	2021	225 200	37	16	70	14	86	78	-	-	-	-	-	-	-	-	-	-
Panama	2020	4 315	68	-	-	-	-	-	-	-	-	-	-	-	-	30	70	-
Papua New Guinea	2019	8 776	13	-	-	32	68	-	-	-	-	-	-	-	-	-	-	-
Paraguay	2021	7 220	62	26	62	12	88	63	-	-	-	-	-	-	-	-	-	-
Peru	2021	33 359	79	7	83	10	90	83	-	-	-	-	-	-	-	-	-	-
Philippines	2018	106 651	47	-	-	-	-	-	-	-	-	-	-	-	-	5	95	-
Romania	2021	19 128	54	-	-	3	97	-	-	-	-	-	-	-	-	-	-	-
Russian Federation	2021	145 912	75	-	-	18	82	-	-	-	-	-	-	-	-	-	-	-
Rwanda	2021	13 277	18	6	93	<1	99	91	-	-	-	-	-	6	92	2	98	91
Saint Kitts and Nevis	2021	54	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Saint Lucia	2021	184	19	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Saint Vincent and the Grenadines	2021	111	53	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Samoa	2021	200	18	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
San Marino	2021	34	98	-	-	<1	>99	>99	-	-	<1	>99	>99	-	-	-	-	-
Senegal	2021	17 196	49	-	-	7	93	93	-	-	2	98	98	-	-	22	78	78
Serbia	2021	8 698	57	6	92	2	98	78	9	91	<1	>99	80	3	93	5	95	76
Seychelles	2021	99	58	-	-	<1	>99	-	-	-	-	-	-	-	-	-	-	-
Sierra Leone	2021	8 141	43	15	81	4	96	96	22	78	<1	>99	97	11	89	<1	100	>99
Solomon Islands	2021	704	25	5	74	21	79	5	-	-	-	-	-	-	-	-	-	-
Somalia	2021	16 360	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Sudan	2017	10 911	19	-	-	8	92	84	-	-	-	-	-	-	-	-	-	-
Sri Lanka	2021	21 497	19	-	-	7	93	93	-	-	8	92	92	-	-	7	93	93
Sudan	2021	44 909	36	7	75	19	81	71	9	86	4	96	84	5	69	27	73	63
Tajikistan	2012	7 875	27	-	-	6	94	43	-	-	-	-	-	-	-	-	-	-
Thailand	2021	69 951	52	81	-	-	-	96	-	-	-	-	-	-	-	-	-	-
Timor-Leste	2021	1 344	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Togo	2019	8 082	42	-	-	-	-	76	-	-	-	-	82	-	-	-	-	71
Tokelau	2021	1 0	>99	<1	<1	>99	>99	NA	NA	NA	NA	NA	NA	>99	<1	<1	>99	>99
Tonga	2021	107	23	-	-	14	86	82	-	-	<1	>99	>99	-	-	24	76	71
Uganda	2021	47 124	26	-	-	37	63	59	-	-	5	95	94	-	-	10	90	86
United Republic of Tanzania	2021	61 498	36	6	94	0	100	100	12	88	0	100	100	-	-	52	48	43
Uzbekistan	2021	33 936	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanuatu	2021	314	26	9	68	24	76	68	14	83	3	97	71	7	66	27	73	68
Viet Nam	2018	95 546	36	-	-	4	96	-	-	-	-	-	-	-	-	-	-	-
Zambia	2021	18 921	45	-	-	7	93	-	-	-	3	97	-	1	96	3	97	47
Zimbabwe	2021	15 092	32	17	82	1	99	64	28	67	4	96	88	16	84	<1	100	60

COUNTRY, AREA OR TERRITORY	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and usable
Oman	2021	>99	<1	<1	>99	>99	94	6	<1	>99	>99	95	5	<1	>99	>99	-	-	-	-	-
Pakistan	2021	39	54	7	93	93	14	71	15	85	77	-	-	-	-	-	-	-	-	-	-
Panama	2020	-	-	-	-	-	-	-	30	70	-	-	-	-	-	-	-	-	-	-	-
Papua New Guinea	2019	-	-	-	-	-	-	-	33	67	-	-	-	-	-	-	-	-	-	-	-
Paraguay	2021	-	-	-	-	-	-	-	-	-	-	26	62	12	88	63	-	-	-	-	-
Peru	2021	-	-	-	-	-	5	87	7	93	82	7	83	10	90	83	-	-	-	-	-
Philippines	2018	-	-	-	-	-	-	-	5	95	-	-	-	5	95	-	-	-	-	-	-
Romania	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian Federation	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rwanda	2021	-	-	-	-	-	6	92	2	98	94	6	94	<1	>99	94	-	-	-	-	-
Saint Kitts and Nevis	2021	-	-	<1	>99	>99	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Saint Lucia	2021	-	-	-	-	-	-	-	-	-	-	-	-	<1	>99	>99	-	-	-	-	-
Saint Vincent and the Grenadines	2021	-	-	-	-	-	-	-	-	-	-	-	-	<1	>99	>99	-	-	-	-	-
Samoa	2021	-	-	<1	>99	>99	-	-	<1	>99	>99	-	-	<1	>99	>99	-	-	-	-	-
San Marino	2021	>99	<1	<1	>99	>99	-	-	<1	>99	>99	>99	<1	<1	>99	>99	-	-	<1	>99	>99
Senegal	2021	-	-	4	96	96	-	-	7	93	93	-	-	7	93	93	-	-	6	94	94
Serbia	2021	8	92	<1	>99	56	6	92	3	97	50	6	92	2	98	78	-	-	-	-	-
Seychelles	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sierra Leone	2021	13	88	<1	>99	>99	15	85	<1	>99	>99	15	85	<1	>99	>99	-	-	-	-	-
Solomon Islands	2021	<1	>99	<1	>99	<1	5	73	22	78	5	4	71	25	75	4	-	-	-	-	-
Somalia	2021	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Sudan	2017	-	-	6	94	88	-	-	9	91	82	-	-	-	-	-	-	-	-	-	-
Sri Lanka	2021	-	-	<1	99	99	-	-	12	88	88	-	-	8	92	92	-	-	<1	>99	>99
Sudan	2021	12	82	6	94	83	1	77	21	79	68	4	74	22	78	66	16	84	<1	>99	93
Tajikistan	2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thailand	2021	82	-	-	-	99	81	-	-	-	92	81	-	-	-	96	-	-	-	-	-
Timor-Leste	2021	-	-	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Togo	2019	-	-	-	-	85	-	-	-	-	76	-	-	-	-	75	-	-	-	-	-
Tokelau	2021	>99	<1	<1	>99	>99	-	-	-	-	-	>99	<1	<1	>99	>99	-	-	-	-	-
Tonga	2021	-	-	<1	>99	>99	-	-	17	83	80	-	-	14	86	81	-	-	-	-	-
Uganda	2021	-	-	-	-	-	-	-	<1	99	99	-	-	3	97	97	-	-	-	-	-
United Republic of Tanzania	2021	-	-	46	54	54	5	95	0	100	100	4	96	0	100	100	9	91	0	100	100
Uzbekistan	2021	-	-	-	-	-	26	50	24	76	-	-	-	-	-	-	-	-	-	-	-
Vanuatu	2021	11	79	10	90	40	8	67	24	76	69	5	71	24	76	67	8	83	8	92	75
Viet Nam	2018	-	-	1	99	97	-	-	5	95	-	-	-	-	-	-	-	-	-	-	-
Zambia	2021	-	-	<1	>99	>99	1	92	7	93	65	2	89	9	91	45	-	-	1	99	99
Zimbabwe	2021	38	62	<1	>99	82	14	85	<1	99	61	21	80	<1	>99	63	15	84	<1	99	64

# ANNEX 3

## NATIONAL HYGIENE ESTIMATES

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets
Afghanistan	2021	39 835	26	-	-	-	82	-	-	-	-	-	-	-	-	-	-	-
Albania	2021	2 873	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antigua and Barbuda	2021	99	24	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-
Armenia	2021	2 968	63	69	-	-	94	69	-	-	-	-	-	-	-	-	-	-
Austria	2021	9 043	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	2021	10 223	57	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Bangladesh	2021	166 304	39	38	59	3	85	44	52	48	<1	72	53	33	63	4	74	40
Benin	2021	12 451	49	-	-	-	91	-	-	-	-	96	-	-	-	-	87	-
Bhutan	2021	780	43	73	-	-	88	82	-	-	-	-	-	-	-	-	-	-
Bolivia (Plurinational State of)	2021	11 833	70	-	-	-	66	-	-	-	-	-	-	-	-	-	-	61
Burkina Faso	2021	21 497	31	-	-	2	96	-	-	-	2	80	-	-	-	2	>99	-
Burundi	2021	12 255	14	-	-	-	58	-	-	-	-	-	-	-	-	-	-	-
Cambodia	2021	16 946	25	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-
Cameroon	2021	27 224	58	-	-	-	74	-	-	-	-	-	-	-	-	-	-	-
Chad	2021	16 915	24	-	-	-	75	-	-	-	-	-	-	-	-	-	-	-
China	2021	1 468 071	63	36	64	0	36	67	-	-	-	-	-	-	-	-	-	-
Colombia	2021	51 266	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76
Comoros	2021	888	30	-	-	-	24	-	-	-	-	-	-	-	-	-	-	-
Congo	2018	5 244	67	-	-	-	61	-	-	-	-	61	-	-	-	-	61	-
Cook Islands	2021	18	76	-	-	-	80	-	-	-	-	50	-	-	-	-	>99	-
Côte d'Ivoire	2021	27 054	52	-	-	24	75	-	-	-	5	74	-	-	-	-	-	-
Czech Republic	2021	10 725	74	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Democratic Republic of the Congo	2021	92 378	46	-	-	-	83	-	-	-	-	89	-	-	-	-	81	-
Djibouti	2019	974	78	-	-	-	35	-	-	-	-	45	-	-	-	-	24	-
Dominican Republic	2021	10 954	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54
Egypt	2021	104 258	43	60	40	0	69	60	-	-	-	-	-	-	-	-	-	-
Estonia	2021	1 325	69	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Eswatini	2021	1 172	24	-	-	-	86	-	-	-	-	-	-	-	-	-	-	-
Ethiopia	2021	117 876	22	-	-	8	70	-	-	-	5	54	-	24	47	29	59	32
Fiji	2021	903	58	42	35	24	62	57	-	-	-	-	-	-	-	-	-	-
Gabon	2014	1 884	88	-	-	-	93	-	-	-	-	-	-	-	-	-	-	-
Gambia	2021	2 487	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	2021	3 980	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	2021	83 900	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ghana	2021	31 732	58	62	35	3	93	-	-	-	4	93	-	20	63	17	80	20
Grenada	2021	113	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- = no estimate. NA = not applicable. For unrounded estimates see [www.washdata.org](http://www.washdata.org).



COUNTRY, AREA OR TERRITORY	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets
Afghanistan	2021	29	65	6	77	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Albania	2021	98	-	-	>99	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antigua and Barbuda	2021	-	-	-	>99	-	-	-	-	>99	-	-	-	-	>99	-	-	-	-	>99	-
Armenia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Austria	2021	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bangladesh	2021	34	63	2	89	40	41	55	4	70	48	32	65	4	81	38	69	31	<1	95	71
Benin	2021	-	-	-	>99	-	-	-	-	89	-	-	-	-	90	-	-	-	-	93	-
Bhutan	2021	54	-	-	95	55	76	-	-	88	85	73	-	-	88	82	-	-	-	-	-
Bolivia (Plurinational State of)	2021	-	-	-	75	-	61	-	-	61	61	-	-	-	66	-	-	-	-	-	-
Burkina Faso	2021	-	-	<1	>99	-	-	-	3	98	-	-	-	<1	93	-	-	-	15	82	-
Burundi	2021	-	-	-	-	-	-	-	-	58	-	-	-	-	-	-	-	-	-	-	-
Cambodia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	>99	-	-	-	-	-	-
Cameroon	2021	-	-	-	-	-	-	-	-	73	-	-	-	-	69	-	-	-	-	85	-
Chad	2021	-	-	-	>99	-	-	-	-	75	-	-	-	-	-	-	-	-	-	-	-
China	2021	-	-	-	-	-	36	64	<1	36	67	36	64	<1	36	67	-	-	-	-	-
Colombia	2021	-	-	-	-	-	-	-	-	-	76	-	-	-	-	-	-	-	-	-	-
Comoros	2021	-	-	-	40	-	-	-	-	23	-	-	-	-	-	-	-	-	-	-	-
Congo	2018	-	-	-	63	-	-	-	-	61	-	-	-	-	58	-	-	-	-	65	-
Cook Islands	2021	-	-	-	>99	-	-	-	-	67	-	-	-	-	80	-	-	-	-	-	-
Côte d'Ivoire	2021	-	-	9	74	-	-	-	25	69	-	-	-	24	77	-	-	-	11	-	-
Czech Republic	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Democratic Republic of the Congo	2021	-	-	-	96	-	-	-	-	69	-	-	-	-	78	-	-	-	-	90	-
Djibouti	2019	-	-	-	64	-	-	-	-	29	-	-	-	-	31	-	-	-	-	61	-
Dominican Republic	2021	-	-	-	-	-	-	-	-	-	54	-	-	-	-	-	-	-	-	-	-
Egypt	2021	-	-	<1	-	-	60	40	<1	68	60	-	-	<1	-	-	-	-	<1	-	-
Estonia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eswatini	2021	-	-	-	78	-	-	-	-	86	-	-	-	-	80	-	-	-	-	90	-
Ethiopia	2021	-	-	9	>99	-	24	49	27	48	32	-	-	11	80	-	-	-	<1	73	-
Fiji	2021	56	33	11	78	67	41	35	24	61	56	42	34	24	62	56	-	-	<1	-	-
Gabon	2014	-	-	-	-	-	-	-	-	-	-	-	-	-	91	-	-	-	-	-	-
Gambia	2021	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	-	-	76	91
Germany	2021	-	-	-	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ghana	2021	92	3	5	90	-	20	63	17	82	20	-	-	3	97	-	-	-	5	-	-
Grenada	2021	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>99	-

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets
Guatemala	2021	18 250	52	-	-	-	35	-	-	-	-	-	-	-	-	-	-	-
Guinea	2021	13 497	37	-	-	-	66	-	-	-	-	89	-	-	-	-	63	-
Guinea-Bissau	2021	2 015	45	47	48	4	49	66	-	-	-	-	-	-	-	-	-	-
Haiti	2021	11 542	58	-	-	-	61	-	-	-	-	75	-	-	-	-	63	-
Honduras	2021	10 063	59	30	40	30	32	61	-	-	-	-	-	30	40	30	39	61
Hungary	2021	9 634	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
India	2021	1 393 409	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indonesia	2021	276 362	57	-	-	1	96	-	-	-	1	94	-	-	-	<1	94	-
Iran (Islamic Republic of)	2021	85 029	76	93	5	2	95	96	98	2	<1	98	99	89	7	4	93	93
Iraq	2021	41 179	71	49	26	25	53	70	58	25	17	63	78	37	27	36	41	60
Jordan	2021	10 269	92	50	46	4	84	52	-	-	-	-	-	-	-	-	-	-
Kenya	2021	54 986	28	45	44	11	82	45	62	30	8	91	62	39	44	16	88	43
Kiribati	2021	121	56	-	-	-	40	-	-	-	-	71	-	-	-	-	37	-
Kuwait	2021	4 329	100	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
Kyrgyzstan	2021	6 628	37	-	-	-	-	26	-	-	-	-	-	-	-	-	-	26
Lao People's Democratic Republic	2021	7 379	37	16	74	10	36	17	-	-	-	-	-	-	-	-	-	-
Lebanon	2021	6 769	89	-	-	1	-	93	-	-	-	-	-	-	-	-	-	-
Liberia	2021	5 180	53	-	-	-	89	-	-	-	-	-	-	-	-	-	-	-
Libya	2021	6 959	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	2021	2 690	68	99	1	<1	99	>99	-	-	-	-	-	-	-	-	-	-
Madagascar	2021	28 427	39	-	-	-	33	-	-	-	-	-	-	-	-	-	-	-
Malawi	2021	19 648	18	27	41	32	67	36	-	-	-	92	-	27	41	32	69	36
Maldives	2021	544	41	80	20	<1	88	86	-	-	-	-	-	-	-	-	-	-
Mali	2021	20 856	45	-	-	-	79	-	-	-	-	79	-	42	50	8	84	48
Malta	2021	443	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mauritania	2021	4 775	56	-	-	-	89	-	-	-	-	-	-	-	-	-	-	-
Mexico	2021	130 262	81	-	-	-	-	-	-	-	-	72	-	-	-	-	-	-
Micronesia (Fed. States of)	2021	116	23	42	27	30	62	50	43	29	29	71	43	42	27	31	61	51
Mongolia	2016	3 056	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	2021	628	68	>99	-	-	>99	>99	-	-	-	-	-	-	-	-	-	-
Mozambique	2021	32 163	38	-	-	-	85	-	-	-	-	94	-	40	40	21	74	55
Myanmar	2021	54 806	31	-	-	-	-	-	-	-	-	>99	-	-	-	-	-	-
Namibia	2021	2 587	53	-	-	-	81	-	-	-	-	<1	-	-	-	-	<1	-
Nepal	2021	29 675	21	-	-	-	97	-	-	-	-	-	-	-	-	-	-	-
Nicaragua	2021	6 702	59	-	-	5	51	-	-	-	2	55	-	25	68	7	50	25
Niger	2021	25 131	17	4	96	0	60	5	-	-	<1	80	-	4	96	<1	52	5
Nigeria	2021	211 401	53	35	53	11	62	38	53	43	4	73	57	28	65	7	56	30
North Macedonia	2021	2 083	59	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
occupied Palestinian territory*	2021	5 223	77	87	13	1	88	98	-	-	-	-	-	-	-	-	-	-

\*Including east Jerusalem. UNICEF reports and the Global SDG Indicators Database refer to 'State of Palestine'.

COUNTRY, AREA OR TERRITORY	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets
Guatemala	2021	-	-	-	33	-	-	-	-	36	-	-	-	-	35	-	-	-	-	-	-
Guinea	2021	-	-	-	93	-	-	-	-	66	-	-	-	-	64	-	-	-	-	92	-
Guinea-Bissau	2021	>99	<1	<1	>99	>99	44	51	5	46	65	-	-	-	-	-	-	-	-	-	
Haiti	2021	-	-	-	77	-	-	-	-	61	-	-	-	-	57	-	-	-	-	63	-
Honduras	2021	-	-	-	-	-	30	40	30	32	61	30	41	29	33	62	-	-	-	-	-
Hungary	2021	88	12	<1	98	89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
India	2021	78	-	-	99	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indonesia	2021	-	-	<1	88	-	-	-	<1	91	-	-	-	<1	98	-	-	-	2	70	-
Iran (Islamic Republic of)	2021	98	2	<1	99	99	92	5	3	94	95	93	5	3	95	96	94	5	2	95	97
Iraq	2021	74	24	3	77	94	45	26	29	50	67	49	26	25	53	70	-	-	<1	-	-
Jordan	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kenya	2021	53	37	10	81	53	43	41	15	81	47	37	45	18	79	40	58	28	14	89	58
Kiribati	2021	-	-	-	>99	-	-	-	-	42	-	-	-	-	43	-	-	-	-	-	-
Kuwait	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kyrgyzstan	2021	-	-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	2021	43	56	1	-	-	12	77	11	-	-	16	74	10	36	17	-	-	<1	-	-
Lebanon	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liberia	2021	-	-	-	59	-	-	-	-	69	-	-	-	-	-	-	-	-	-	-	-
Libya	2021	-	-	-	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	2021	>99	<1	<1	>99	>99	99	1	<1	99	>99	-	-	-	-	-	-	-	-	-	-
Madagascar	2021	-	-	-	-	-	-	-	-	35	-	-	-	-	43	-	-	-	-	-	-
Malawi	2021	-	-	-	89	-	27	41	32	72	36	25	43	32	60	33	-	-	29	90	-
Maldives	2021	70	30	<1	96	74	81	19	<1	87	88	-	-	-	-	-	-	-	-	-	-
Mali	2021	-	-	-	73	-	42	50	8	84	48	42	50	8	84	48	-	-	<1	78	-
Malta	2021	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mauritania	2021	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	2021	-	-	-	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Micronesia (Fed. States of)	2021	17	33	50	50	17	45	27	28	63	53	-	-	-	-	-	-	-	-	-	-
Mongolia	2016	-	-	-	-	-	-	-	-	-	33	-	-	-	-	-	-	-	-	-	-
Montenegro	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mozambique	2021	-	-	-	98	-	40	40	21	74	55	38	40	22	75	52	-	-	<1	-	-
Myanmar	2021	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Namibia	2021	-	-	-	85	-	-	-	-	74	-	-	-	-	-	-	-	-	-	-	-
Nepal	2021	-	-	-	98	-	-	-	-	97	-	-	-	-	97	-	-	-	-	98	-
Nicaragua	2021	-	-	2	70	-	25	70	5	49	25	-	-	-	-	-	-	-	-	-	-
Niger	2021	-	-	-	-	-	4	96	<1	58	5	4	96	<1	59	6	-	-	<1	-	-
Nigeria	2021	-	-	<1	78	-	35	58	6	59	38	33	60	7	60	35	60	38	2	76	67
North Macedonia	2021	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99
occupied Palestinian territory*	2021	96	4	<1	96	>99	86	13	<1	87	98	86	13	<1	88	98	88	12	<1	88	99

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets
Oman	2021	5 223	87	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99
Pakistan	2021	225 200	37	55	15	31	61	63	-	-	-	-	-	-	-	-	-	-
Panama	2021	4 382	69	-	-	-	89	-	-	-	-	-	-	-	-	-	-	-
Papua New Guinea	2019	8 776	13	-	-	-	98	-	-	-	-	-	-	-	-	-	-	-
Paraguay	2021	7 220	62	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-
Peru	2021	33 359	79	-	-	-	74	-	-	-	-	-	-	-	-	-	-	-
Romania	2021	19 128	54	-	-	-	-	>99	-	-	-	-	-	-	-	-	-	-
Rwanda	2021	13 277	18	65	25	10	65	84	-	-	-	-	-	65	25	10	70	84
Saint Vincent and the Grenadines	2021	111	53	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-
San Marino	2021	34	98	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
Senegal	2021	17 196	49	-	-	-	92	-	-	-	-	94	-	-	-	-	80	-
Serbia	2021	8 698	57	86	14	1	98	87	90	10	<1	99	91	81	17	1	98	82
Seychelles	2021	99	58	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-
Sierra Leone	2021	8 141	43	39	-	-	91	39	-	-	-	-	48	-	-	-	-	34
Solomon Islands	2021	704	25	23	28	48	59	44	-	-	-	83	-	-	-	-	70	-
Somalia	2020	15 893	46	-	-	-	58	-	-	-	-	77	-	-	-	-	30	-
South Sudan	2017	10 911	19	-	-	-	77	-	-	-	-	-	-	-	-	-	-	-
Sri Lanka	2021	21 497	19	-	-	-	91	-	-	-	-	98	-	-	-	-	89	-
Sudan	2021	44 909	36	17	14	68	30	19	29	20	51	47	31	10	11	78	20	12
Thailand	2021	69 951	52	93	-	-	93	98	-	-	-	-	-	-	-	-	-	-
Timor-Leste	2021	1 344	32	-	-	-	46	-	-	-	-	-	-	-	-	-	-	-
Togo	2021	8 478	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tokelau	2021	1	0	-	-	-	>99	-	NA	NA	NA	NA	NA	-	-	-	>99	-
Tonga	2021	107	23	-	-	-	>99	-	-	-	-	>99	-	-	-	-	>99	-
Tunisia	2020	11 819	70	-	-	-	46	-	-	-	-	-	-	-	-	-	-	-
Uganda	2021	47 124	26	24	74	2	74	24	-	-	3	64	-	-	-	1	75	-
United Republic of Tanzania	2021	61 498	36	42	-	-	78	42	61	-	-	87	61	-	-	-	73	-
United States of America	2015	320 878	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uzbekistan	2021	33 936	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanuatu	2021	314	26	27	35	38	67	41	71	21	7	79	86	18	37	45	62	32
Zambia	2021	18 921	45	-	-	-	83	-	-	-	-	83	-	14	69	17	90	24
Zimbabwe	2021	15 092	32	58	32	10	-	-	70	25	5	-	-	57	33	11	-	-



COUNTRY, AREA OR TERRITORY	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets
Oman	2021	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	<1	-	-
Pakistan	2021	80	<1	20	84	87	53	15	32	59	62	-	-	-	-	-	-	-	-	-	-
Panama	2021	-	-	-	>99	-	-	-	-	87	-	-	-	-	89	-	-	-	-	-	-
Papua New Guinea	2019	-	-	-	-	-	-	-	-	99	-	-	-	-	-	-	-	-	-	-	-
Paraguay	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-
Peru	2021	-	-	-	-	-	-	-	-	75	-	-	-	-	74	-	-	-	-	-	-
Romania	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rwanda	2021	-	-	-	-	-	65	25	10	66	84	65	25	10	68	84	-	-	<1	-	-
Saint Vincent and the Grenadines	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	>99	-	-	-	-	-	-
San Marino	2021	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99
Senegal	2021	-	-	-	95	-	-	-	-	92	-	-	-	-	92	-	-	-	-	91	-
Serbia	2021	85	15	<1	>99	85	85	15	<1	99	87	86	14	<1	98	87	-	-	<1	-	-
Seychelles	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sierra Leone	2021	56	-	-	83	56	38	-	-	91	38	-	-	-	-	37	-	-	-	-	61
Solomon Islands	2021	82	18	<1	94	>99	21	29	51	57	41	23	26	51	59	42	-	-	37	-	-
Somalia	2020	-	-	-	85	-	-	-	-	56	-	-	-	-	52	-	-	-	-	71	-
South Sudan	2017	-	-	-	80	-	-	-	-	76	-	-	-	-	-	-	-	-	-	-	-
Sri Lanka	2021	-	-	-	93	-	-	-	-	90	-	-	-	-	91	-	-	-	-	99	-
Sudan	2021	28	14	58	42	28	15	14	71	27	17	12	13	75	24	13	44	19	37	61	46
Thailand	2021	94	-	-	94	98	92	-	-	92	98	93	-	-	93	98	-	-	-	-	-
Timor-Leste	2021	-	-	-	>99	-	-	-	-	46	-	-	-	-	46	-	-	-	-	-	-
Togo	2021	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tokelau	2021	-	-	-	>99	-	-	-	-	-	-	-	-	-	>99	-	-	-	-	-	-
Tonga	2021	-	-	-	>99	-	-	-	-	>99	-	-	-	-	>99	-	-	-	-	-	-
Tunisia	2020	-	-	-	-	-	-	-	-	46	-	-	-	-	46	-	-	-	-	-	-
Uganda	2021	-	-	<1	82	-	-	-	2	71	-	-	-	2	76	-	-	-	3	85	-
United Republic of Tanzania	2021	-	-	-	69	-	40	-	-	97	40	32	-	-	72	32	63	-	-	90	63
United States of America	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	78	-	-	-	-	-	-
Uzbekistan	2021	-	-	-	-	-	62	36	2	83	65	-	-	-	-	-	-	-	-	-	-
Vanuatu	2021	80	20	<1	>99	80	25	35	40	66	40	20	37	43	64	34	67	21	13	75	79
Zambia	2021	-	-	-	92	-	14	69	17	71	24	13	71	16	85	23	-	-	50	86	-
Zimbabwe	2021	56	35	9	-	-	59	32	10	-	-	53	35	12	-	-	61	31	9	-	-

# ANNEX 3

## NATIONAL WASTE MANAGEMENT ESTIMATES

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated
Afghanistan	2021	39 835	26	-	-	-	-	85	-	-	-	-	-	-	-	-	-	-
Albania	2021	2 873	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Andorra	2021	77	88	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Anguilla	2021	15	100	-	-	-	-	-	-	-	-	-	-	NA	NA	NA	NA	NA
Armenia	2021	2 968	63	97	-	-	97	97	-	-	-	-	-	-	-	-	-	-
Austria	2021	9 043	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	2021	10 223	57	-	-	-	-	55	-	-	-	-	-	-	-	-	-	-
Bahrain	2021	1 748	90	88	-	-	-	-	88	-	-	-	-	-	-	-	-	-
Bangladesh	2021	166 304	39	34	52	14	70	36	16	81	4	54	16	9	74	17	26	32
Belize	2020	398	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benin	2021	12 451	49	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Bhutan	2021	780	43	36	-	-	82	44	-	-	-	-	-	-	-	-	-	-
Brazil	2021	213 993	87	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-
British Virgin Islands	2021	30	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Burkina Faso	2021	21 497	31	21	79	<1	21	61	25	-	-	25	64	14	86	<1	14	77
Burundi	2021	12 255	14	82	-	-	82	97	-	-	-	-	-	-	-	-	-	-
Cambodia	2020	16 719	24	-	-	-	94	-	-	-	-	-	-	-	-	-	-	-
Cameroon	2021	27 224	58	-	-	-	56	-	-	-	-	-	-	-	-	-	-	-
Chad	2021	16 915	24	75	-	-	78	75	-	-	-	-	-	-	-	-	-	-
China	2021	1 468 071	63	-	-	-	86	-	-	-	-	-	-	-	-	-	-	-
China, Hong Kong SAR	2021	7 553	100	100	-	-	-	-	-	-	-	-	-	NA	NA	NA	NA	NA
Comoros	2021	888	30	-	-	-	21	-	-	-	-	-	-	-	-	-	-	-
Congo	2018	5 244	67	12	27	60	40	26	12	32	55	45	25	12	21	66	34	27
Cook Islands	2021	18	76	20	-	-	80	20	-	-	-	50	-	-	-	>99	-	-
Côte d'Ivoire	2021	27 054	52	14	-	-	36	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	2021	10 725	74	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Democratic Republic of the Congo	2021	92 378	46	<1	>99	<1	<1	50	<1	98	2	<1	53	<1	>99	<1	<1	49
Djibouti	2021	1 002	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dominica	2021	72	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecuador	2021	17 888	64	49	-	-	53	65	53	-	-	58	69	42	-	-	45	57
Egypt	2021	104 258	43	-	-	<1	81	-	-	-	-	-	-	-	-	-	-	-
El Salvador	2021	6 519	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Estonia	2021	1 325	69	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Eswatini	2021	1 172	24	73	-	-	73	85	-	-	-	-	-	-	-	-	-	-
Ethiopia	2021	117 876	22	64	-	-	93	64	85	-	-	98	85	23	77	<1	73	55
Falkland Islands (Malvinas)	2021	4	79	-	-	-	-	>99	-	-	-	-	>99	-	-	-	-	-
Fiji	2021	903	58	56	41	3	79	71	-	-	-	-	-	-	-	-	-	-
Gabon	2014	1 884	88	-	-	-	-	35	-	-	-	-	-	-	-	-	-	-
Gambia	2016	2 149	60	-	-	-	66	-	-	-	-	-	-	-	-	-	-	-

- = no estimate. NA = not applicable. For unrounded estimates see [www.washdata.org](http://www.washdata.org).

COUNTRY, AREA OR TERRITORY	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated
Afghanistan	2021	23	72	4	32	49	-	-	-	91	-	-	-	-	-	-	-	-	-	-	-
Albania	2021	91	9	<1	91	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Andorra	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anguilla	2021	>99	-	-	>99	>99	-	-	-	-	-	-	-	-	-	>99	-	-	-	-	-
Armenia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Austria	2021	92	-	-	>99	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bahrain	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88	-	-	-	-
Bangladesh	2021	37	56	6	84	37	13	54	33	32	30	31	53	16	67	42	35	63	2	86	35
Belize	2020	-	-	-	-	25	-	-	-	-	52	-	-	-	-	51	-	-	-	-	-
Benin	2021	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Bhutan	2021	77	-	-	92	87	31	-	-	79	45	36	-	-	80	50	-	-	-	-	-
Brazil	2021	-	-	-	-	-	-	-	-	94	-	-	-	-	-	-	-	-	-	-	-
British Virgin Islands	2021	-	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Burkina Faso	2021	54	46	<1	54	62	21	78	<1	21	58	16	84	<1	16	72	32	-	-	32	69
Burundi	2021	-	-	-	-	-	83	-	-	83	97	-	-	-	-	-	-	-	-	-	-
Cambodia	2020	-	-	-	-	-	-	-	-	-	-	-	-	-	94	-	-	-	-	-	-
Cameroon	2021	-	-	-	-	-	-	-	-	56	-	-	-	-	47	-	-	-	-	65	-
Chad	2021	93	-	-	94	93	72	-	-	82	72	-	-	-	-	60	-	-	-	-	73
China	2021	-	-	-	-	-	-	-	-	86	-	-	-	-	86	-	-	-	-	-	-
China, Hong Kong SAR	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Comoros	2021	-	-	-	60	-	-	-	-	18	-	-	-	-	-	-	-	-	-	-	-
Congo	2018	16	31	53	47	31	12	27	61	39	25	14	30	57	44	26	10	24	67	33	24
Cook Islands	2021	50	-	-	>99	50	<1	-	-	67	<1	20	-	-	80	20	-	-	-	-	-
Côte d'Ivoire	2021	21	-	-	41	-	14	-	-	36	-	14	-	-	36	-	-	-	-	-	-
Czech Republic	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Democratic Republic of the Congo	2021	<1	97	3	<1	58	<1	>99	<1	<1	39	<1	>99	<1	<1	48	<1	>99	<1	<1	54
Djibouti	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>99
Dominica	2021	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>99	-
Ecuador	2021	67	-	-	72	84	48	-	-	52	63	46	-	-	50	62	63	-	-	70	77
Egypt	2021	-	-	<1	-	-	-	-	<1	81	-	-	-	<1	-	-	-	-	<1	-	-
El Salvador	2021	-	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Estonia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eswatini	2021	78	-	-	78	>99	73	-	-	73	84	77	-	-	77	91	71	-	-	71	80
Ethiopia	2021	95	-	-	95	95	23	77	<1	71	62	68	-	-	93	68	-	-	-	-	70
Falkland Islands (Malvinas)	2021	-	-	-	-	>99	-	-	-	-	-	-	-	-	-	>99	-	-	-	-	-
Fiji	2021	61	39	<1	89	72	56	41	3	78	71	57	41	3	78	72	-	-	-	-	-
Gabon	2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-	-
Gambia	2016	-	-	-	63	-	-	-	-	67	-	-	-	-	-	-	-	-	-	-	-

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated
Georgia	2021	3 980	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	2021	83 900	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ghana	2021	31 732	58	51	-	-	-	43	53	-	-	99	59	21	79	<1	-	38
Gibraltar	2021	34	100	-	-	-	-	-	-	-	-	-	-	NA	NA	NA	NA	NA
Grenada	2021	113	37	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-
Guatemala	2014	15 923	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Guinea	2021	13 497	37	45	-	-	45	59	67	-	-	71	67	51	-	-	51	58
Guinea-Bissau	2021	2 015	45	2	93	5	2	41	-	-	-	-	-	-	-	-	-	-
Haiti	2021	11 542	58	6	85	9	18	37	6	83	11	10	50	7	86	7	22	29
Honduras	2021	10 063	59	28	71	1	56	56	-	-	-	-	-	28	71	1	56	56
Hungary	2021	9 634	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
India	2021	1 393 409	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indonesia	2021	276 362	57	74	-	-	86	-	67	-	-	85	-	76	-	-	87	-
Iran (Islamic Republic of)	2021	85 029	76	52	44	4	61	82	66	32	2	72	91	41	53	6	52	74
Iraq	2021	41 179	71	21	45	34	55	26	25	47	27	60	33	14	43	43	49	17
Jordan	2021	10 269	92	-	-	-	75	-	-	-	-	-	-	-	-	-	-	-
Kenya	2021	54 986	28	47	46	7	52	47	61	36	4	76	66	36	60	4	69	49
Kiribati	2021	121	56	17	75	8	92	18	71	21	7	93	75	7	88	5	95	7
Kyrgyzstan	2017	6 190	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	2021	7 379	37	19	30	51	49	30	-	-	-	-	-	-	-	-	-	-
Lebanon	2021	6 769	89	64	31	5	95	64	-	-	-	-	-	-	-	-	-	-
Lesotho	2021	2 159	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liberia	2021	5 180	53	31	-	-	31	32	-	-	-	-	-	-	-	-	-	-
Libya	2021	6 959	81	43	-	-	46	43	-	-	-	-	-	-	-	-	-	-
Lithuania	2021	2 690	68	93	8	<1	>99	93	-	-	-	-	-	-	-	-	-	-
Madagascar	2021	28 427	39	-	-	-	-	42	-	-	-	-	-	-	-	-	-	-
Malawi	2021	19 648	18	42	57	<1	54	82	75	-	-	75	76	42	57	<1	52	79
Maldives	2021	544	41	30	48	22	47	59	-	-	-	-	-	-	-	-	-	-
Mali	2021	20 856	45	57	-	-	57	66	48	-	-	48	67	61	39	<1	64	70
Malta	2021	443	95	-	-	-	-	>99	-	-	-	-	-	-	-	-	-	-
Marshall Islands	2021	60	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mauritania	2021	4 775	56	44	-	-	76	44	-	-	-	-	-	-	-	-	-	-
Mexico	2021	130 262	81	-	-	-	-	-	65	35	<1	93	71	-	-	-	-	-
Micronesia (Fed. States of)	2021	116	23	35	33	32	52	44	43	43	14	57	57	34	32	34	51	42
Mongolia	2016	3 056	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	2021	628	68	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-
Montserrat	2021	5	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mozambique	2021	32 163	38	-	-	-	-	18	-	-	-	-	37	29	71	<1	40	45
Myanmar	2021	54 806	31	-	-	-	-	34	-	-	<1	-	-	-	-	-	-	-
Namibia	2021	2 587	53	-	-	<1	77	-	-	-	-	-	-	-	-	-	-	-
Nauru	2021	11	100	-	-	-	-	-	-	-	-	-	-	NA	NA	NA	NA	NA
Nepal	2019	28 609	20	1	62	36	5	21	-	-	-	-	-	-	-	-	-	-
Nicaragua	2021	6 702	59	31	64	6	44	74	40	58	2	53	55	26	67	8	40	70
Niger	2021	25 131	17	36	64	<1	52	48	-	-	-	71	-	33	67	<1	52	43
Nigeria	2021	211 401	53	35	54	11	69	50	41	53	5	74	63	27	59	14	61	40



COUNTRY, AREA OR TERRITORY	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated
Georgia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82	-
Germany	2021	95	-	-	97	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ghana	2021	74	-	-	95	89	16	84	<1	-	28	56	-	-	-	58	-	-	-	-	-
Gibraltar	2021	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grenada	2021	-	-	-	-	-	-	-	-	>99	-	-	-	-	>99	-	-	-	-	>99	-
Guatemala	2014	-	-	-	-	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Guinea	2021	72	-	-	77	72	57	-	-	57	61	52	-	-	52	59	64	-	-	72	64
Guinea-Bissau	2021	-	-	-	-	-	2	94	5	2	42	-	-	-	-	-	-	-	-	-	-
Haiti	2021	8	82	10	14	65	6	85	10	19	26	6	91	3	22	29	7	82	12	15	40
Honduras	2021	-	-	-	-	-	28	71	1	56	56	28	71	1	56	56	-	-	-	-	-
Hungary	2021	98	<1	<1	99	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
India	2021	76	21	3	80	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indonesia	2021	-	-	-	90	-	63	-	-	82	-	81	-	-	91	-	-	-	-	60	-
Iran (Islamic Republic of)	2021	89	10	1	93	96	46	49	5	56	79	50	45	5	59	80	69	31	<1	77	91
Iraq	2021	31	43	26	63	39	19	46	35	54	24	21	45	34	55	26	-	-	-	-	-
Jordan	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kenya	2021	69	27	3	83	75	49	48	3	84	62	45	50	5	83	58	57	38	5	78	58
Kiribati	2021	58	17	25	75	58	18	77	5	95	18	19	75	5	95	20	-	-	-	-	-
Kyrgyzstan	2017	72	-	-	72	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lao People's Democratic Republic	2021	51	22	28	-	-	14	31	54	-	-	19	30	51	49	30	-	-	-	-	-
Lebanon	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lesotho	2021	-	-	-	-	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liberia	2021	-	-	-	-	66	-	-	-	-	56	-	-	-	-	-	-	-	-	-	-
Libya	2021	50	-	-	84	50	42	-	-	51	42	-	-	-	-	-	-	-	-	-	-
Lithuania	2021	98	3	<1	>99	98	93	8	<1	>99	93	-	-	-	-	-	-	-	-	-	-
Madagascar	2021	-	-	-	-	-	-	-	-	-	44	-	-	-	-	42	-	-	-	-	-
Malawi	2021	82	-	-	91	82	41	58	<1	52	83	40	60	<1	49	75	73	-	-	73	81
Maldives	2021	35	44	22	52	35	29	49	22	46	42	-	-	-	-	-	-	-	-	-	-
Mali	2021	-	-	-	-	-	61	39	<1	81	73	61	39	<1	65	70	41	-	-	41	65
Malta	2021	>99	<1	<1	>99	>99	-	-	-	-	>99	-	-	-	-	-	-	-	-	-	-
Marshall Islands	2021	<1	-	-	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mauritania	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	2021	65	35	<1	93	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Micronesia (Fed. States of)	2021	<1	83	17	17	50	38	28	33	55	42	-	-	-	-	-	-	-	-	-	-
Mongolia	2016	-	-	-	-	-	-	-	-	-	91	-	-	-	-	-	-	-	-	-	-
Montenegro	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Montserrat	2021	>99	-	-	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mozambique	2021	-	-	-	-	55	29	71	<1	40	46	32	68	<1	41	47	-	-	-	-	-
Myanmar	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Namibia	2021	-	-	<1	84	-	-	-	<1	74	-	-	-	<1	-	-	-	-	-	-	-
Nauru	2021	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nepal	2019	1	35	64	4	43	1	73	26	5	13	1	71	28	4	13	2	32	65	5	44
Nicaragua	2021	70	28	2	85	84	29	65	6	43	73	-	-	-	-	-	-	-	-	-	-
Niger	2021	-	-	-	-	-	37	63	<1	52	47	35	65	<1	50	44	-	-	-	-	-
Nigeria	2021	48	47	4	74	70	31	57	12	66	48	34	56	11	68	48	26	58	17	48	61

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated
Niue	2021	2	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Macedonia	2021	2 083	59	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
occupied Palestinian territory*	2021	5 223	77	57	34	9	69	78	-	-	-	-	-	-	-	-	-	-
Oman	2021	5 223	87	98	2	<1	98	100	98	2	<1	98	99	96	4	<1	96	>99
Pakistan	2021	225 200	37	14	31	55	37	22	-	-	-	-	-	-	-	-	-	-
Palau	2021	18	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Papua New Guinea	2019	8 776	13	10	-	-	97	10	-	-	-	-	-	-	-	-	-	-
Paraguay	2021	7 220	62	6	-	-	80	23	-	-	-	-	-	-	-	-	-	-
Peru	2021	33 359	79	28	-	-	97	28	-	-	-	-	-	-	-	-	-	-
Philippines	2018	106 651	47	-	-	-	-	-	-	-	-	-	-	-	-	-	68	-
Portugal	2021	10 168	67	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-
Rwanda	2021	13 277	18	52	46	2	52	84	-	-	-	-	-	59	39	2	59	80
Saint Kitts and Nevis	2021	54	31	-	-	-	-	>99	-	-	-	-	-	-	-	-	-	-
Saint Lucia	2021	184	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
San Marino	2021	34	98	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
Senegal	2021	17 196	49	25	74	<1	38	63	22	78	<1	34	59	28	69	2	49	59
Serbia	2021	8 698	57	85	13	2	90	95	90	10	<1	92	98	79	17	4	86	91
Seychelles	2021	99	58	80	-	-	80	80	-	-	-	-	-	-	-	-	-	-
Sierra Leone	2021	8 141	43	64	-	-	64	71	-	-	<1	-	64	-	-	-	-	52
Slovakia	2017	5 448	54	-	-	-	-	99	-	-	-	-	-	-	-	-	-	-
Solomon Islands	2021	704	25	19	57	24	72	31	53	30	17	83	54	5	75	20	78	15
Somalia	2020	15 893	46	13	63	24	53	26	20	69	10	69	34	2	54	44	28	13
South Sudan	2021	11 381	21	-	-	-	57	-	-	-	-	-	-	-	-	-	-	-
Sri Lanka	2021	21 497	19	27	69	4	51	44	47	51	1	66	69	19	76	5	45	34
Sudan	2021	44 909	36	3	30	67	7	29	8	51	41	15	50	<1	18	82	1	17
Tajikistan	2012	7 875	27	-	-	42	-	-	-	-	-	-	-	-	-	-	-	-
Thailand	2021	69 951	52	-	-	<1	-	98	-	-	-	-	-	-	-	-	-	-
Timor-Leste	2021	1 344	32	9	77	14	47	24	-	-	-	-	-	-	-	-	-	-
Togo	2021	8 478	43	-	-	<1	-	-	-	-	<1	-	-	-	-	<1	-	-
Tokelau	2021	1	0	67	33	<1	>99	83	NA	NA	NA	NA	NA	67	33	<1	>99	83
Tonga	2021	107	23	63	38	<1	>99	66	82	18	<1	>99	82	50	50	<1	>99	56
Tunisia	2020	11 819	70	-	-	-	-	18	-	-	-	-	-	-	-	-	-	-
Tuvalu	2021	12	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uganda	2021	47 124	26	47	-	-	85	47	50	-	-	80	50	37	-	-	85	37
United Republic of Tanzania	2021	61 498	36	28	64	8	64	42	65	-	-	72	65	29	-	-	55	29
Uzbekistan	2021	33 936	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanuatu	2021	314	26	13	87	<1	73	25	36	64	<1	68	61	8	92	<1	73	17
Viet Nam	2021	98 169	38	-	-	-	-	35	-	-	-	-	-	-	-	-	-	-
Wallis and Futuna Islands	2021	11	0	-	-	-	-	>99	NA	NA	NA	NA	NA	-	-	-	-	-
Yemen	2021	30 491	39	13	37	50	36	20	-	-	-	-	-	-	-	-	-	-
Zambia	2021	18 921	45	-	-	-	-	76	-	-	-	-	76	13	87	<1	64	54
Zimbabwe	2021	15 092	32	78	22	<1	84	78	87	12	<1	-	-	65	35	<1	-	-

\*Including east Jerusalem. UNICEF reports and the Global SDG Indicators Database refer to 'State of Palestine'.

COUNTRY, AREA OR TERRITORY	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated
Niue	2021	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Macedonia	2021	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99
occupied Palestinian territory*	2021	58	32	9	77	72	57	34	9	68	79	64	29	7	77	80	32	53	16	38	72
Oman	2021	>99	<1	<1	>99	>99	98	2	<1	98	100	98	2	<1	98	100	-	-	-	-	>99
Pakistan	2021	44	33	23	64	56	12	31	57	35	21	-	-	-	-	-	-	-	-	-	-
Palau	2021	<1	-	-	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Papua New Guinea	2019	-	-	-	-	-	9	-	-	98	9	-	-	-	-	-	-	-	-	-	-
Paraguay	2021	-	-	-	-	-	-	-	-	-	-	6	-	-	80	23	-	-	-	-	-
Peru	2021	-	-	-	-	-	27	-	-	98	27	28	-	-	97	28	-	-	-	-	-
Philippines	2018	-	-	-	-	-	-	-	-	68	-	-	-	-	68	-	-	-	-	-	-
Portugal	2021	-	-	-	-	>99	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-
Rwanda	2021	-	-	<1	-	-	52	46	2	52	84	52	46	2	52	84	-	-	-	-	-
Saint Kitts and Nevis	2021	-	-	-	-	>99	-	-	-	-	>99	-	-	-	-	>99	-	-	-	>99	-
Saint Lucia	2021	>99	-	-	>99	>99	-	-	-	-	-	-	-	-	-	-	>99	-	-	>99	>99
San Marino	2021	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99
Senegal	2021	47	52	1	54	93	24	76	<1	37	61	23	76	<1	36	60	37	63	<1	48	74
Serbia	2021	85	15	<1	85	96	84	14	3	91	95	85	13	2	90	95	-	-	-	-	-
Seychelles	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sierra Leone	2021	-	-	-	-	69	-	-	<1	-	71	-	-	<1	-	59	-	-	<1	-	62
Slovakia	2017	-	-	-	-	99	-	-	-	-	99	-	-	-	-	99	-	-	-	-	99
Solomon Islands	2021	50	43	7	85	61	18	58	23	72	30	20	56	24	72	31	-	-	-	-	-
Somalia	2020	34	64	2	93	42	12	63	25	50	24	12	60	28	45	25	15	70	15	71	28
South Sudan	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sri Lanka	2021	38	60	1	72	52	18	76	6	39	38	23	74	4	47	40	72	25	3	87	84
Sudan	2021	6	43	51	11	43	3	27	70	6	26	2	24	74	4	23	9	60	32	18	60
Tajikistan	2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thailand	2021	-	-	<1	-	98	-	-	<1	-	99	-	-	<1	-	98	-	-	-	-	-
Timor-Leste	2021	50	50	<1	>99	50	9	77	14	47	23	9	77	14	47	24	-	-	-	-	-
Togo	2021	-	-	<1	-	-	-	-	<1	-	-	-	-	<1	-	-	-	-	-	-	-
Tokelau	2021	67	33	<1	>99	83	-	-	-	-	-	67	33	<1	>99	83	-	-	-	-	-
Tonga	2021	38	63	<1	>99	38	60	40	<1	>99	65	63	38	<1	>99	66	-	-	-	-	-
Tunisia	2020	-	-	-	-	-	-	-	-	-	18	-	-	-	-	18	-	-	-	-	-
Tuvalu	2021	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uganda	2021	74	-	-	91	74	34	-	-	85	34	39	-	-	97	39	-	-	-	53	-
United Republic of Tanzania	2021	33	63	5	72	33	28	63	8	66	62	19	74	7	61	39	50	39	11	71	74
Uzbekistan	2021	-	-	-	-	-	52	44	4	58	-	-	-	-	-	-	-	-	-	-	-
Vanuatu	2021	60	40	<1	>99	60	11	89	<1	72	23	10	90	<1	72	22	25	75	<1	71	38
Viet Nam	2021	-	-	-	-	46	-	-	-	-	32	-	-	-	-	-	-	-	-	-	-
Wallis and Futuna Islands	2021	-	-	-	-	>99	-	-	-	-	>99	-	-	-	-	>99	-	-	-	-	-
Yemen	2021	7	44	49	32	19	-	-	-	-	-	14	35	51	36	20	-	-	-	-	-
Zambia	2021	-	-	-	-	88	13	87	<1	64	62	10	90	<1	62	70	-	-	-	-	91
Zimbabwe	2021	73	26	<1	-	-	69	31	<1	-	-	68	32	<1	-	-	76	24	<1	-	-

# ANNEX 3

## NATIONAL ENVIRONMENTAL CLEANING ESTIMATES

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning	Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning	Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning
Afghanistan	2014	33 371	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Albania	2021	2 873	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Austria	2021	9 043	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	2021	10 223	57	-	-	-	-	>99	-	-	-	-	-	-	-	-	-	-
Bangladesh	2021	166 304	39	-	-	-	-	26	-	-	-	-	26	-	-	-	-	26
Bhutan	2021	780	43	5	55	40	20	45	-	-	-	-	-	-	-	-	-	-
China	2021	1 468 071	63	-	-	-	46	-	-	-	-	-	-	-	-	-	-	-
Ethiopia	2021	117 876	22	-	-	-	-	-	-	-	-	-	-	30	65	5	47	34
Germany	2021	83 900	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ghana	2021	31 732	58	-	-	-	-	-	-	-	-	-	-	41	58	1	64	46
Guinea-Bissau	2021	2 015	45	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-
Honduras	2021	10 063	59	43	56	1	61	64	-	-	-	-	-	43	56	1	61	64
Hungary	2021	9 634	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
India	2021	1 393 409	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iran (Islamic Republic of)	2021	85 029	76	62	30	8	73	74	73	24	3	81	83	54	35	11	67	68
Iraq	2021	41 179	71	20	43	37	57	25	26	46	28	67	32	11	57	32	43	16
Jordan	2021	10 269	92	36	48	16	84	36	-	-	-	-	-	-	-	-	-	-
Kenya	2021	54 986	28	8	85	7	15	10	14	80	6	20	18	5	87	8	13	6
Kuwait	2021	4 329	100	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
Liberia	2017	4 702	51	-	-	-	-	90	-	-	-	-	-	-	-	-	-	-
Lithuania	2021	2 690	68	-	-	-	98	-	-	-	-	-	-	-	-	-	-	-
Malawi	2018	18 143	17	20	76	4	59	30	-	-	-	-	-	20	76	4	59	30
Maldives	2021	544	41	18	57	25	61	19	-	-	-	-	-	-	-	-	-	-
Mali	2021	20 856	45	-	-	-	-	-	-	-	-	-	-	17	80	3	34	33
Malta	2021	443	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Micronesia (Fed. States of)	2021	116	23	36	39	24	45	61	86	14	<1	86	>99	31	4	5	41	56
Montenegro	2021	628	68	80	15	5	80	85	-	-	-	-	-	-	-	-	-	-
Mozambique	2021	32 163	38	-	-	-	-	-	-	-	-	-	-	58	41	1	82	64
Niger	2021	25 131	17	5	94	1	15	19	-	-	-	-	-	5	94	1	15	19
North Macedonia	2021	2 083	59	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
occupied Palestinian territory*	2021	5 223	77	33	58	8	79	36	-	-	-	-	-	-	-	-	-	-
Oman	2021	5 223	87	90	10	<1	>99	90	89	11	<1	>99	89	92	8	<1	>99	92
Pakistan	2021	225 200	37	34	43	22	57	39	-	-	-	-	-	-	-	-	-	-
Republic of Korea	2021	51 305	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rwanda	2021	13 277	18	43	55	2	92	43	-	-	-	-	-	43	55	2	92	43
San Marino	2021	34	98	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	-	-	-	-	-
Serbia	2021	8 698	57	56	38	5	68	82	63	33	4	97	87	49	44	7	57	77
Solomon Islands	2021	704	25	16	71	14	29	24	-	-	-	-	-	-	-	-	-	-
Sudan	2021	44 909	36	1	90	9	10	5	3	88	9	12	9	<1	1	85	9	2
Thailand	2018	69 428	50	87	11	2	97	95	-	-	-	-	-	-	-	-	-	-
Tunisia	2020	11 819	70	43	49	8	51	43	-	-	-	-	-	-	-	-	-	-
Uzbekistan	2021	33 936	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanuatu	2021	314	26	5	88	7	12	12	25	64	11	36	36	<1	93	6	7	7
Zambia	2021	18 921	45	-	-	-	-	-	-	-	-	-	-	29	71	<1	69	37

- = no estimate. NA = not applicable. For unrounded estimates see [www.washdata.org](http://www.washdata.org).

\*Including east Jerusalem. UNICEF reports and the Global SDG Indicators Database refer to 'State of Palestine'.



COUNTRY, AREA OR TERRITORY	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning	Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning	Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning	Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning
Afghanistan	2014	-	-	-	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Albania	2021	93	4	4	96	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Austria	2021	-	-	-	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bangladesh	2021	-	-	-	-	27	-	-	-	-	23	-	-	-	-	32	-	-	-	-	24
Bhutan	2021	<1	85	15	15	<1	6	53	41	20	47	5	55	40	20	45	-	-	-	-	-
China	2021	-	-	-	-	-	-	-	-	46	-	-	-	-	46	-	-	-	-	-	-
Ethiopia	2021	-	-	-	-	-	30	65	5	47	34	-	-	-	-	-	-	-	-	-	-
Germany	2021	-	-	-	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ghana	2021	-	-	-	-	-	41	58	1	64	46	-	-	-	-	-	-	-	-	-	-
Guinea-Bissau	2021	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-
Honduras	2021	-	-	-	-	-	43	56	1	61	64	42	57	1	61	63	-	-	-	-	-
Hungary	2021	98	2	<1	99	99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
India	2021	73	8	19	74	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iran (Islamic Republic of)	2021	88	11	1	95	90	58	33	9	70	72	61	31	8	72	74	69	27	5	80	80
Iraq	2021	43	34	23	66	51	16	45	39	55	21	20	43	37	57	25	-	-	-	-	-
Jordan	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kenya	2021	33	62	5	33	38	6	87	7	13	8	4	88	8	12	6	11	82	7	18	15
Kuwait	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liberia	2017	-	-	-	-	89	-	-	-	-	90	-	-	-	-	-	-	-	-	-	-
Lithuania	2021	-	-	-	>99	-	-	-	-	98	-	-	-	-	-	-	-	-	-	-	-
Malawi	2018	-	-	-	-	-	20	76	4	59	30	19	76	5	60	30	-	-	-	-	-
Maldives	2021	30	65	4	83	30	16	56	28	58	17	-	-	-	-	-	-	-	-	-	-
Mali	2021	-	-	-	-	-	17	80	3	34	33	17	80	3	34	33	-	-	-	-	-
Malta	2021	>99	<1	<1	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Micronesia (Fed. States of)	2021	67	33	<1	>99	67	33	40	27	40	60	-	-	-	-	-	-	-	-	-	-
Montenegro	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mozambique	2021	-	-	-	-	-	58	41	1	82	64	58	41	1	81	64	-	-	-	-	-
Niger	2021	-	-	-	-	-	5	94	1	15	19	6	94	<1	15	22	-	-	-	-	-
North Macedonia	2021	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99
occupied Palestinian territory*	2021	53	43	4	96	53	32	59	9	78	34	35	57	8	79	37	29	60	11	80	32
Oman	2021	97	3	<1	>99	97	88	12	<1	>99	88	90	10	<1	>99	90	-	-	-	-	-
Pakistan	2021	62	22	16	81	64	33	45	22	55	37	-	-	-	-	-	-	-	-	-	-
Republic of Korea	2021	-	-	-	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rwanda	2021	-	-	-	-	-	43	55	2	92	43	43	55	2	92	43	-	-	-	-	-
San Marino	2021	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99	>99	<1	<1	>99	>99
Serbia	2021	67	31	2	83	90	54	40	6	65	81	56	38	5	68	82	-	-	-	-	-
Solomon Islands	2021	73	18	9	82	73	13	73	14	27	22	15	73	12	27	24	-	-	-	-	-
Sudan	2021	2	83	15	17	6	1	91	7	9	4	1	91	8	9	3	4	82	14	18	16
Thailand	2018	91	8	2	-	-	83	14	3	-	-	87	11	2	97	95	-	-	-	-	-
Tunisia	2020	-	-	-	-	-	43	49	8	51	43	43	49	8	51	43	-	-	-	-	-
Uzbekistan	2021	-	-	-	-	-	70	28	2	-	-	-	-	-	-	-	-	-	-	-	-
Vanuatu	2021	40	40	20	80	40	4	89	7	10	11	1	92	7	7	8	25	63	13	38	33
Zambia	2021	-	-	-	-	-	29	71	<1	69	37	28	72	<1	70	36	-	-	-	-	-

# ANNEX 3

## REGIONAL AND GLOBAL WATER ESTIMATES

REGION	Year	Population (thousands)		% urban	NATIONAL					URBAN					RURAL				
					Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises
WORLD																			
World	2021	7 874 966	57	78	11	11	89	79	-	-	3	97	-	-	-	11	89	-	
SDG REGIONS																			
Australia and New Zealand	2021	30 649	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Central and Southern Asia	2021	2 037 699	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Eastern and South-Eastern Asia	2021	2 357 973	61	90	1	9	91	92	-	-	5	95	-	-	-	10	90	-	
Europe and Northern America	2021	1 118 855	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Latin America and the Caribbean	2021	659 744	81	-	-	6	94	89	-	-	-	-	-	-	-	-	-	-	
Northern Africa and Western Asia	2021	534 624	63	70	22	9	91	83	-	-	-	-	-	-	-	-	-	-	
Oceania	2021	12 571	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sub-Saharan Africa	2021	1 122 851	42	52	26	21	79	57	68	24	8	92	77	43	29	28	71	49	
OTHER REGIONAL GROUPINGS																			
Landlocked developing countries	2021	545 397	32	64	13	23	77	73	-	-	9	91	-	44	28	29	71	53	
Least developed countries	2021	1 081 505	35	53	28	19	81	58	71	23	6	94	81	44	34	23	77	51	
Small island developing States	2021	70 024	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fragile contexts	2021	1 821 155	43	56	26	18	82	61	76	19	5	95	83	46	31	23	77	52	
INCOME GROUPINGS																			
Low income	2021	683 006	34	45	29	26	74	53	53	36	10	90	71	33	34	34	66	41	
Lower middle income	2021	3 374 001	43	-	-	12	88	-	-	-	-	-	-	-	-	-	-	-	
Upper middle income	2021	2 592 431	68	88	3	9	91	90	-	-	5	95	-	-	-	10	90	-	
High income	2021	1 193 844	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

REGION	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises	Basic water services (improved, available and on premises)	Limited water services (improved, not available and/or not on premises)	No water service (no facility or unimproved)	Improved water source	Improved water on premises
WORLD																					
World	2021	88	-	-	-	-	77	13	10	90	82	77	14	8	92	82	-	-	-	-	-
SDG REGIONS																					
Australia and New Zealand	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central and Southern Asia	2021	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastern and South-Eastern Asia	2021	-	-	-	-	-	90	1	9	91	92	90	1	9	91	92	-	-	-	-	-
Europe and Northern America	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America and the Caribbean	2021	73	-	-	-	-	-	-	9	91	86	-	-	-	-	-	-	-	-	-	-
Northern Africa and Western Asia	2021	-	-	1	99	-	67	23	10	90	81	-	-	-	-	-	-	-	3	97	-
Oceania	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-Saharan Africa	2021	69	25	6	94	74	47	34	18	82	54	50	22	28	72	52	63	30	8	92	63
OTHER REGIONAL GROUPINGS																					
Landlocked developing countries	2021	-	-	3	97	-	51	31	18	81	60	-	-	27	73	-	-	-	9	91	-
Least developed countries	2021	68	28	5	95	70	49	32	20	80	55	53	25	22	78	56	70	23	7	92	74
Small island developing States	2021	-	-	-	-	-	71	17	11	89	74	-	-	-	-	-	-	-	-	-	-
Fragile contexts	2021	75	21	4	96	82	53	30	17	83	60	55	24	21	79	58	71	23	6	94	72
INCOME GROUPINGS																					
Low income	2021	60	34	7	93	63	37	36	26	74	46	41	27	32	68	45	-	-	12	88	-
Lower middle income	2021	91	7	2	98	-	-	-	12	88	-	-	-	-	-	-	-	-	-	-	-
Upper middle income	2021	-	-	-	-	-	88	4	8	92	91	89	3	8	92	92	-	-	-	-	-
High income	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

# ANNEX 3

## REGIONAL AND GLOBAL SANITATION ESTIMATES

REGION	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and useable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and useable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and useable
WORLD																		
World	2021	7 874 966	57	-	-	10	90	78	-	-	-	-	-	-	-	16	84	-
SDG REGIONS																		
Australia and New Zealand	2021	30 649	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central and Southern Asia	2021	2 037 699	38	-	-	-	-	-	-	-	-	-	-	-	-	11	89	-
Eastern and South-Eastern Asia	2021	2 357 973	61	-	-	3	97	84	-	-	-	-	-	-	-	-	-	-
Europe and Northern America	2021	1 118 855	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America and the Caribbean	2021	659 744	81	38	59	3	97	81	-	-	-	-	-	-	-	-	-	-
Northern Africa and Western Asia	2021	534 624	63	49	42	9	91	87	-	-	-	-	-	-	-	-	-	-
Oceania	2021	12 571	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-Saharan Africa	2021	1 122 851	42	13	65	22	78	73	24	66	10	89	88	7	65	28	72	63
OTHER REGIONAL GROUPINGS																		
Landlocked developing countries	2021	545 397	32	-	-	18	81	73	-	-	8	92	90	3	77	19	81	71
Least developed countries	2021	1 081 505	35	21	64	15	84	67	26	67	7	93	73	12	67	22	78	62
Small island developing States	2021	70 024	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fragile contexts	2021	1 821 155	43	17	64	19	81	68	29	62	9	91	79	12	63	25	75	61
INCOME GROUPINGS																		
Low income	2021	683 006	34	-	-	22	78	70	-	-	9	90	85	3	72	25	75	67
Lower middle income	2021	3 374 001	43	-	-	15	85	73	-	-	-	-	-	-	-	15	85	-
Upper middle income	2021	2 592 431	68	-	-	4	96	83	-	-	-	-	-	-	-	-	-	-
High income	2021	1 193 844	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



REGION	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and useable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and useable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and useable	Basic sanitation services (improved, usable, dedicated for staff, sex-separated with menstrual hygiene facilities, and adapted for limited mobility)	Limited sanitation services (improved, not meeting all criteria for basic)	No sanitation service (no facility or unimproved)	Improved	Improved and useable
WORLD																					
World	2021	-	-	-	-	91	-	-	13	87	72	-	-	9	91	70	-	-	-	-	-
SDG REGIONS																					
Australia and New Zealand	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central and Southern Asia	2021	-	-	-	-	84	-	-	27	73	-	-	-	-	-	-	-	-	-	-	-
Eastern and South-Eastern Asia	2021	-	-	-	-	-	-	-	3	97	83	-	-	3	97	84	-	-	-	-	-
Europe and Northern America	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America and the Caribbean	2021	-	-	-	-	-	28	64	8	92	79	-	-	-	-	-	-	-	-	-	-
Northern Africa and Western Asia	2021	-	-	-	-	-	-	-	10	90	-	-	-	-	-	-	-	-	-	-	-
Oceania	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-Saharan Africa	2021	-	-	12	87	84	9	69	22	78	72	11	67	22	78	70	14	77	10	90	75
OTHER REGIONAL GROUPINGS																					
Landlocked developing countries	2021	-	-	4	96	80	9	75	16	83	77	-	-	14	86	76	-	-	8	92	90
Least developed countries	2021	-	-	10	89	66	10	74	16	83	63	10	76	15	85	62	-	-	8	92	74
Small island developing States	2021	-	-	-	-	-	-	-	15	85	-	-	-	-	-	-	-	-	-	-	-
Fragile contexts	2021	36	55	9	91	74	12	68	20	80	65	13	68	20	80	62	25	67	7	93	71
INCOME GROUPINGS																					
Low income	2021	-	-	8	91	77	5	74	22	78	69	-	-	20	80	69	-	-	14	86	85
Lower middle income	2021	-	-	-	-	85	20	55	25	75	70	-	-	-	-	-	-	-	-	-	-
Upper middle income	2021	-	-	-	-	-	-	-	4	96	82	-	-	3	97	83	-	-	-	-	-
High income	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

# ANNEX 3

## REGIONAL AND GLOBAL HYGIENE ESTIMATES

REGION	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic hygiene services (hand hygiene at points of care and handwashing facility with water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene at points of care and handwashing facility with water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene at points of care and handwashing facility with water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets
WORLD																		
World	2021	7 874 966	57	51	40	9	68	65	-	-	-	-	-	-	-	-	-	-
SDG REGIONS																		
Australia and New Zealand	2021	30 649	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central and Southern Asia	2021	2 037 699	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastern and South-Eastern Asia	2021	2 357 973	61	38	61	1	47	68	-	-	-	-	-	-	-	-	-	-
Europe and Northern America	2021	1 118 855	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America and the Caribbean	2021	659 744	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Africa and Western Asia	2021	534 624	63	53	29	18	62	59	-	-	-	-	-	-	-	-	-	-
Oceania	2021	12 571	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-Saharan Africa	2021	1 122 851	42	38	53	10	73	37	56	40	4	79	58	29	56	14	70	34
OTHER REGIONAL GROUPINGS																		
Landlocked developing countries	2021	545 397	32	-	-	8	74	-	-	-	4	69	-	27	56	17	68	33
Least developed countries	2021	1 081 505	35	32	56	12	75	36	-	-	8	78	-	27	54	19	69	35
Small island developing States	2021	70 024	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fragile contexts	2021	1 821 155	43	45	40	15	71	50	62	32	6	78	66	31	53	16	67	37
INCOME GROUPINGS																		
Low income	2021	683 006	34	-	-	17	70	-	-	-	-	74	-	25	50	24	65	33
Lower middle income	2021	3 374 001	43	-	-	10	78	-	-	-	2	86	-	-	-	-	-	-
Upper middle income	2021	2 592 431	68	39	59	1	41	69	-	-	-	-	-	-	-	-	-	-
High income	2021	1 193 844	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

REGION	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic hygiene services (hand hygiene at points of care and handwashing facility with water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene at points of care and handwashing facility with water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene at points of care and handwashing facility with water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets	Basic hygiene services (hand hygiene at points of care and handwashing facility with water and soap at toilets)	Limited hygiene services (hand hygiene facilities missing at points of care or toilets)	No hygiene service (hand hygiene facilities missing at points of care and toilets)	Hand hygiene facilities at points of care	Handwashing facility near toilets
WORLD																					
World	2021	-	-	-	89	-	51	40	10	66	65	48	46	7	69	62	-	-	-	-	-
SDG REGIONS																					
Australia and New Zealand	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central and Southern Asia	2021	74	-	-	96	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastern and South-Eastern Asia	2021	-	-	-	-	-	38	61	1	46	69	38	61	0	48	68	-	-	-	-	-
Europe and Northern America	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America and the Caribbean	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Africa and Western Asia	2021	-	-	14	-	-	49	29	22	57	54	-	-	22	-	-	-	-	8	-	-
Oceania	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-Saharan Africa	2021	-	-	4	87	-	33	53	13	68	37	33	57	10	73	36	60	34	6	82	-
OTHER REGIONAL GROUPINGS																					
Landlocked developing countries	2021	-	-	6	91	-	33	52	14	68	39	-	-	9	77	-	-	-	7	81	-
Least developed countries	2021	-	-	10	88	-	32	51	17	68	39	29	57	14	74	35	-	-	7	85	-
Small island developing States	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fragile contexts	2021	62	30	9	85	67	42	40	17	65	49	39	49	12	71	43	66	29	5	84	69
INCOME GROUPINGS																					
Low income	2021	-	-	15	88	-	27	50	23	61	34	-	-	19	70	-	-	-	8	79	-
Lower middle income	2021	74	20	5	93	76	48	42	10	75	53	-	-	5	82	-	-	-	-	-	-
Upper middle income	2021	-	-	-	-	-	39	60	1	40	69	39	60	1	40	69	-	-	-	-	-
High income	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

# ANNEX 3

## REGIONAL AND GLOBAL WASTE MANAGEMENT ESTIMATES

REGION	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated
WORLD																		
World	2021	7 874 966	57	-	-	-	73	-	-	-	-	-	-	-	-	-	-	-
SDG REGIONS																		
Australia and New Zealand	2021	30 649	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central and Southern Asia	2021	2 037 699	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastern and South-Eastern Asia	2021	2 357 973	61	-	-	-	86	-	-	-	-	-	-	-	-	-	-	-
Europe and Northern America	2021	1 118 855	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America and the Caribbean	2021	659 744	81	-	-	-	91	-	-	-	-	-	-	-	-	-	-	-
Northern Africa and Western Asia	2021	534 624	63	-	-	25	58	-	-	-	-	-	-	-	-	-	-	-
Oceania	2021	12 571	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-Saharan Africa	2021	1 122 851	42	39	55	6	59	54	44	52	4	64	63	28	68	4	56	49
OTHER REGIONAL GROUPINGS																		
Landlocked developing countries	2021	545 397	32	55	-	-	74	66	66	-	-	76	73	32	68	<1	66	56
Least developed countries	2021	1 081 505	35	34	50	15	55	49	31	63	6	47	49	21	69	10	43	45
Small island developing States	2021	70 024	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fragile contexts	2021	1 821 155	43	32	46	22	55	46	40	53	7	60	58	23	66	12	48	43
INCOME GROUPINGS																		
Low income	2021	683 006	34	37	46	18	50	55	34	-	-	42	60	24	67	9	47	51
Lower middle income	2021	3 374 001	43	41	-	-	65	43	51	-	-	74	-	-	-	-	-	-
Upper middle income	2021	2 592 431	68	-	-	-	87	-	-	-	-	-	-	-	-	-	-	-
High income	2021	1 193 844	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



REGION	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated	Basic waste management services (waste segregated and treated and disposed of safely)	Limited waste management services (Waste not segregated or treated and disposed of safely)	No waste management service (waste not segregated nor treated and disposed of safely)	Waste segregated	Waste treated
WORLD																					
World	2021	61	35	4	81	75	-	-	-	70	-	-	-	-	72	-	-	-	-	-	-
SDG REGIONS																					
Australia and New Zealand	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central and Southern Asia	2021	68	26	5	78	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastern and South-Eastern Asia	2021	-	-	-	-	-	-	-	-	85	-	-	-	-	87	-	-	-	-	-	-
Europe and Northern America	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America and the Caribbean	2021	-	-	-	-	-	-	-	-	86	-	-	-	-	-	-	-	-	-	-	-
Northern Africa and Western Asia	2021	-	-	21	-	-	-	-	23	58	-	-	-	27	-	-	-	-	-	-	-
Oceania	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-Saharan Africa	2021	55	42	3	69	72	30	66	4	58	53	36	59	5	60	54	33	58	10	47	65
OTHER REGIONAL GROUPINGS																					
Landlocked developing countries	2021	75	-	-	81	81	38	60	2	69	62	49	-	-	75	61	-	-	-	-	73
Least developed countries	2021	44	45	11	62	59	23	63	14	47	49	30	56	14	54	49	29	64	6	52	58
Small island developing States	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fragile contexts	2021	47	41	12	67	62	25	54	21	50	45	33	54	13	58	50	34	57	8	55	61
INCOME GROUPINGS																					
Low income	2021	48	35	17	54	67	26	66	8	50	52	33	51	16	49	52	20	-	-	28	65
Lower middle income	2021	65	30	5	79	80	33	46	21	59	41	47	-	-	-	-	-	-	-	-	-
Upper middle income	2021	-	-	-	-	-	-	-	-	86	-	-	-	-	85	-	-	-	-	-	-
High income	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

# ANNEX 3

## REGIONAL AND GLOBAL ENVIRONMENTAL CLEANING ESTIMATES

REGION	Year	Population (thousands)	% urban	NATIONAL					URBAN					RURAL				
				Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning	Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning	Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning
WORLD																		
World	2021	7 874 966	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SDG REGIONS																		
Australia and New Zealand	2021	30 649	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central and Southern Asia	2021	2 037 699	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastern and South-Eastern Asia	2021	2 357 973	61	-	-	-	46	-	-	-	-	-	-	-	-	-	-	-
Europe and Northern America	2021	1 118 855	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America and the Caribbean	2021	659 744	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Africa and Western Asia	2021	534 624	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oceania	2021	12 571	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-Saharan Africa	2021	1 122 851	42	-	-	-	-	-	-	-	-	-	-	26	70	4	45	32
OTHER REGIONAL GROUPINGS																		
Landlocked developing countries	2021	545 397	32	-	-	-	-	-	-	-	-	-	-	26	70	4	46	33
Least developed countries	2021	1 081 505	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29
Small island developing States	2021	70 024	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fragile contexts	2021	1 821 155	43	-	-	-	-	34	-	-	-	-	-	-	-	-	-	29
INCOME GROUPINGS																		
Low income	2021	683 006	34	-	-	-	-	-	-	-	-	-	-	25	70	5	43	31
Lower middle income	2021	3 374 001	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper middle income	2021	2 592 431	68	-	-	-	47	-	-	-	-	-	-	-	-	-	-	-
High income	2021	1 193 844	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

REGION	Year	HOSPITAL					NON-HOSPITAL					GOVERNMENT					NON-GOVERNMENT				
		Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning	Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning	Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning	Basic environmental cleaning services (Cleaning protocols and staff trained)	Limited environmental cleaning services (Cleaning protocols or some staff trained)	No environmental cleaning service (No protocols and no staff trained)	Protocols for cleaning	Training on cleaning
WORLD																					
World	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SDG REGIONS																					
Australia and New Zealand	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Central and Southern Asia	2021	72	10	18	76	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Eastern and South-Eastern Asia	2021	-	-	-	-	-	-	-	-	46	-	-	-	46	-	-	-	-	-	-	
Europe and Northern America	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Latin America and the Caribbean	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Northern Africa and Western Asia	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Oceania	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sub-Saharan Africa	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
OTHER REGIONAL GROUPINGS																					
Landlocked developing countries	2021	-	-	-	-	-	33	63	4	47	34	-	-	-	-	-	-	-	-	-	
Least developed countries	2021	-	-	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	-	-	
Small island developing States	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fragile contexts	2021	-	-	-	-	50	30	57	13	49	34	-	-	-	-	-	-	-	-	-	
INCOME GROUPINGS																					
Low income	2021	-	-	-	-	-	26	70	4	42	32	-	-	-	-	-	-	-	-	-	
Lower middle income	2021	71	12	17	74	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Upper middle income	2021	-	-	-	-	-	-	-	-	47	-	-	-	47	-	-	-	-	-	-	
High income	2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

# WASH IN HEALTH CARE FACILITIES IN 2021

## HYGIENE

- Half (**51%**) of health care facilities globally had a **basic** hygiene service.
- National data on basic hygiene services were available for **35%** of the global population, and for **37%** of the population of LDCs.
- Only **one third (32%)** of health care facilities in least developed countries (LDCs) had a basic hand hygiene service.
- **3.85 billion** people lacked a basic hygiene service at their health care facility, including **688 million** people with **no hygiene service**.

## ENVIRONMENTAL CLEANING

- **21** countries (representing 7% of the global population) had sufficient data to estimate national coverage of **basic** environmental cleaning services in health care facilities.
- There were not enough countries with national data on environmental cleaning to calculate regional or global estimates for **basic** environmental cleaning services.
- In sub-Saharan Africa, **26%** of rural health care facilities had a **basic** environmental cleaning service.

## WASTE MANAGEMENT

- **65** countries had sufficient data to estimate national coverage of **basic** waste management services in health care facilities.
- **One out of three** health care facilities in LDCs (**34%**) had a **basic** health care waste management service.
- Three out of five (61%) hospitals globally had a basic health care waste management service.
- **73%** of health care facilities globally had systems for segregating waste.

## WATER

- **78%** of health care facilities globally had a **basic** water service.
- **59** countries and three of the eight SDG regions had sufficient data to estimate national coverage of **basic** water services in health care facilities.
- In LDCs, only **53%** of health care facilities had a **basic** water service.
- **88%** of hospitals but only **77%** of non-hospitals had a **basic** water service.
- **1.7 billion** people lacked a **basic** water service at their health care facility.

## SANITATION

- **41** countries and three SDG regions had sufficient data to estimate national coverage of **basic** sanitation services in health care facilities.
- National data on **basic** sanitation services were available for **19%** of the global population.
- **21%** of health care facilities in LDCs had a **basic** sanitation service.
- **765 million** people globally had no sanitation service at their health care facility.



JMP website: [washdata.org](https://washdata.org)