

PROGRESS ON HOUSEHOLD DRINKING WATER, SANITATION AND HYGIENE

2000-2020

FIVE YEARS
INTO THE SDGs



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



JMP

unicef



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PROGRESS ON HOUSEHOLD DRINKING WATER, SANITATION AND HYGIENE

2000-2020

FIVE YEARS INTO THE SDGs





Highlights

Five years into the SDGs

The World Health Organization and United Nations Children's Fund (WHO/UNICEF) Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) produces internationally comparable estimates of progress on drinking water, sanitation and hygiene (WASH) and is responsible for global monitoring of the Sustainable Development Goal (SDG) targets related to WASH. In 2020, the JMP released updated estimates for WASH in schools and WASH in health care facilities (2000-2019). This report presents updated national, regional and global estimates for WASH in households for the period 2000 to 2020 and takes stock of progress five years into the SDG period (2015-2020).



The 2030 Agenda for Sustainable Development called for 'ensuring availability and sustainable management of water and sanitation for all' under SDG6, and established ambitious indicators for WASH services under targets 6.1 and 6.2. While the number of countries with estimates available for the new SDG global indicators has increased with each JMP progress update, many still only have a small number of data points making it difficult to assess trends. However we now have enough data to begin to assess the prospects for achieving the SDG targets. This report extrapolates estimates based on existing trends to illustrate current trajectories and the acceleration required to achieve universal coverage by 2030.

Achieving SDG WASH targets by 2030 will require a quadrupling of current rates of progress



FIGURE 1 Global coverage of WASH services, 2015-2020 (%), and acceleration required to meet targets by 2030

Five years into the SDGs, the world is not on track to achieve SDG targets 6.1 and 6.2. Achieving universal coverage by 2030 will require a quadrupling of current rates of progress in safely managed drinking water services, safely managed sanitation services, and basic hygiene services (Figure 1). Least developed countries (LDCs) have the furthest to go and it will be especially challenging to accelerate progress in fragile contexts¹. Many more countries are facing challenges in extending services to rural areas and to poor and vulnerable populations who are most at risk of being left behind.



¹ As of May 2021, the OECD States of Fragility series identifies 57 fragile contexts, including 13 which are classified as extremely fragile. Source: <<https://www.oecd.org/dac/states-of-fragility-fa5a6770-en.htm>>

DRINKING WATER

From 2015 to 2020

- The proportion of the global population using safely managed services increased from 70% to 74%, urban coverage increased from 85% to 86%, and rural coverage increased from 53% to 60%.
- The number of people without safely managed services decreased by 193 million, decreasing by 225 million in rural areas but increasing by 32 million in urban areas.
- The number of countries with estimates available for SDG 6.1.1 increased from 96 to 138, and the proportion of the global population with data available increased from 34% to 45%. Latin America and the Caribbean recorded the biggest increase in data coverage.
- On average, use of safely managed services increased by 0.63 percentage points per year (% pts/yr) at the national level, 0.89 % pts/yr in rural areas and 0.06 % pts/yr in urban areas.
- Achieving universal access to safely managed services by 2030 will require a 4x increase in current rates of progress (10x in least developed countries and 23x in fragile contexts).
- At current rates of progress, the world will only reach 81% coverage by 2030, leaving 1.6 billion people without safely managed services.

In 2020

- 2 billion people lacked safely managed services, including 1.2 billion people with basic services, 282 million with limited services, 367 million using unimproved sources, and 122 million drinking surface water.
- 138 countries and five out of eight SDG regions had estimates for safely managed services, representing 45% of the global population.
- 84 countries had achieved universal (>99%) access to at least basic services, including 30 countries that had achieved universal access to safely managed services.
- 16 countries are on track to reach universal access to safely managed services, and 34 countries are on track to reach universal access to at least basic drinking water between 2020 and 2030.
- People living in fragile contexts were twice as likely to lack safely managed services as those living in non-fragile contexts.
- Eight out of ten people who still lacked even basic services lived in rural areas. Around half of them lived in least developed countries (LDCs).

One in four people lacked safely managed drinking water services in 2020

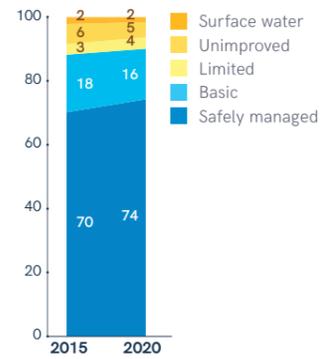


FIGURE 2 Global drinking water coverage, 2015-2020 (%)

Five SDG regions had estimates for safely managed drinking water services in 2020

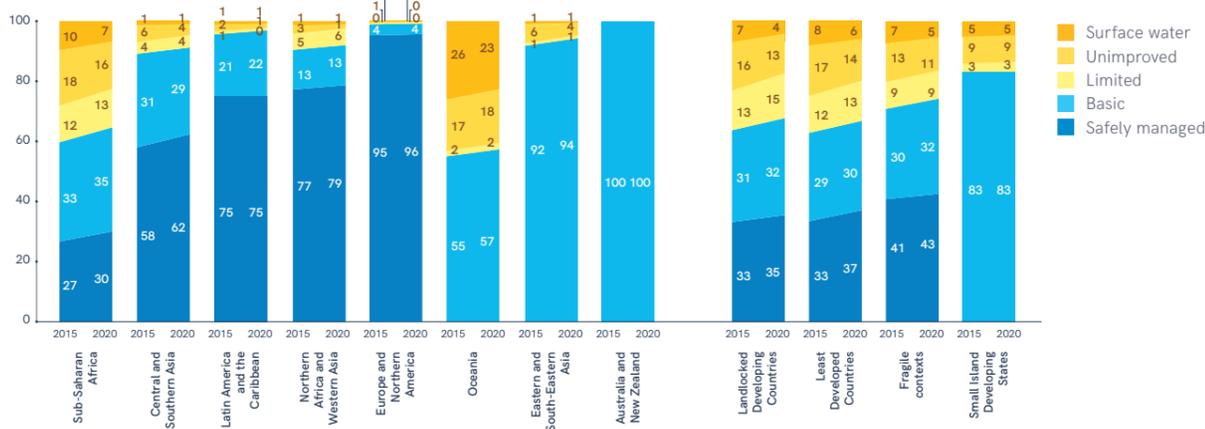


FIGURE 3 Regional drinking water coverage, 2015-2020 (%)

In 2020, 138 countries² had estimates for safely managed drinking water services

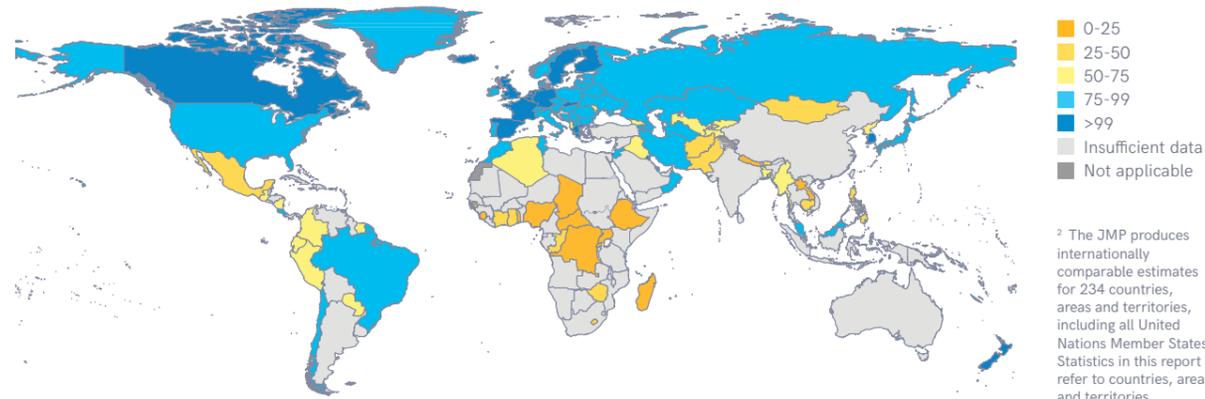


FIGURE 4 Proportion of population using safely managed drinking water services, 2020 (%)

² 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.

SANITATION

From 2015 to 2020

- The proportion of the global population using safely managed services increased from 47% to 54%, rural coverage increased from 36% to 44%, and urban coverage increased from 57% to 62%.
- The population practising open defecation decreased by a third, from 739 million people to 494 million. 85% of this drop occurred in rural areas.
- The number of countries with estimates available for safely managed services increased from 84 to 120, and the global population with data available increased from 48% to 81%.
- On average, use of safely managed services increased by 1.27 percentage points per year (% pts/yr) at the national level, 1.48 % pts/yr in rural areas, and 0.84 % pts/yr in urban areas.
- Achieving universal access to safely managed services by 2030 will require a 4x increase in current rates of progress (15x in least developed countries and 9x in fragile contexts).
- At current rates of progress, the world will only reach 67% coverage by 2030, leaving 2.8 billion people without safely managed services.

In 2020

- 3.6 billion people lacked safely managed services, including 1.9 billion people with basic services, 580 million with limited services, 616 million using unimproved facilities, and 494 million practising open defecation.
- 120 countries and seven out of eight SDG regions had estimates for safely managed services, representing 81% of the global population.
- 62 countries had achieved universal (>99%) access to at least basic services, including eight countries that had achieved universal access to safely managed services.
- 8 countries are on track to reach universal access to safely managed services, and 26 countries are on track to reach universal access to at least basic services between 2020 and 2030.
- Two thirds of people who still lacked even basic services lived in rural areas. Nearly half of them lived in sub-Saharan Africa.
- 92% of the population practising open defecation lived in rural areas.

Nearly half the world's population lacked safely managed sanitation services in 2020

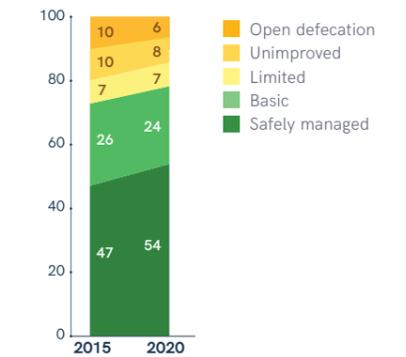


FIGURE 5 Global sanitation coverage, 2015-2020 (%)

Seven SDG regions had estimates for safely managed sanitation services in 2020

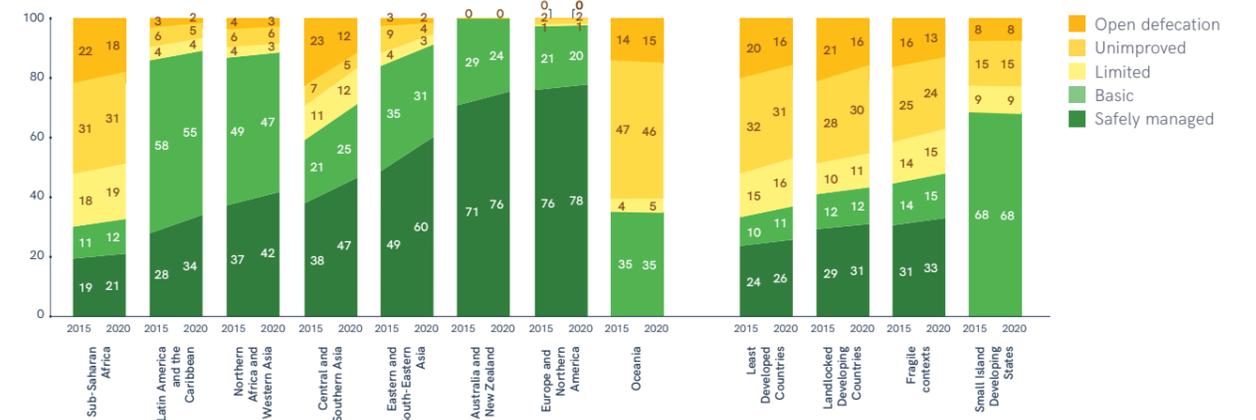


FIGURE 6 Regional sanitation coverage, 2015-2020 (%)

In 2020, 120 countries had estimates for safely managed sanitation services

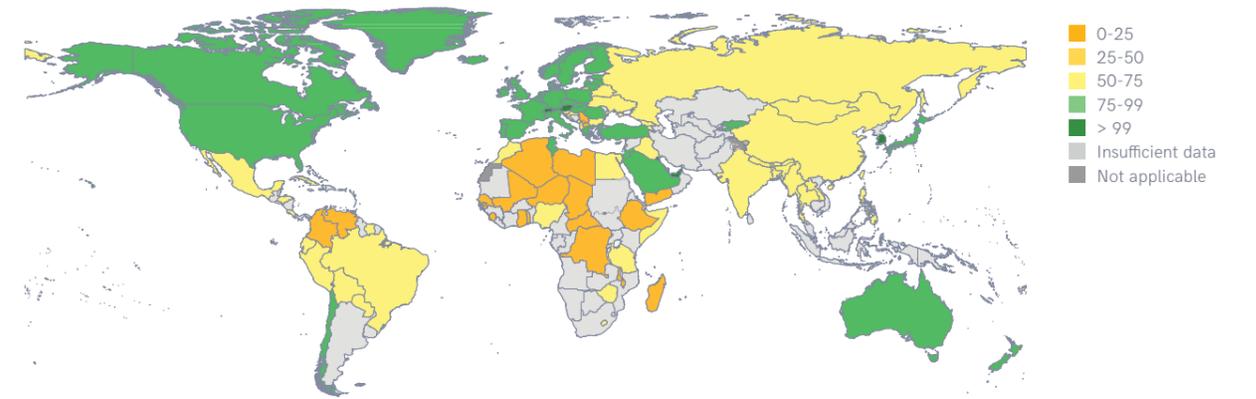


FIGURE 7 Proportion of population using safely managed sanitation services, 2020 (%)

From 2015 to 2020	In 2020
<ul style="list-style-type: none"> The proportion of the global population with basic handwashing facilities with soap and water at home increased from 67% to 71%. The number of people lacking basic services decreased from 2.4 billion to 2.3 billion. The population with basic services increased by an average of 0.69 percentage points per year (% pts/yr). The rate of increase was greater in rural areas, at 1.08 % pts/yr. There were not enough data to make global estimates for urban areas. The number of countries with estimates available for basic services increased from 70 to 79, and the proportion of the global population with data available increased from 30% to 50%. Central and Southern Asia recorded the biggest increase in data coverage, followed by Oceania. Achieving universal access to basic services by 2030 will require a 4x increase in current rates of progress (7x in least developed countries and 5x in fragile contexts). At current rates of progress, the world will only reach 78% coverage in 2030, leaving 1.9 billion people without basic services. 	<ul style="list-style-type: none"> 71% of the global population had basic handwashing facilities with soap and water at home. 2.3 billion people lacked basic services, including 670 million people with no handwashing facilities at all. Over half of these people (374 million) live in fragile contexts. 79 countries and four out of eight SDG regions had estimates for basic services, representing 50% of the global population. 4 countries had already achieved universal (>99%) access to basic services, and 6 countries were on track to reach universal access between 2020 and 2030. Most high-income countries lacked data on the availability of handwashing facilities with soap and water at home. In 16 countries, the gap in basic hygiene coverage between urban and rural areas was more than 20% pts and in 12 countries, the gap between highest and lowest subnational region was more than 50 % pts.

Seven out of ten people had basic hygiene services in 2020

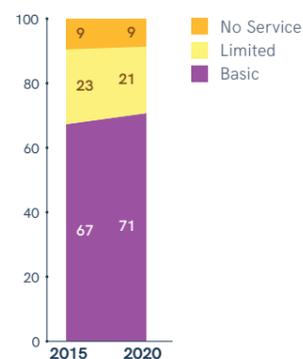


FIGURE 8 Global handwashing coverage, 2015-2020 (%)

Four SDG regions had estimates for basic hygiene services in 2020

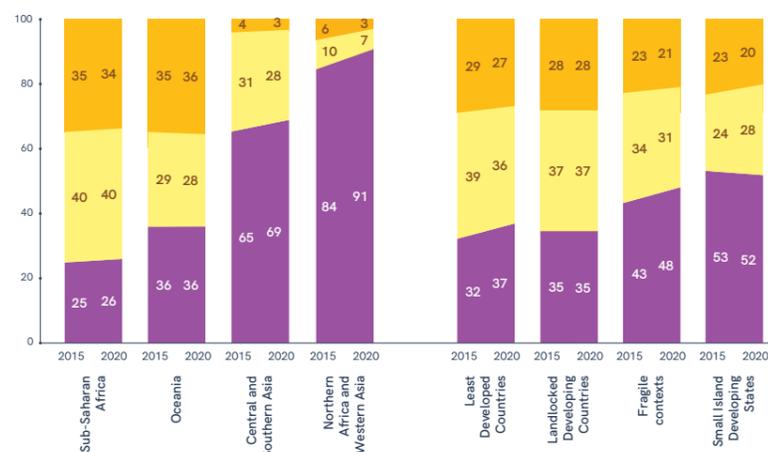


FIGURE 9 Regional handwashing coverage, 2015-2020 (%)
Note: For Northern Africa and Western Asia, limited and no service levels for 2020 were projected based on 2018 estimates.

In 2020, 79 countries had estimates for basic hygiene services

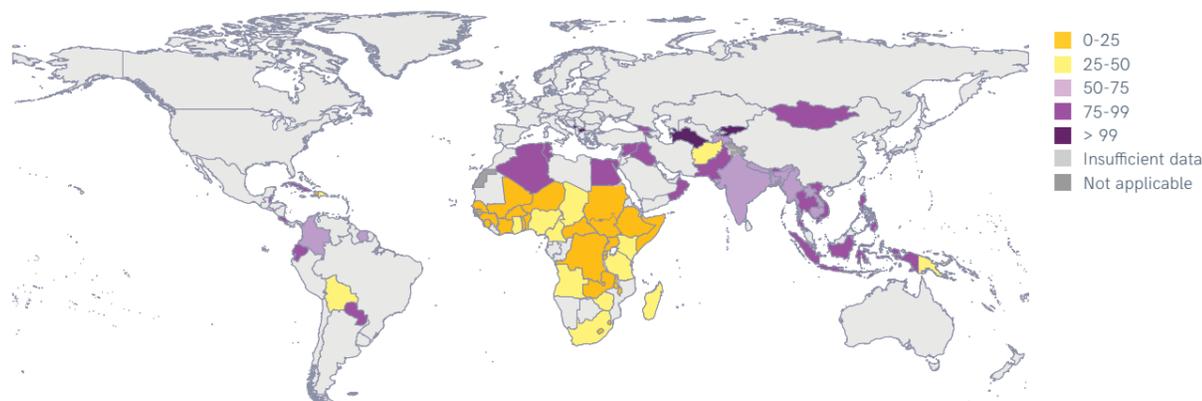


FIGURE 10 Proportion of population with basic handwashing facilities at home, 2020 (%)

Emerging data and indicators on menstrual health

- SDG target 6.2 calls for 'special attention to the needs of women and girls' and WASH programmes are increasingly monitoring menstrual health related needs. The JMP has expanded its global database to include emerging national data on menstrual health.
- New indicators related to menstrual health and associated WASH service needs have been progressively included in household survey questionnaires for women and girls age 15 to 49, and can be grouped as follows:
 - Awareness of menstruation before menarche (first menstruation).
 - Use of menstrual materials to capture and contain menstrual blood, such as pads, cloths, tampons or cups. These can also be grouped into single-use and reusable materials.
 - Access to a private place to wash and change while at home.
 - Participation in activities during menstruation, such as school, work and social activities.
- National data on these menstrual health indicators have been collected from 42 countries, 29 of which had some information on at least three of the indicators.
- Nearly half (19) of the 42 countries with national data on the menstrual health indicators are in the sub-Saharan Africa region, and the majority are either low-income (13) or lower-middle-income countries (18). No high-income countries had national data on any of the four menstrual health indicators.
- Only two countries had national data on awareness of menstruation before menarche; 32% and 66% of girls were aware of menstruation before their first period in Bangladesh and Egypt, respectively.
- Emerging data show in many countries a significant proportion of women and girls do not have the services they need for menstrual health and there are often substantial disparities between population sub-groups, particularly between sub-national regions and for women and girls with and without disabilities.

In 2020, 42 countries had nationally representative data on at least one menstrual health indicator

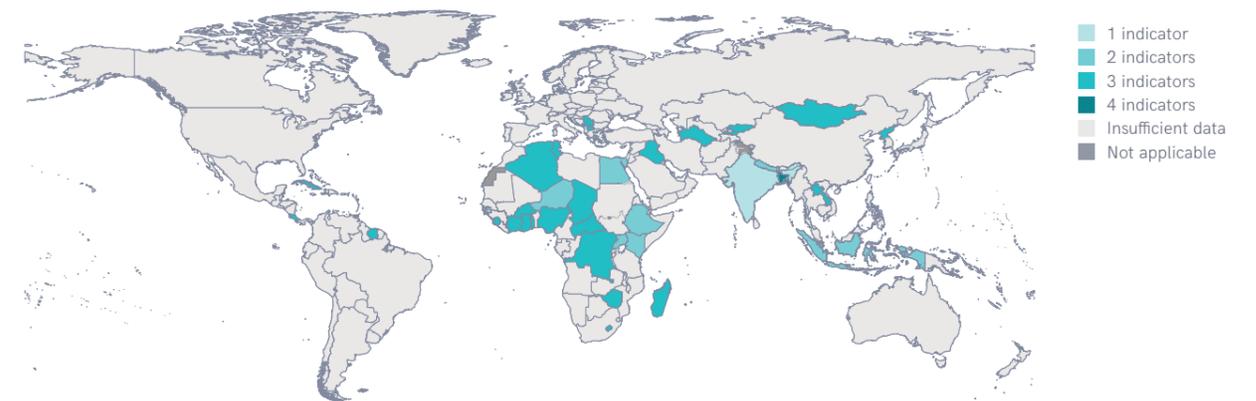


FIGURE 11 Numbers of indicators of menstrual health, by country, 2020

Use of menstrual materials is high, but some women lack a private place to wash and change

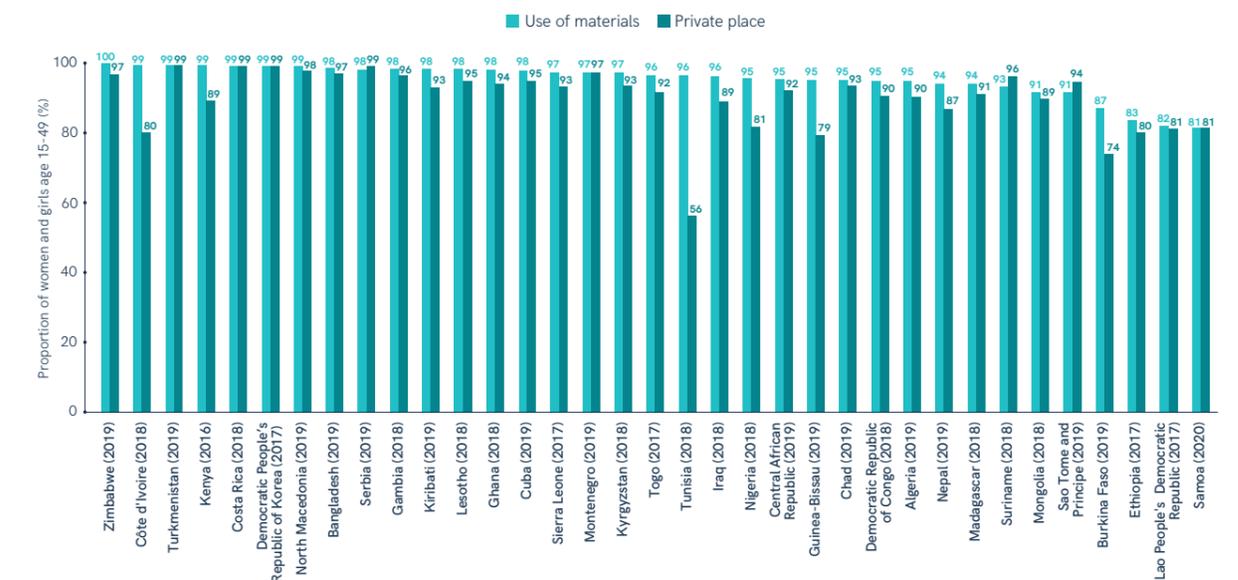


FIGURE 12 Proportion of women and girls age 15-49 who use menstrual materials, and have a private place to wash and change during menstruation, selected countries, 2016-2020



01

Introduction

Five years into the SDGs

Transforming our world: The 2030 Agenda for Sustainable Development is a plan of action for people, planet and prosperity, comprising 17 Sustainable Development Goals (SDGs) and 169 global targets. Goal 6 aims to 'ensure availability and sustainable management of water and sanitation for all' and includes eight targets that address drinking water, sanitation and hygiene (WASH) services, wastewater treatment, water quality, water use, water management, transboundary cooperation, water-related ecosystems, official development assistance and participation of local communities (Figure 13). The WHO/UNICEF Joint Monitoring Programme for Water, Supply, Sanitation and Hygiene (JMP) is responsible for monitoring SDG targets 6.1 and 6.2, and collaborates with other custodian agencies through

the UN-Water Integrated Monitoring Initiative for SDG6 (IMI-SDG6). The JMP also contributes to monitoring WASH indicators related to SDG targets on poverty (1.4.1), health (3.8.1) and education (4.a.1).

SDG targets 6.1 and 6.2 call for universal access to WASH services by 2030 and establish ambitious indicators that go beyond the types of facilities people use and introduce additional criteria related to the level of service provided (see Chapters 2 to 4). The 2030 Agenda also seeks to progressively reduce inequalities between and within countries and specifies that 'SDG indicators should be disaggregated where relevant by income, sex, age, race, ethnicity, migratory status, disability and geographic location or other characteristics'.



	SDG6 global targets	SDG6 global indicators	Custodian agencies ³
<p>6 CLEAN WATER AND SANITATION</p>	6.1 Drinking water	6.1.1 Safely managed drinking water services	WHO, UNICEF
	6.2 Sanitation and hygiene	6.2.1a Safely managed sanitation services 6.2.1b Basic handwashing services	WHO, UNICEF
	6.3 Wastewater and water quality	6.3.1 Wastewater safely treated 6.3.2 Good ambient water quality	WHO, UN-Habitat, UNSD UNEP
	6.4 Water use and water scarcity	6.4.1 Water use efficiency 6.4.2 Level of water stress	FAO FAO
	6.5 Water resources management	6.5.1 Integrated water resources management 6.5.2 Transboundary basin area with water cooperation	UNEP UNECE, UNESCO-IHP
	6.6 Water ecosystems	6.6.1 Water-related ecosystems	UNEP, Ramsar Convention
	6.a Cooperation	6.a. Water and sanitation-related official development assistance	WHO, OECD
	6.b. Participation	6.b. Participation of local communities in water and sanitation management	WHO, OECD

FIGURE 13 SDG6 global targets and indicators

³ Coordinated by the UN-Water Integrated Monitoring Initiative for SDG6 (IMI-SDG6), including the United Nations Environment Programme (UNEP), United Nations Human Settlements Programme (UN-Habitat), United Nations Children's Fund (UNICEF), Food and Agriculture Organization of the United Nations (FAO), United Nations Economic Commission for Europe (UNECE), United Nations Educational, Scientific and Cultural Organization (UNESCO), World Health Organization (WHO) and World Meteorological Organization (WMO).

Since 2015, the JMP has expanded its global databases to incorporate the latest available national data related to the new SDG indicators. The JMP produces internationally comparable estimates for 234 countries, areas and territories, and has produced estimates disaggregated by wealth quintile and sub-national region for over 100 countries. The JMP published a global baseline report on WASH in households in 2017, and a progress update with a special focus on inequalities in 2019. This report presents updated national, regional

and global estimates of progress on WASH in households for the period 2000 to 2020.

The report takes stock of progress over the first five years of the SDG period. It assesses the status of WASH services in 2020 and progress made since 2015, and analyses the acceleration required to meet the SDG targets by 2030. It also reviews global trends in the availability of data for monitoring the SDG WASH indicators and presents emerging data on new indicators related to menstrual health. The report

documents inequalities in drinking water, sanitation and hygiene (and menstrual health) between and within countries, and highlights the particular challenges faced by those living in fragile contexts⁴, which often have much lower coverage and rates of progress on WASH services and will need to be a major focus of efforts to build back better after the pandemic and accelerate progress towards the 2030 targets.

⁴ As of May 2021, the OECD States of Fragility series identifies 57 fragile contexts, including 13 classified as extremely fragile. <<https://www.oecd.org/dac/states-of-fragility-fa5a6770-en.htm>>



The challenge of assessing progress

During the first five years of the SDG period, there has been a steady improvement in the availability of data for monitoring the SDG global indicators for WASH. Both the total number of countries, areas and territories with estimates and the proportion of the global population for which estimates are available have increased with each JMP progress update on WASH in households (Figure 14).

The number of countries with national estimates available for SDG indicator 6.1.1 (safely managed drinking water services) has increased from 96 to 138, resulting in a growth in population coverage from 34% to 45%. There has been a three-fold increase in the number of countries with rural estimates (from 20 to 65) and a more than two-fold increase in the number of countries with urban estimates (from 42 to 87). Data availability for SDG indicator 6.2.1a (safely managed

sanitation services) has also improved, rising from 84 countries to 120 countries (rising from 48% to 81% of the population). More countries have gained estimates for safely managed sanitation in rural (45) than in urban (30) areas. By contrast, there has been a relatively small increase in the number of countries with data available for SDG indicator 6.2.1b (basic hygiene services), rising from 70 countries in the 2017 baseline report to 79 countries in this 2021 progress update. While population coverage has increased from 30% to 50%, this has mainly been driven by the addition of estimates for populous countries.

While previous JMP updates on WASH in households have presented estimates up to the current year minus two, this report presents estimates up to the current year minus one (2020). Therefore, timeliness has been significantly

improved. However, it remains challenging to assess trends and rates of progress for countries lacking recent data or having only a small number of data points available. If a country has only one data point or two data points less than five years apart, the JMP creates estimates using a simple average, which is extended for four years beyond the most recent data point. If there are two or more data points, covering a span of at least five years, the JMP applies linear regression with extrapolation for up to two years forwards and backwards from the last data point, and extends estimates for up to four more years. This means to generate estimates for 2020, countries must have new data points available from 2014 onwards, or from 2016 onwards if only one data point or two closely-spaced data points are available⁵.

⁵ For further details on the JMP methodology see Annex 1.



Global availability of data on SDG WASH indicators is improving



FIGURE 14 Proportion of population and number of countries with national, rural and urban estimates for SDG WASH indicators in JMP progress updates, 2017-2021

Despite improvements in data availability, many countries⁶ still lacked estimates for SDG indicators 6.1.1, 6.2.1a and 6.2.1b in 2020. Table 1 shows that data coverage for global WASH indicators varies widely

⁶ The JMP produces internationally comparable estimates for 234 countries, areas and territories, including all United Nations Member States.

between SDG regions and there are still big gaps, particularly for elements of safely managed services. By 2020, estimates for basic drinking water, open defecation, and basic sanitation services were available for >95% of the population in all SDG regions, except for Latin

America and the Caribbean (93%). By contrast, population coverage for basic hygiene estimates ranged from 0% in Australia and New Zealand and in Europe and Northern America (no data available) to 92% in Central and Southern Asia and 93% in sub-Saharan Africa.

Data availability for elements of safely managed drinking water services varied widely between regions. While data coverage for accessibility was universal (>99%) in all SDG regions, data coverage for availability ranged from just 43% in Europe and Northern America to 84% in Australia and New Zealand, and data coverage for quality ranged from 100% in Europe and Northern America to just 17% in Oceania. But the biggest data gaps were observed for elements of safely managed sanitation services. While estimates for centralized wastewater treatment were available for >50% of the relevant population in all regions, except for sub-Saharan Africa (8%), population coverage for safe management of on-site systems was much lower. Only three regions (Central and Southern Asia, Eastern and South-Eastern Asia, and sub-Saharan Africa) had estimates for safe disposal in situ for >50% of the relevant population. Only two SDG regions had estimates for the population using on-site systems emptied and treated off-site; Europe and Northern America had estimates for 9% of the relevant population, while data coverage in Eastern and South-Eastern Asia was just 3%.

The impact of COVID-19 on WASH

The COVID-19 pandemic has plunged the global economy into recession, with an additional 119 to 124 million people pushed into extreme poverty during 2020⁷. Measures taken by governments to contain and mitigate the pandemic have led to widespread disruption in the provision and financing of essential services, including WASH. The global response has had a strong focus on promoting hand hygiene and strengthening infection prevention and control (IPC), and governments have introduced a range of measures designed to keep WASH services running, including emergency financial support to utilities and vulnerable households⁸. While it is clear the pandemic will have far reaching effects on levels of public and private investment in WASH services, it remains too early to assess the medium and long-term impact on progress towards the SDG WASH targets.

⁷ World Bank, Updated estimates of the impact of COVID-19 on global poverty: Looking back at 2020 and the outlook for 2021 <<https://blogs.worldbank.org/opendata/updated-estimates-impact-covid-19-global-poverty-looking-back-2020-and-outlook-2021>>
⁸ UNICEF & SIWI 2020 Overview of Water, Sanitation, and Hygiene (WASH) COVID-19 Responses from Governments, Regulators, Utilities and other Stakeholders in 84 Countries <https://www.siwi.org/wp-content/uploads/2020/08/20200701_Mapping-WASH-COVID-19_Key-remarks_v6_clean-Aug-10-.pdf>

Disruption of routine data collection

COVID-19 has posed severe challenges to the collection and production of data at all levels, which will have a long-term impact on national and global monitoring of all key development indicators. At the same time it has increased demand for new data on emerging issues and for 'real-time' information to evaluate the impact of the outbreak and the effectiveness of responses.

In May 2020, the United Nations Statistics Division (UNSD) and the World Bank launched a global survey to assess the impact of COVID-19 on statistical operations at country level⁹. It found that the pandemic has caused widespread disruption to routine data collection and led to delays, interruptions, diversion of funding, and, in some cases, cancellation of planned censuses and household surveys. The final assessment in December 2020 showed that many National Statistical Offices (NSOs) have been forced to close for long periods. 75% reported that face-to-face data collection had been partially or fully suspended, and most were uncertain about when they would resume. Many NSOs reported exploring remote methods of data collection to fill data gaps, but highlighted the need for further capacity building in this area.

Emergence of new data sources

During the pandemic, many NSOs have switched from face-to-face surveys to alternative means of data collection to track responses to COVID-19 and its socio-economic impacts, including increased use of phone surveys, and computer-assisted telephone interviewing (CATI) and short message service (SMS) surveys.

⁹ UNSD and World Bank, Survey of National Statistics Offices during COVID-19, World Bank and UNSD, December 2020 <<https://covid-19-response.unstats.un.org/posts/survey-of-national-statistical-offices-during-covid-19/>>

Five years into the SDGs, data coverage for WASH indicators varies widely between regions

% of population (# countries, areas and territories) in 2020	DRINKING WATER					SANITATION						HYGIENE
	Basic	Safely managed	Accessible on premises	Available when needed	Free from contamination	Open defecation	Basic	Safely managed	Safely disposed of in situ	Emptied and treated	Wastewater treated	Basic
World (234)	99% (211)	45% (138)	99% (210)	81% (121)	56% (138)	97% (198)	99% (202)	81% (120)	65% (20)	1% (7)	91% (103)	50% (79)
Rural	98% (164)	55% (65)	98% (163)	86% (91)	55% (65)	97% (159)	98% (161)	73% (77)	69% (61)	0% (2)	83% (68)	67% (78)
Urban	93% (175)	56% (87)	93% (173)	74% (108)	56% (87)	94% (172)	94% (172)	75% (98)	60% (53)	0% (1)	80% (77)	37% (76)
SDG regions												
Australia and New Zealand (2)	100% (2)	16% (1)	100% (2)	84% (1)	73% (1)	100% (2)	100% (2)	100% (2)	0% (0)	0% (0)	100% (2)	0% (0)
Central and Southern Asia (14)	100% (14)	30% (11)	100% (14)	92% (10)	73% (11)	96% (13)	100% (14)	78% (5)	82% (0)	0% (0)	70% (5)	92% (10)
Eastern and South-Eastern Asia (18)	100% (18)	19% (12)	100% (17)	88% (10)	49% (12)	99% (16)	99% (16)	81% (11)	62% (2)	3% (2)	94% (7)	27% (9)
Europe and Northern America (53)	100% (50)	100% (48)	100% (50)	43% (16)	100% (48)	100% (48)	100% (48)	99% (44)	19% (16)	9% (5)	100% (46)	0% (2)
Latin America and the Caribbean (50)	93% (36)	77% (18)	94% (36)	91% (24)	77% (18)	93% (34)	93% (35)	82% (14)	13% (0)	0% (0)	91% (15)	19% (10)
Northern Africa and Western Asia (25)	100% (24)	37% (16)	100% (24)	72% (18)	38% (16)	95% (22)	98% (23)	85% (20)	28% (1)	0% (0)	94% (21)	53% (10)
Oceania (21)	99% (20)	11% (11)	99% (20)	84% (10)	17% (11)	97% (16)	98% (17)	3% (3)	10% (1)	0% (0)	58% (2)	76% (5)
Sub-Saharan Africa (51)	99% (47)	57% (21)	99% (47)	92% (32)	63% (21)	99% (47)	99% (47)	63% (21)	69% (0)	0% (0)	8% (5)	93% (33)
Other regional groupings												
Landlocked Developing Countries (32)	100% (32)	74% (22)	100% (32)	78% (23)	74% (22)	98% (31)	98% (31)	54% (17)	54% (0)	0% (0)	59% (11)	85% (26)
Least Developed Countries (46)	100% (44)	61% (21)	100% (44)	89% (34)	63% (21)	100% (43)	100% (43)	68% (25)	71% (0)	0% (0)	25% (5)	92% (36)
Small Island Developing States (53)	97% (39)	19% (16)	97% (39)	80% (23)	20% (16)	94% (33)	95% (35)	33% (9)	15% (1)	0% (0)	79% (6)	69% (14)
Fragile contexts (57)	100% (54)	71% (28)	100% (54)	87% (43)	74% (28)	94% (52)	100% (54)	54% (26)	57% (0)	0% (0)	38% (13)	85% (39)
Income groupings												
Low-income (29)	99% (28)	59% (14)	99% (28)	87% (23)	56% (14)	97% (27)	99% (28)	56% (14)	57% (0)	0% (0)	22% (2)	84% (23)
Lower-middle-income (50)	100% (48)	37% (26)	100% (48)	94% (36)	69% (26)	100% (48)	100% (48)	80% (26)	78% (0)	0% (0)	74% (20)	94% (34)
Upper-middle-income (55)	98% (50)	30% (30)	98% (50)	85% (36)	50% (30)	94% (45)	97% (46)	80% (28)	51% (1)	0% (0)	93% (27)	19% (21)
High-income (82)	100% (71)	93% (58)	100% (70)	47% (24)	93% (58)	100% (65)	100% (66)	98% (52)	37% (19)	28% (7)	99% (54)	0% (1)

Legend: >50% coverage (blue), 0-49% coverage (yellow)

TABLE 1 Data coverage for global WASH indicators in JMP 2021 progress update, percentage of population (number of countries) with data available



SMS consumer surveys indicate significant disruption to drinking water services due to COVID-19

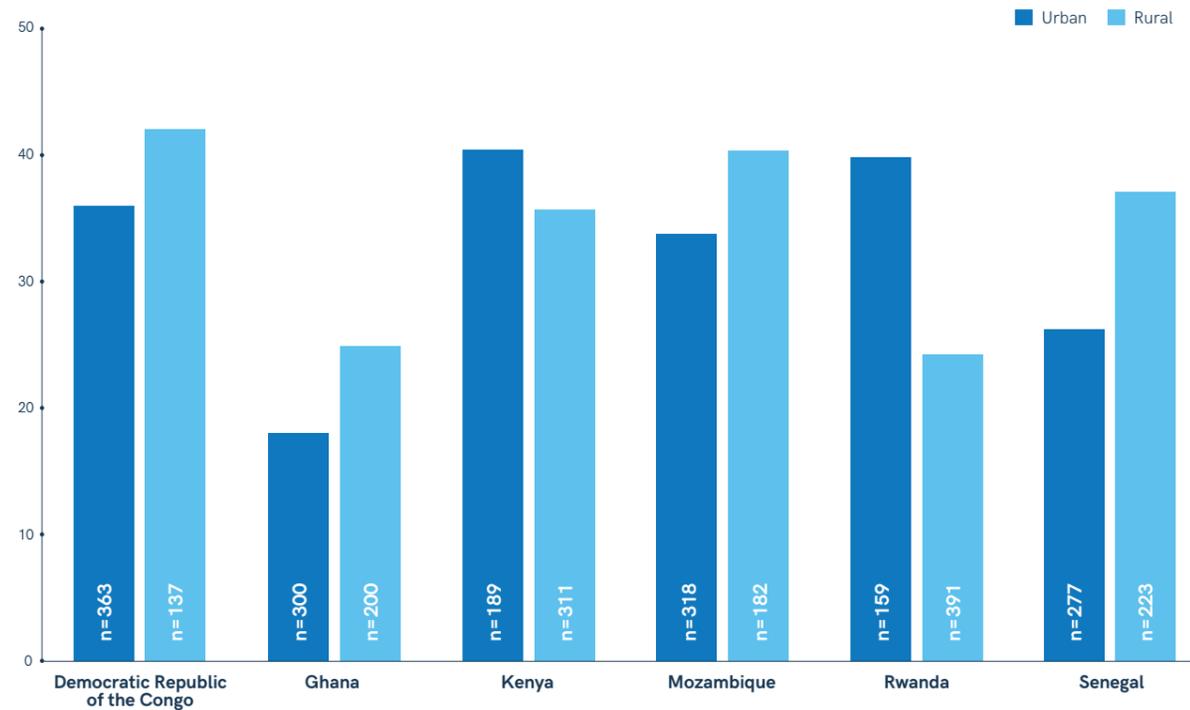


FIGURE 15 Proportion of respondents answering 'Yes' to the question 'Has COVID-19 made it more difficult to get your drinking water?' (%), August-October, 2020

Source: USAID 2020 Synthesis Report: Assessing the effects of COVID-19 on access to water, sanitation, and hygiene in USAID high priority and strategy-aligned countries <https://pdf.usaid.gov/pdf_docs/PA00XDMX.pdf>.

For example, the World Bank Living Standards Measurement Study (LSMS) has supported high-frequency phone surveys comprising monthly interviews over a 12-month period with a sub-sample of households interviewed during previous household surveys¹⁰. The UNICEF Multiple Indicator Cluster Surveys (MICS) programme has also started conducting follow up telephone interviews with a sub-sample of respondents to accumulate longitudinal data on responses to crises (MICS Plus)¹¹. These phone surveys often include a small number of questions on WASH services and whether households had sufficient water to drink or soap to wash hands with in the last week or month.

¹⁰ <https://www.worldbank.org/en/programs/lsm/brief/lsm-launches-high-frequency-phone-surveys-on-covid-19>

¹¹ <https://mics.unicef.org/mics-plus/methodology-and-use>

SMS consumer surveys use large mobile subscriber databases to generate nationally representative samples of users who are then asked to complete short surveys using basic feature phones (non-smartphones)¹². During 2020, the United States Agency for International Development (USAID) commissioned cross-sectional SMS surveys on the effects of COVID-19 on WASH services for more than 3,000 randomly selected individuals in six African countries. Respondents indicated significant disruption to WASH services, with around one in four people reporting that COVID-19 had made it more difficult to access drinking water, while in most of the countries there are more pandemic-related water access problems reported in rural than urban areas (Figure 15).

¹² While cell phone coverage is growing rapidly, cell phone ownership and the technical ability to complete surveys are potential sources of bias in SMS survey samples.

Big data is another potential new source of data on WASH services. In early 2020, Facebook launched a series of surveys related to COVID-19¹³. With more than 2 billion users in more than 200 countries, Facebook's surveys have the potential to reach large segments of the global population. Each day, a new sample of Facebook users in each country are invited to participate in surveys about symptoms, beliefs and behaviours related to COVID-19. Daily, weekly and monthly data are then aggregated for public health researchers and decision makers, using analytic weights to adjust for non-response and coverage biases.

¹³ The World Symptoms Survey was developed in collaboration with University of Maryland and Carnegie Mellon University and the COVID-19 Preventive Health Survey and the COVID-19 Beliefs, Behaviors & Norms Survey were developed in collaboration with the Massachusetts Institute of Technology (MIT), Johns Hopkins University (JHU), with advice from the WHO and the Global Outbreak Alert and Response Network (GOARN) <<https://dataforgood.fb.com/docs/covid19/>>.



Between April and July 2020, respondents were asked how often they had washed their hands after being in public in the past seven days ('all of the time', 'most of the time', 'about half of the time', 'some of the time' or 'none of the time'). Compliance with recommended hand hygiene measures varied widely between countries but was generally higher in urban than rural areas (Figure 16). Less than half the population in Brazil, Pakistan, the United Republic of Tanzania, Thailand, Tunisia, Viet Nam and Yemen reported washing their hands 'all of the time' and no country achieved >75% compliance during

the reporting period. The data suggest a gradual improvement in Uzbekistan, although big gaps remain between urban and rural, whereas in Albania the gap between urban and rural has been gradually reduced. In Australia, New Zealand and the Netherlands, there has been a gradual deterioration in hand hygiene behaviour during the reporting period.

Between July 2020 and May 2021, users were asked about the frequency of handwashing with soap and water or hand sanitizer over the last 24 hours. The frequency of handwashing varied between

countries, but in most cases it did not change significantly during the reporting period (Figure 17). In Australia and New Zealand, more than nine out of ten people reported washing their hands at least three times per day throughout the assessment period. But in Viet Nam, Yemen, Haiti and Tanzania, around one in five people reported washing their hands fewer than three times per day. Yemen had the largest proportion reporting washing their hands 'zero times' (20%) and the smallest proportion washing their hands '7+ times' (17%).

Big data show wide variations in adoption of hand hygiene measures in response to COVID-19



FIGURE 16 Proportion of population reporting washing hands 'all of the time' after being in public in the last seven days, selected countries (%)

Big data confirm that daily frequency of handwashing varies widely across countries and over time

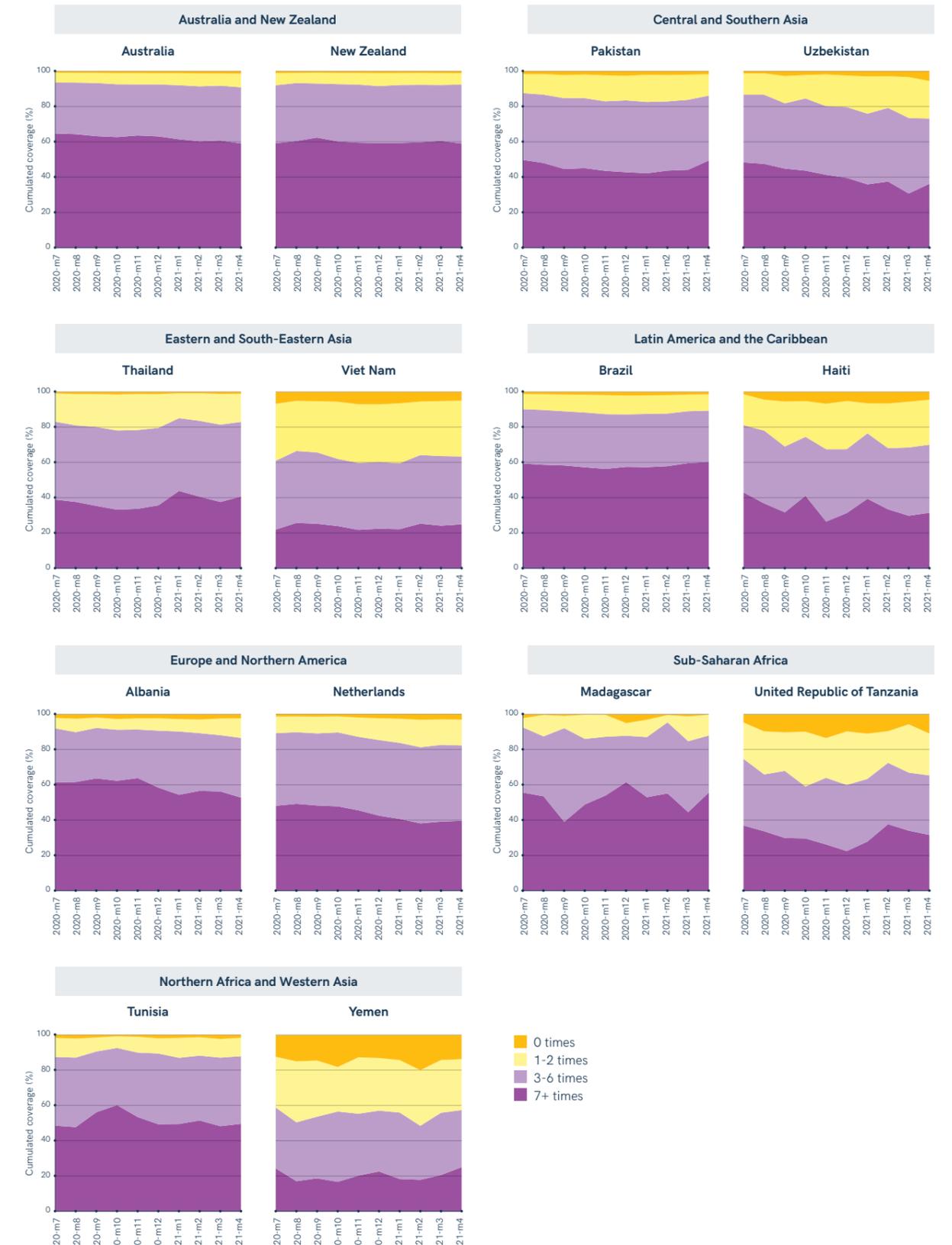


FIGURE 17 Frequency of handwashing with soap and water or use of hand sanitizer in the last 24 hours

Fragile contexts and vulnerable populations

Fragility poses a major threat to the achievement of the SDGs. Fragile contexts were home to 23% of the world's population (1.8 billion people) and more than three quarters of those living in extreme poverty in 2020. This report highlights the challenges faced by including separate estimates for this group of countries in many of the figures and in the statistical annexes. People living in fragile contexts often have much lower WASH service levels and will need to be a major focus of efforts to accelerate progress towards the 2030 SDG targets.

Over the first five years of the SDG period, basic drinking water coverage in fragile contexts has increased from 71% in 2015 to 74% in 2020. However, achieving universal access to at least basic drinking water will require a 4x increase in current rates of progress, while achieving universal access to safely managed drinking water will require a 23x increase (Figure 18). Open defecation in fragile contexts has been reduced from 16% in 2015 to 13% in 2020, but rates of progress will need to double to achieve elimination by 2030. Achieving universal access

to at least basic sanitation will require a 7x increase, and achieving universal access to safely managed services will require a 9x increase. Coverage of basic hygiene services has increased from 43% in 2015 to 48% in 2020, but at current rates of progress only 58% of the population living in fragile contexts will have access by 2030. Achieving the SDG target for hygiene in fragile contexts will require a 5x increase in current rates of progress.

In 2020, people living in fragile contexts were half as likely as those living in non-fragile contexts to

have safely managed drinking water (43% vs 82%) and safely managed sanitation services (33% vs 60%) (Figure 19). They were five times as likely to lack even basic drinking water (26% vs 5%), four times as likely to lack basic sanitation (52% vs 13%) and three times as likely to practise open defecation (13% vs 4%). There were also significant

disparities between fragile and non-fragile contexts in each SDG region. In Oceania, there was a 47 % pt gap in coverage of basic drinking water and a 66 % pt gap in basic sanitation coverage. While there was no difference in Central and Southern Asia, in sub-Saharan Africa only a quarter of those in fragile contexts used basic hygiene

services, compared with one third in non-fragile contexts. Latin America and the Caribbean has the biggest coverage gaps for safely managed drinking water (32 % pts) and Eastern and South-Eastern Asia has the biggest disparities in coverage of safely managed sanitation services (19% pts).

Achieving SDG targets in fragile contexts will require a dramatic acceleration in current rates of progress



FIGURE 18 Progress on WASH in fragile contexts, 2015-2020 (%), and acceleration required to achieve universal coverage by 2030

People living in fragile contexts have much lower service levels in all regions

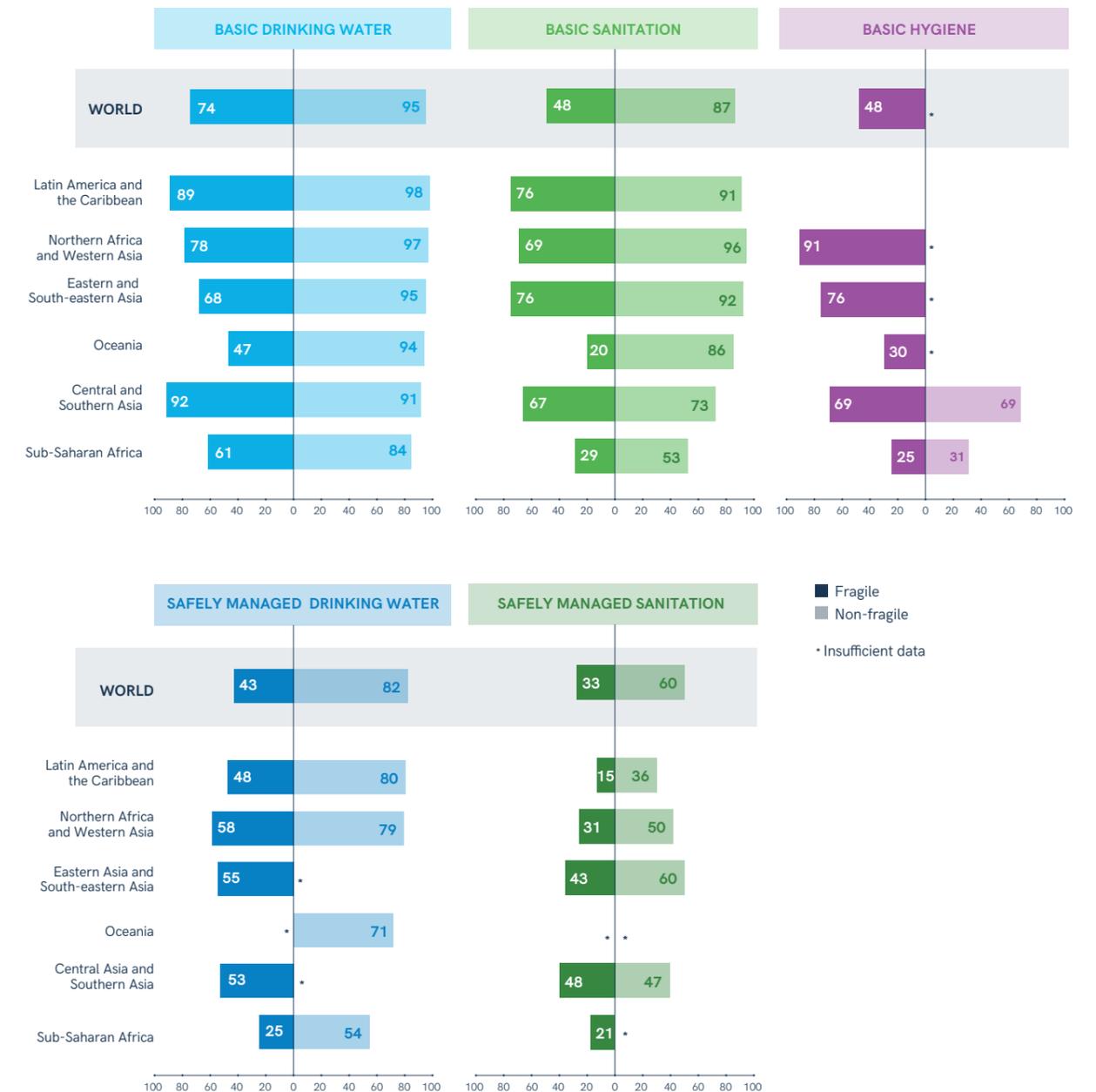


FIGURE 19 Proportion of population with at least basic and safely managed services in fragile and non-fragile contexts, 2020 (%)

People living in fragile contexts are more likely to suffer from political, economic and environmental crises and national systems for monitoring WASH services in such contexts are often weak. The REACH-supported Multi-Sector Needs Assessments (MSNAs)¹⁴ aim to inform humanitarian planning by providing comparable data across all relevant sectors on disaster and crisis-affected areas and vulnerable populations. MSNAs were conducted in 12 countries during 2020, and while these surveys are not standardized, they provide disaggregated data that can be used to compare WASH service levels between population sub-groups. Figure 20 shows JMP 2020 estimates for global, regional and national coverage of basic sanitation

¹⁴ For more details: <https://www.reachresourcecentre.info/theme/multi-sector-assessments>

services alongside MSNA sub-national estimates for vulnerable populations in Afghanistan. In 2020, global coverage of basic sanitation services was 78% but it was far lower among the 44 countries listed as fragile (49%) and the 13 countries listed as extremely fragile (42%) by OECD. National coverage among these 57 fragile contexts varied widely, from universal (>99%) in Iraq to just 9% in Ethiopia, with most countries (35) having <50% coverage. The JMP estimates that basic sanitation coverage in Afghanistan was 50% in 2020, and higher in urban (67%) than rural areas (45%). The 2020 MSNA survey provides further disaggregations for vulnerable populations. Coverage was significantly lower among displaced populations (38%) than non-displaced (50%), and among

vulnerable populations, refugees (32%) were least likely to use basic sanitation services.

Similar surveys in Burkina Faso and the Central African Republic showed that displaced populations were also far less likely to have basic water and sanitation services than the rest of the population (Figure 21). The JMP estimates 47% of the population of Burkina Faso had basic drinking water services by 2020, but coverage among displaced populations was just 30%. Displaced populations in the Central African Republic were only half as likely to use basic sanitation services (8%) as the overall population (14%), but while they were more likely to use unimproved facilities (66% vs 45%) they were less likely to practise open defecation (11% vs 25%).



Displaced populations in fragile contexts are least likely to have basic sanitation services



FIGURE 20 Inequalities in coverage of basic sanitation services among fragile contexts and vulnerable populations, Afghanistan, 2020 (%)

Note: Vulnerable population estimates are extracted from the Afghanistan 2020 MSNA. Other data are JMP 2021 estimates.

In Burkina Faso and the Central African Republic, displaced populations were far less likely to have basic services

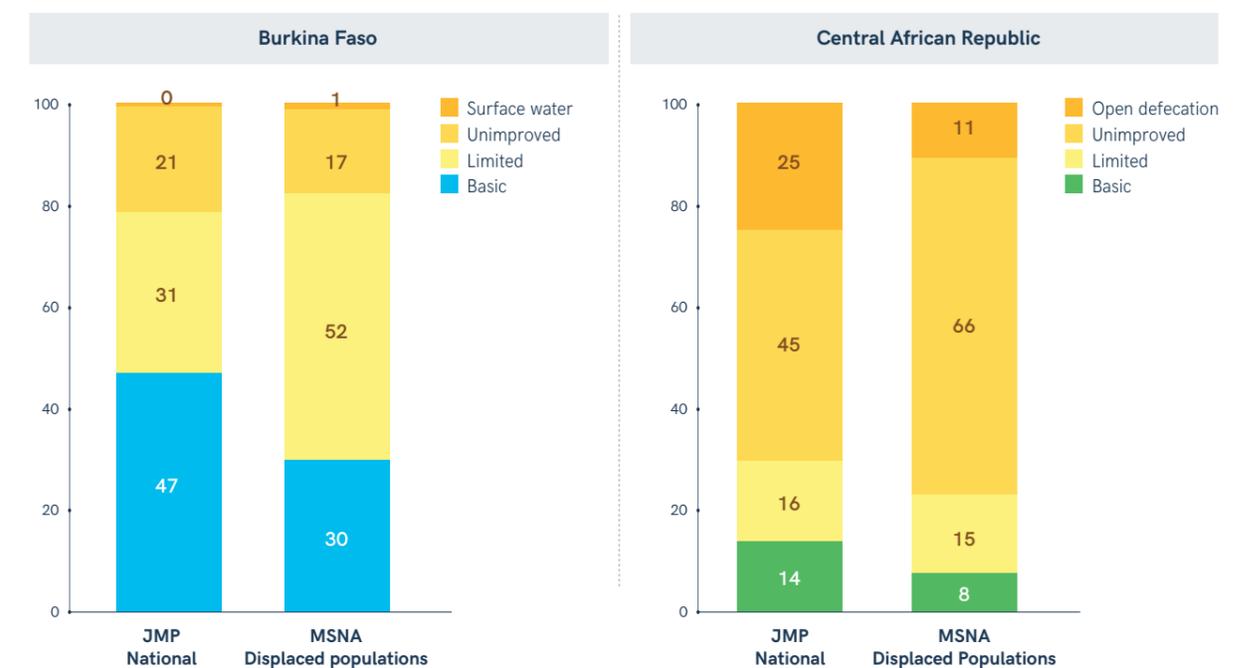


FIGURE 21 Basic drinking water and sanitation service ladders for national (JMP) and for displaced populations (MSNA), 2020

Among vulnerable populations, displaced populations are less likely to have soap in the household

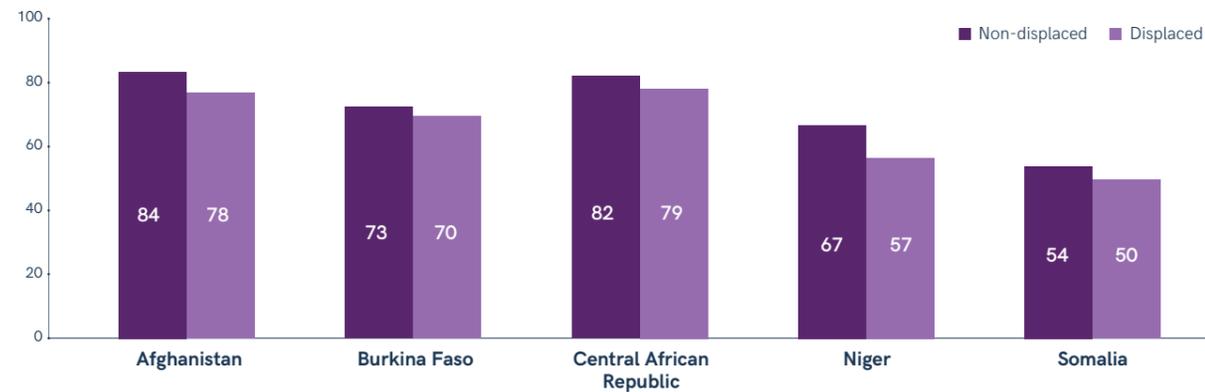


FIGURE 22 Availability of soap for non-displaced and displaced populations, MSNA 2020

MSNA surveys also collect data on hygiene which show that among vulnerable populations displaced households are consistently less likely to have soap available in the household than non-displaced households (Figure 22). Some recent surveys have also included information on the accessibility and availability of drinking water. In Afghanistan, internally displaced persons (IDPs), returnees and refugees were significantly less likely to have drinking water accessible on premises (within the dwelling, yard or plot), while in Burkina Faso disparities in the availability of sufficient water to meet domestic needs were less pronounced (Figure 23).

Displaced populations in fragile contexts are least likely to have basic services

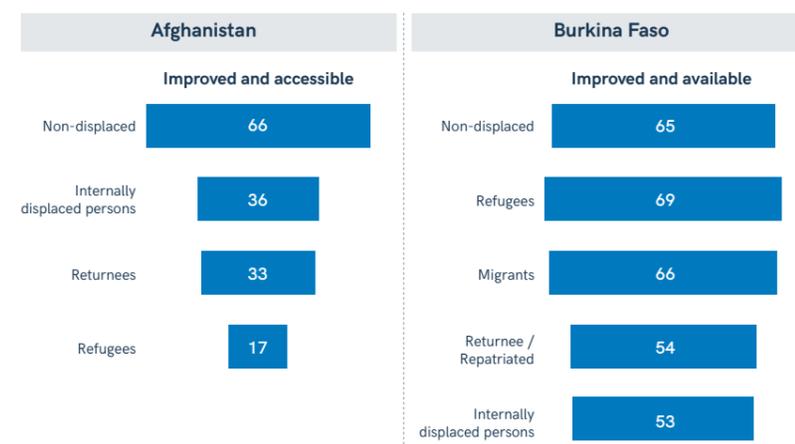


FIGURE 23 Population with access to improved drinking water accessible on premises (Afghanistan) and improved water available when needed (Burkina Faso) among vulnerable population sub-groups (%), MSNA 2020

People living in refugee camps are among the most vulnerable of all. The office of the United Nations High Commissioner for Refugees (UNHCR) maintains a global database¹⁵ containing information on the status of WASH services and compliance

¹⁵ <https://wash.unhcr.org/unhcr-wash-monitoring-systems-for-refugee-settings>

with agreed targets and service standards for refugee settings. Data collected through monthly site reports and annual Knowledge Attitudes and Practices surveys are uploaded to an online data portal containing information for 160 sites in 25 countries, which serve more than 3.8 million refugees.

While most people living in refugee camps collect drinking water from protected/treated sources, camps in many countries are unable to meet the post-emergency target of at least 85% of households with a household toilet/latrine and at least 95% of households with access to soap (Figure 24).

People living in refugee camps often lack access to soap and toilets in the household

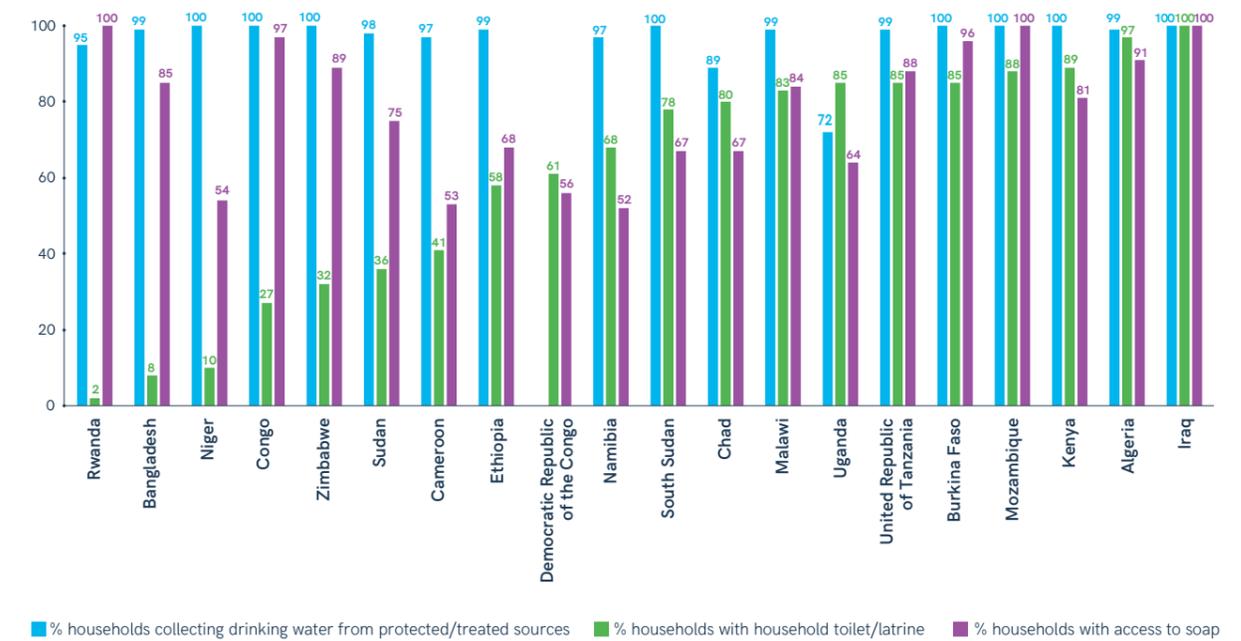


FIGURE 24 Proportion of households with access to WASH services in refugee camps, by country in 2021 (%)

Source: UNHCR WASH dashboard for refugee settings: household and community, accessed May 2021 <<https://wash.unhcr.org/wash-dashboard-for-refugee-settings/>>.





02

Drinking water services

The JMP uses 'service ladders' to benchmark and compare progress across countries, and these have been updated and expanded for SDG monitoring. The drinking water ladder defines five service levels, ranging from surface water to safely managed drinking water services, which is the global indicator for SDG target 6.1 (Figure 25). The ladder builds on the improved/unimproved source type classification used for Millennium

Development Goal (MDG) monitoring and introduces additional criteria related to the level of service provided. For SDG monitoring, households using improved sources are divided into three categories. If a round trip to collect water, including queuing, exceeds 30 minutes, it counts as a 'limited service', and if it takes no more than 30 minutes, it counts as a 'basic service'.

SERVICE LEVEL	DEFINITION
SAFELY MANAGED	Drinking water from an improved source that is accessible on premises, available when needed and free from faecal and priority chemical contamination
BASIC	Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing
LIMITED	Drinking water from an improved source, for which collection time exceeds 30 minutes for a round trip, including queuing
UNIMPROVED	Drinking water from an unprotected dug well or unprotected spring
SURFACE WATER	Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal

FIGURE 25 SDG ladder for drinking water services

Note: Improved sources include: piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water.



But to meet the SDG standard for 'safely managed services', improved sources must be accessible on premises, available when needed, and free from contamination. Since households with safely managed services also meet the requirements for basic services, the two levels can also be grouped together as 'at least basic service', which is the indicator used for monitoring SDG target 1.4.

Improved sources include: piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water. Sources are considered 'accessible on premises' if the point of collection is within the dwelling, compound, yard or plot, or water is delivered to the household. Water is counted as 'available when needed' if households report having 'sufficient' water, or water is available 'most of the time' (that is, continuously or for at least 12 hours per day or four days per week). For the purposes of global monitoring, drinking water is considered 'free from contamination' if no E. coli or thermotolerant coliforms are detected in a 100 mL sample, and it meets WHO standards for priority chemicals (arsenic and fluoride). For further details, see Annex 1: Methods.

Between 2000 and 2020, the global population increased from 6.1 billion to 7.8 billion people¹⁶. During this period, 2 billion people gained access to safely managed drinking water services, and the number of people lacking safely managed services decreased by 342 million. The 2 billion people who still lacked safely managed drinking water in 2020 included 1.2 billion people using basic services, 282 million using limited services, 367 million using unimproved sources, and 122 million drinking surface water (Figure 26). Half of the 771 million people still lacking even a basic drinking water service in 2020 lived in sub-Saharan Africa.

¹⁶ The population data used in this report are published by the United Nations Population Division (World Population Prospects, 2019 Revision).

Between 2000 and 2020, 2 billion people gained access to safely managed drinking water services

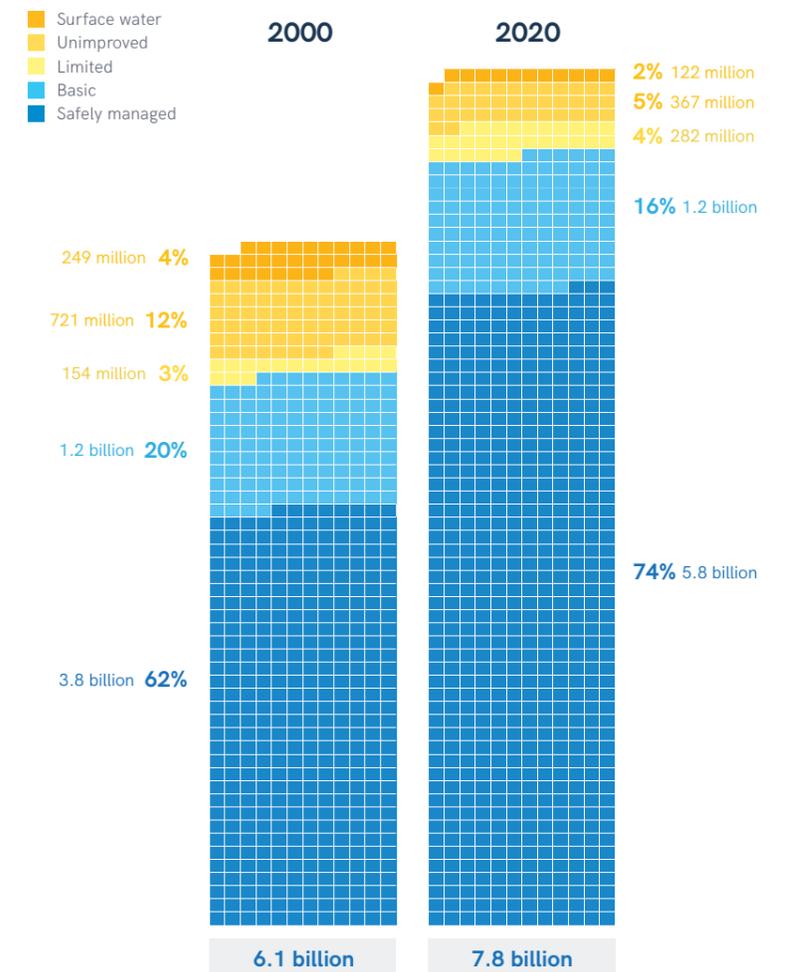


FIGURE 26 Global population using different levels of drinking water service, in 2000 and 2020 (each unit represents 10 million people)





In 2020, coverage of safely managed drinking water services remained lower in rural areas (60%) than in urban areas (86%), but over the first five years of the SDG period rural coverage has increased faster than urban coverage (Figure 27). Between 2015 and 2020, rural coverage increased by 7 % pts while urban coverage increased by just 1 % pt and stagnated in many regions.

While the gap between rural and urban coverage decreased from 32 % pts to 26 % pts, urban areas still accounted for around two thirds of those with safely managed drinking water in 2020. All SDG regions had urban estimates, but only three out of eight had estimates for rural areas in 2020. Sub-Saharan Africa had the most significant disparity in coverage of safely managed

drinking water between urban (54%) and rural (13%) areas, followed by Latin America and the Caribbean with 81% in urban versus 53% in rural areas. Since 2015, Central and Southern Asia has recorded the fastest progress in rural areas, while sub-Saharan Africa recorded the fastest progress in urban areas.

In 2020, urban coverage of basic and safely managed services was higher in all SDG regions

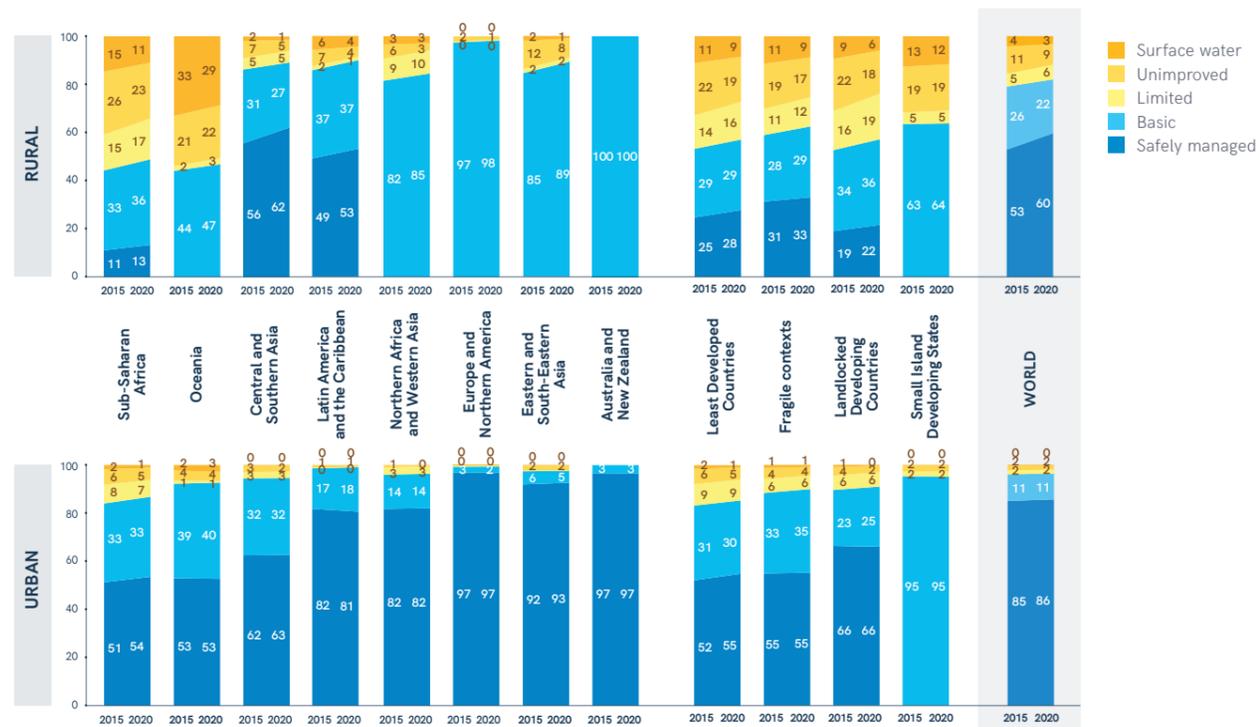


FIGURE 27 Urban and rural drinking water coverage, by service level and SDG region, in 2015 and 2020 (%)

Safely managed drinking water services

Over the first five years of the SDG period¹⁷, global coverage of safely managed drinking water services has increased by just 4 % pts. At current rates of progress, the world will only reach 81% coverage by 2030, leaving 1.6 billion people without safely managed services (Figure 28). Since 2015, Central and Southern Asia has achieved the fastest rate of progress, but no SDG region is on track to achieve universal coverage by 2030. Although it achieved the second fastest rate of progress, sub-Saharan Africa still requires the greatest acceleration and at current rates of progress will only reach 37% coverage of safely managed drinking water by 2030. Achieving universal access to safely managed services by 2030 requires a 4x increase in current rates of progress (10x in the LDCs and 23x in fragile contexts).

The world is not on track to achieve universal access to safely managed drinking water services by 2030



FIGURE 28 Progress in safely managed drinking water services 2015-2020 (%), and acceleration required to reach universal coverage by 2030, by SDG region

¹⁷ In this report, with a focus on 'five years into the SDGs' many figures focus on the progression from 2015-2020, although the JMP produces estimates of annual rates of change using all available data points for the entire reference period, 2000-2020.



Coverage of safely managed drinking water services varied widely between countries in 2020

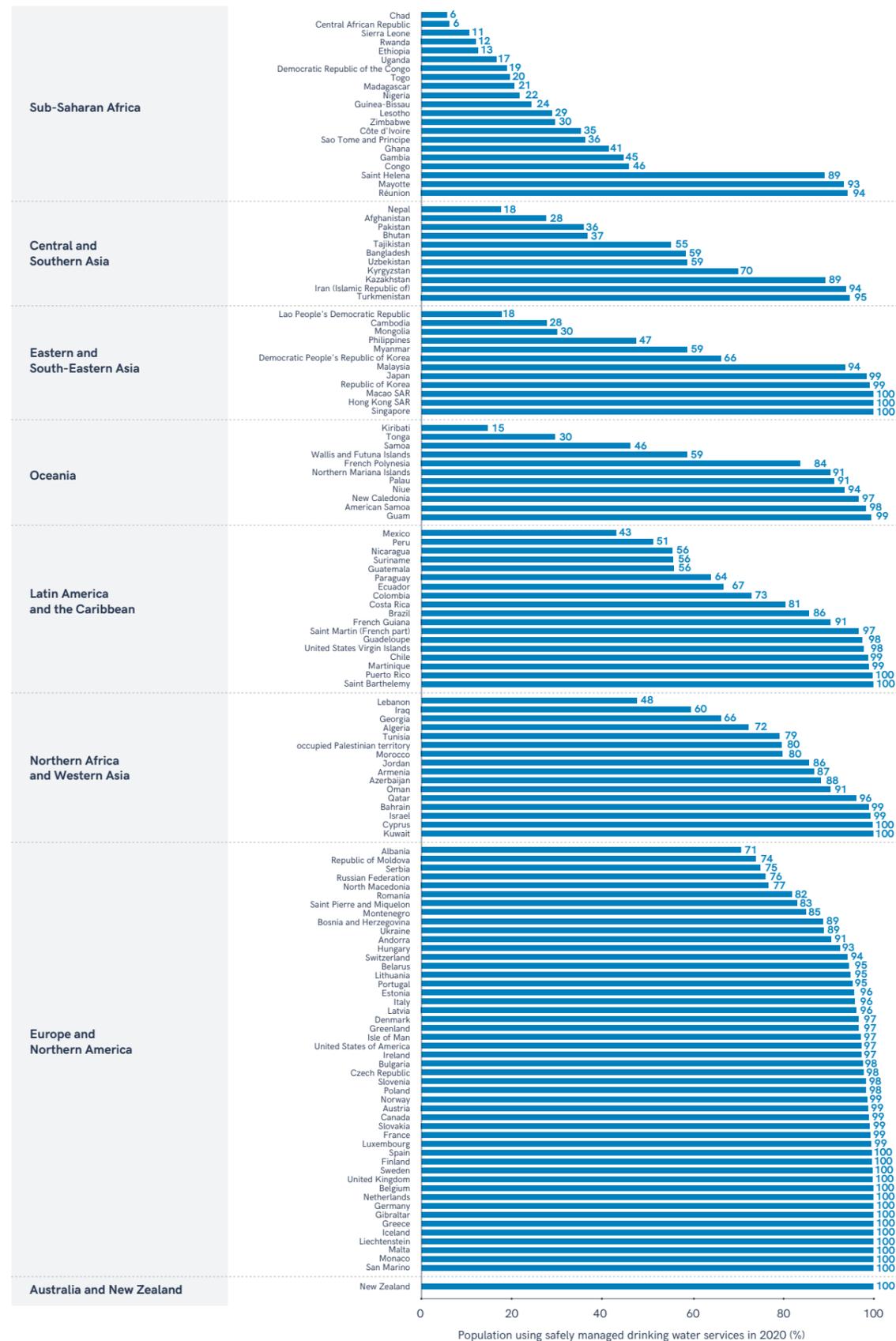


FIGURE 29 Population using safely managed drinking water services, by country, 2020 (%)

In 2020, 138 countries had estimates for safely managed services, representing 45% of the global population. Thirty countries had already achieved universal coverage (>99%), but coverage varied widely between countries (Figure 29). In 2020, six out of eight SDG regions had at least one country with <50% coverage, and in 20 countries less than a third of the population used safely managed drinking water services.

Figure 30 shows the coverage of safely managed drinking water services among countries with less than 99% coverage in 2020, and the average percentage point change per year between 2000 and 2020. At current rates of progress, only 16 countries are on track to reach universal coverage by 2030. These are mostly upper-middle or high-income¹⁸ countries, and Ukraine is the only lower-middle income country on track. Sixty-nine countries are progressing too slowly and in 14 countries coverage has decreased. Although the Republic of Moldova has recorded the fastest

¹⁸ Using the World Bank's classification by income, updated in June 2020. <http://databank.worldbank.org/data/download/site-content/CLASS.xls>

Only 16 out of 99 countries are on track to achieve universal (>99%) safely managed drinking water by 2030

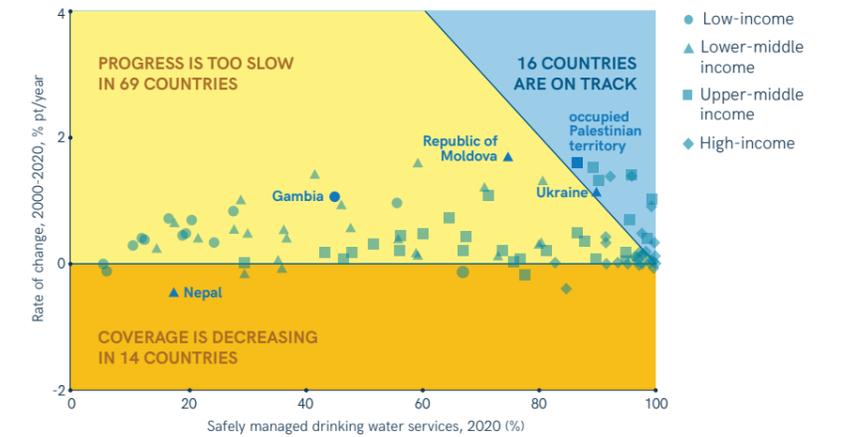


FIGURE 30 Progress towards universal safely managed services, 2000-2020, among countries with <99% coverage in 2020, by income

Note: This figure does not include 30 countries with >99% coverage in 2020, or 10 countries with no estimates for rates of change

rate of change since 2015 (0.37 percentage points per year), this is not sufficient to achieve universal coverage by 2030.

National, regional and global averages often mask significant inequalities in service levels between and within countries. While three out of four people worldwide used safely managed drinking water services in 2020, regional coverage ranged

from 96% in Europe and Northern America to just 30% in sub-Saharan Africa (Figure 31). Inequalities were even more pronounced among the 21 countries in sub-Saharan Africa, with national estimates ranging from 94% in Reunion to just 6% in Chad. The national average for Chad masks a big gap in coverage between rural areas and urban areas, which were nine times more likely to have safely managed drinking water in 2020.

Disaggregated data reveal huge disparities in drinking water service levels between and within countries

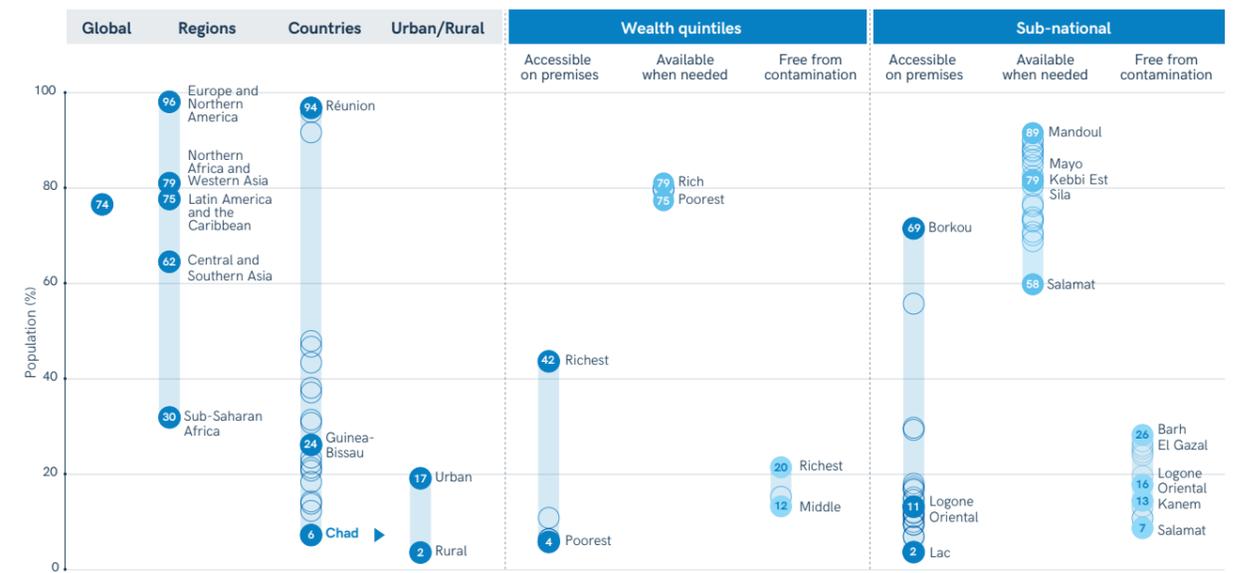


FIGURE 31 Inequalities in safely managed drinking water services and its elements, Chad, 2019 (%)

Note: Sub-national and wealth quintile data are extracted from the Chad 2019 MICS. Other data are JMP 2021 estimates.



The availability of disaggregated data on individual elements of safely managed drinking water services from the Chad 2019 MICS enables further analysis of sub-national inequalities in accessibility on premises, availability when needed, and drinking water quality (free from contamination). Disparities between the richest and poorest were relatively small for availability and quality but much larger for accessibility, with 42% of the richest and just 4% of the poorest having improved sources accessible on premises. There were also large disparities in accessibility between sub-national regions, ranging from 69% on premises in Borkou to just 2% in Lac. In all sub-national regions, at least half the population had water available when needed, but the proportion of the population with supplies free from contamination was much lower, ranging from 26% in Barh el Gazal to just 7% in Salamat.

To calculate safely managed drinking water services, the JMP takes the minimum value

for accessibility, availability and quality in rural and urban areas and combines these to produce national estimates. In 2020, 210 countries had national estimates for accessibility (representing 99% of the population), 121 countries had estimates for availability (representing 82% of the population), and 138 countries had estimates for quality (representing 45% of the population). Figure 32 shows that drinking water service levels varied widely between countries in each SDG region. For example, in Latin America and the Caribbean, accessibility on premises ranged from 8% in Haiti to universal (>99%) in eight countries, availability ranged from 26% in the Bolivarian Republic of Venezuela to universal (>99%) in Chile, Puerto Rico and Uruguay. Quality ranged from 43% in Mexico to universal (>99%) in Martinique, Puerto Rico and Saint Barthelemy. Accessibility is often the limiting factor in Eastern and South-Eastern Asia, Oceania and sub-Saharan Africa, in contrast, availability is more likely to be the limiting factor in Australia and New

Zealand, Europe and Northern America, and Latin America and the Caribbean, and quality tends to be the limiting factor in Northern Africa and Western Asia and Central and Southern Asia.

A growing number of countries have disaggregated data available for all three criteria of safely managed drinking water services in rural and urban areas. In almost all countries, service levels are higher in urban areas than in rural areas, but different patterns of inequality can be seen (Figure 33). For example, in Lesotho the gap between rural (9%) and urban (78%) coverage of drinking water accessible on premises is 69 pts. In Madagascar, the gap between rural and urban areas exceeds 24 pts for all three SDG criteria. Both Côte d'Ivoire and Zimbabwe have large coverage gaps for accessibility and quality but small gaps for availability. In Tonga, the coverage gap is less than 5% for accessibility and availability but more than 28% for quality.

Accessibility, availability and quality of drinking water varied widely between countries and regions in 2020

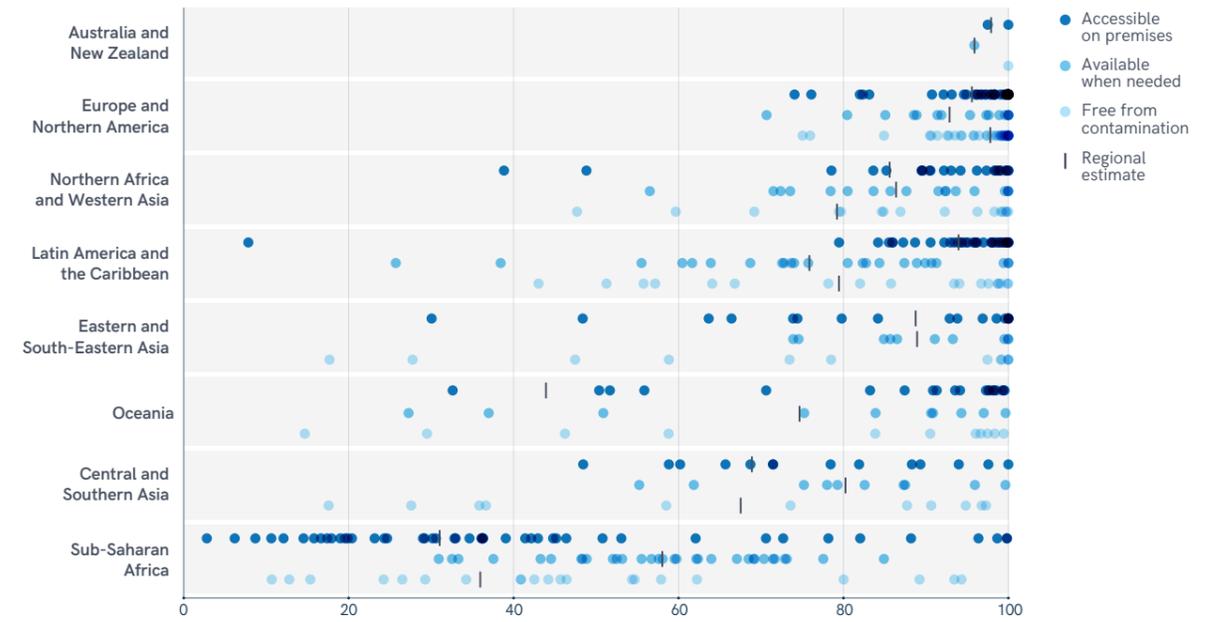


FIGURE 32 Population using improved sources accessible on premises, available when needed, and free from contamination, by country and SDG region, 2020 (%)

Note: Some regions do not have enough data to produce a regional estimate.

In 2020, many countries had large gaps in accessibility, availability and quality of drinking water in urban and rural areas

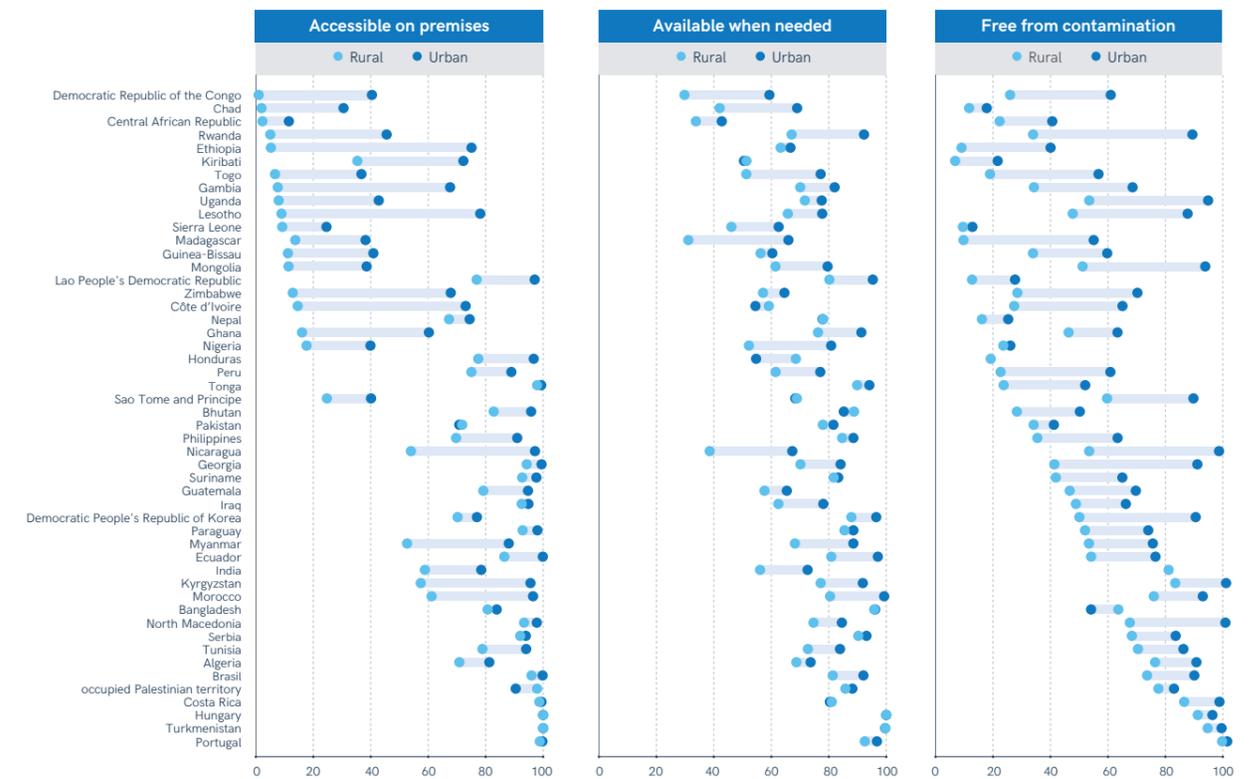


FIGURE 33 Proportion of rural and urban populations using improved sources accessible on premises, available when needed, and free from contamination, by country in 2020 (%)

Improved sources that are accessible on premises are not always available when needed or free from contamination

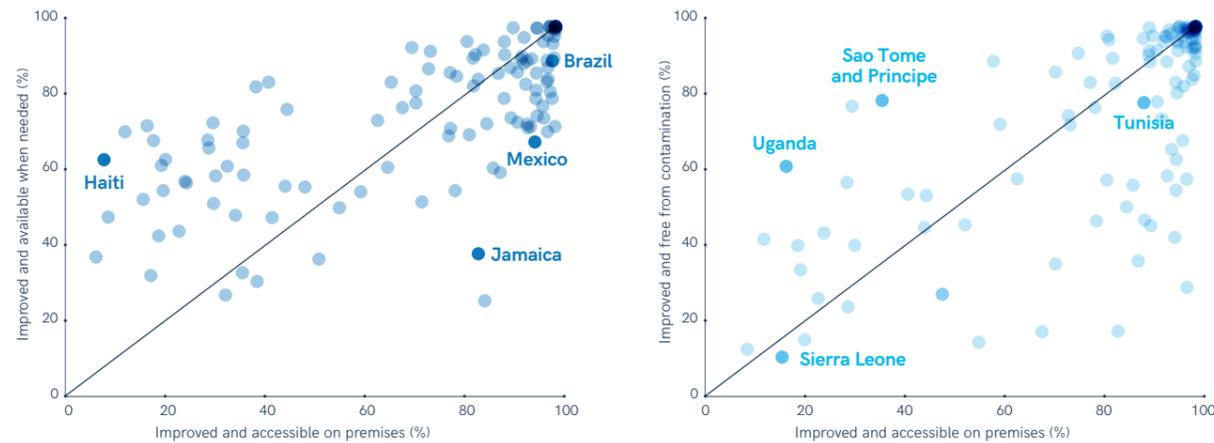


FIGURE 34 Population using improved sources accessible on premises, and improved sources available when needed and free from contamination, by country, 2020 (%)

Figure 34 compares the proportion of the population with an improved source accessible on premises and the proportions with water available when needed and free from contamination for countries with national estimates for all three. It shows that water supplies that are accessible on premises are not always available when needed or free from contamination. For example, in Jamaica, the majority of people (84%) use improved sources accessible on premises, but only 38% use supplies that are available when needed. In Haiti, by contrast, most people (64%) have water available when needed, but very few (8%) have supplies accessible on premises. Accessibility on premises is similar in Uganda (17%) and Sierra Leone (16%), but 62% of the population of Uganda use improved sources free

from contamination, compared with just 11% in Sierra Leone. Sao Tome and Principe is the only country with less than 50% of supplies accessible on premises to achieve >80% free from contamination.

While drinking water service levels vary widely between regions, there have been improvements in most regions over the first five years of the SDG period (Figure 35). In 2020, 77% of the world's population (6 billion people) used improved sources accessible on premises, rising from 74% (5.5 billion) in 2015. During this period, accessibility of drinking water increased in all SDG regions, but Central and Southern Asia and Eastern and South-Eastern Asia were the only regions to increase coverage by more than 5 % pts. Between 2015 and 2020, global coverage

of water available when needed remained steady at 78%, but due to population growth the number of people with water available when needed increased from 5.8 billion to 6.1 billion. Five out of eight SDG regions have improved the availability of drinking water, with sub-Saharan Africa recording the biggest increase (4.4 % pts). But availability decreased slightly in Latin America and the Caribbean and Australia and New Zealand and fell by 3 % pts in Central and Southern Asia. Globally, 75% of the population (5.8 billion) used improved water free from contamination by 2020, rising from 70% (5.2 billion) in 2015. Estimates were only available for five SDG regions, with Central and Southern Asia recording the biggest increase, from 61% in 2015 to 68% in 2020 (6.2 % pts).

In most regions accessibility, availability and quality of drinking water increased between 2015 and 2020

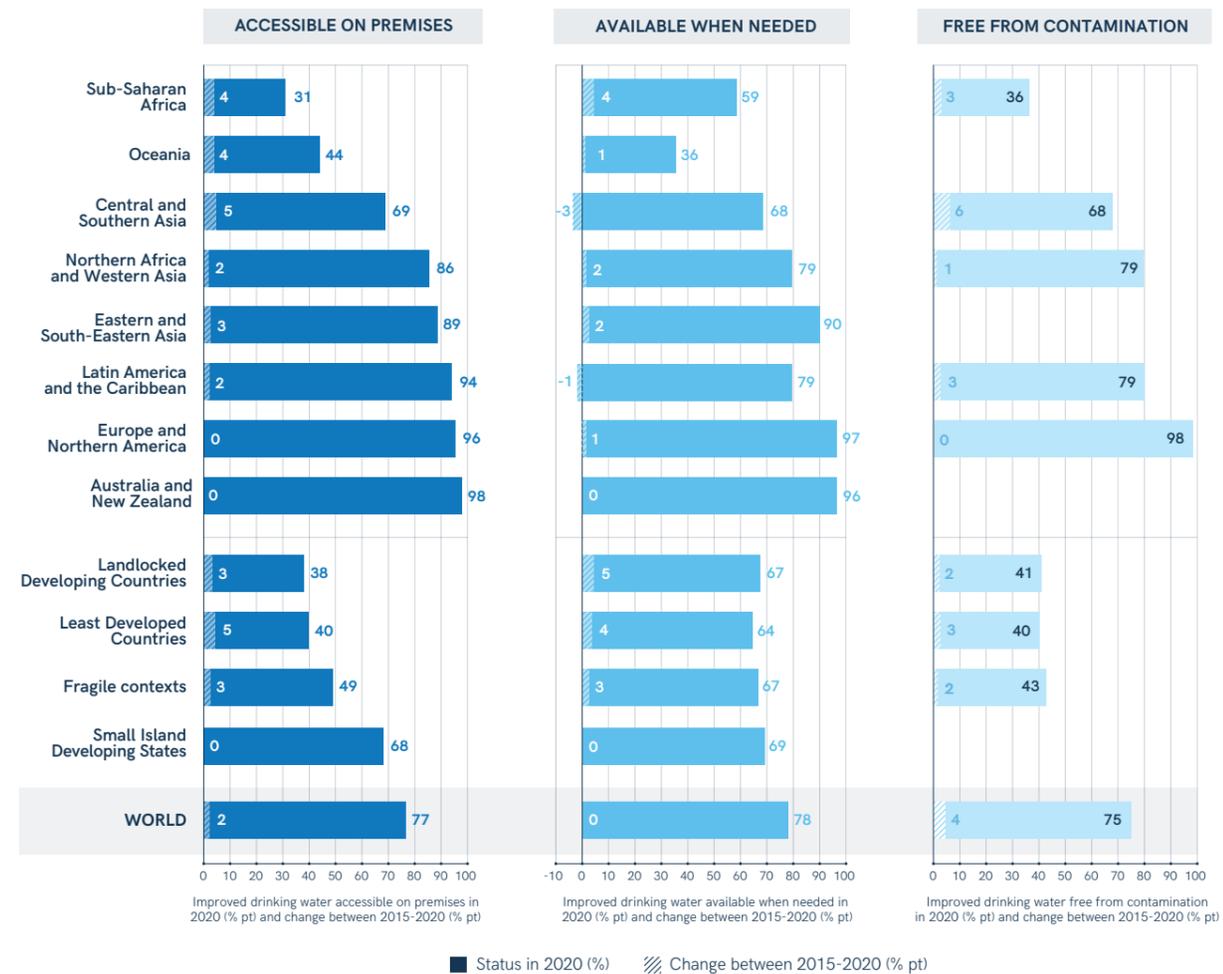


FIGURE 35 Population using improved drinking water sources accessible on premises, available when needed, and free from contamination, by region in 2020, and percentage point change, 2015-2020 (%)



Brazil is one of the few countries that routinely publish disaggregated data, enabling in-depth analysis of sub-national inequalities in drinking water quality. The left-hand side of Figure 36 shows that 86% of the population of Brazil used improved sources free from contamination in 2020 and that drinking water quality is higher in urban (88%) than in rural (72%) areas. The right-hand side provides a more detailed sub-national breakdown, using data extracted from the Ministry of Health's Water Quality Surveillance Information System for Human Consumption (SISAGUA)¹⁹ in 2020.

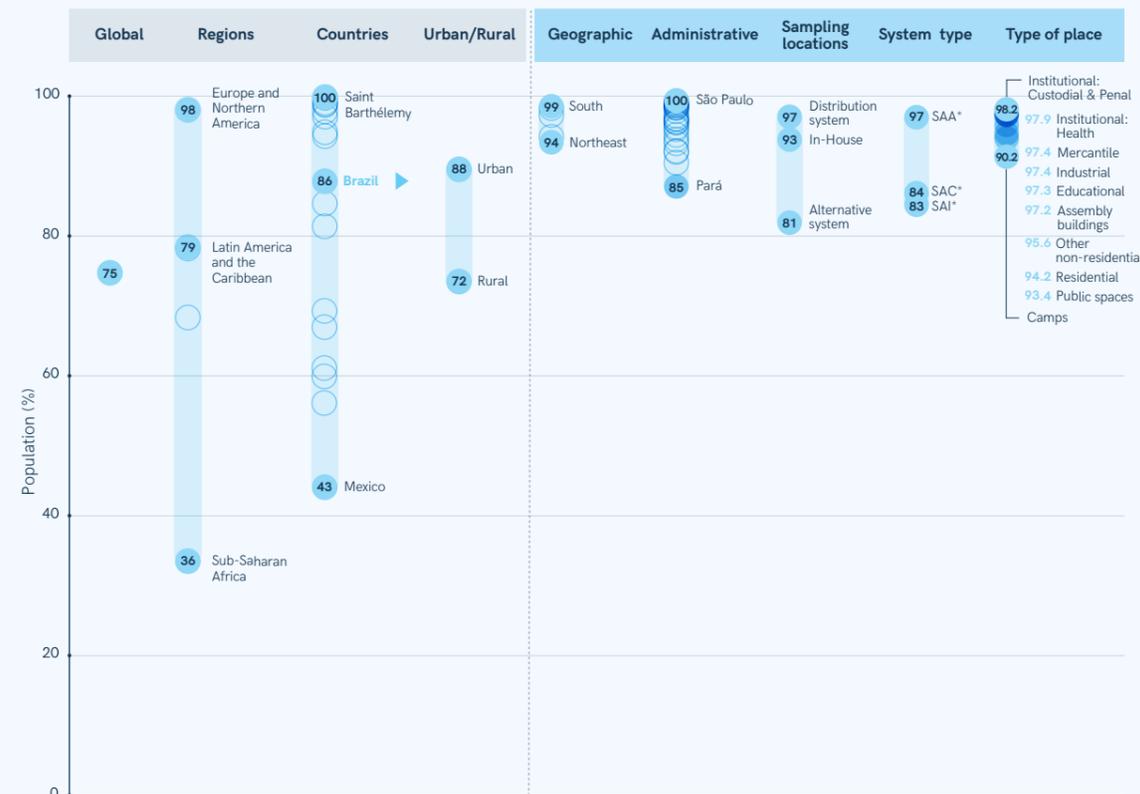
The SISAGUA database includes more than 2 million monthly observations during 2020, of which, 20% were routine presence/absence tests for E. coli. Data are available for 26 administrative units in five geographic regions and water quality data can be further disaggregated by the type of water supply system and the location in which the sample was taken. The list of places tested includes residential (house,

housing, condominium, group of houses); camps; educational buildings; institutional: health; institutional: custodial & penal (asylum/nursing home, jail/prison, nursery, orphanage); transport hubs (airport, harbor, train and bus stations); assembly buildings (club, religious temple/space, gym); mercantile buildings; industrial buildings; open spaces (park, plaza/square, cemetery); and other non-residential places.

In 2020, the proportion of drinking water samples free from contamination ranged from 85% (Pará in North) to 100% (São Paulo in Southeast). While almost all the samples (97%) from mains water supply systems were free from contamination, compliance was lower in collective (84%) and individual (83%) systems. Among the places tested, the lowest water quality was observed in camps (90%), followed by public spaces (93%). The highest water quality (98%) was observed in custodial, penal and health institutions. As the SISAGUA database includes data for every year since 2014, it is also possible to assess changes over time.

¹⁹ Brazil Ministry of Health, Sistema de Informações de Vigilância da Qualidade da Água para Consumo Humano, 2014-2020 <http://sisagua.saude.gov.br/sisagua/paginaExterna.jsf>

In Brazil, disaggregated data enable in-depth analysis of inequalities in drinking water quality



*SAA: Water Supply System / SAC: Collective Alternative System / SAI: Individual Alternative System

FIGURE 36 Inequalities in the use of improved drinking water sources free from contamination, Brazil, 2020 (%)

In 2020, the JMP published a thematic report presenting key findings and lessons learned from the experience of integrating water testing in 33 national household surveys around the world. These surveys show that exposure to faecal contamination through drinking water is widespread, and in some low and middle-income countries large numbers of people use sources with a very high risk of contamination (Figure 37). In six countries (Sierra Leone, Chad, Ethiopia, Kiribati, Lao People's Democratic Republic and Madagascar) less than 20% of the population used sources free from contamination, and in four countries (Sierra Leone, Chad, Madagascar and Nigeria) more than 40% used sources with a very high risk of contamination.



Water quality testing in household surveys reveals high levels of faecal contamination in many countries

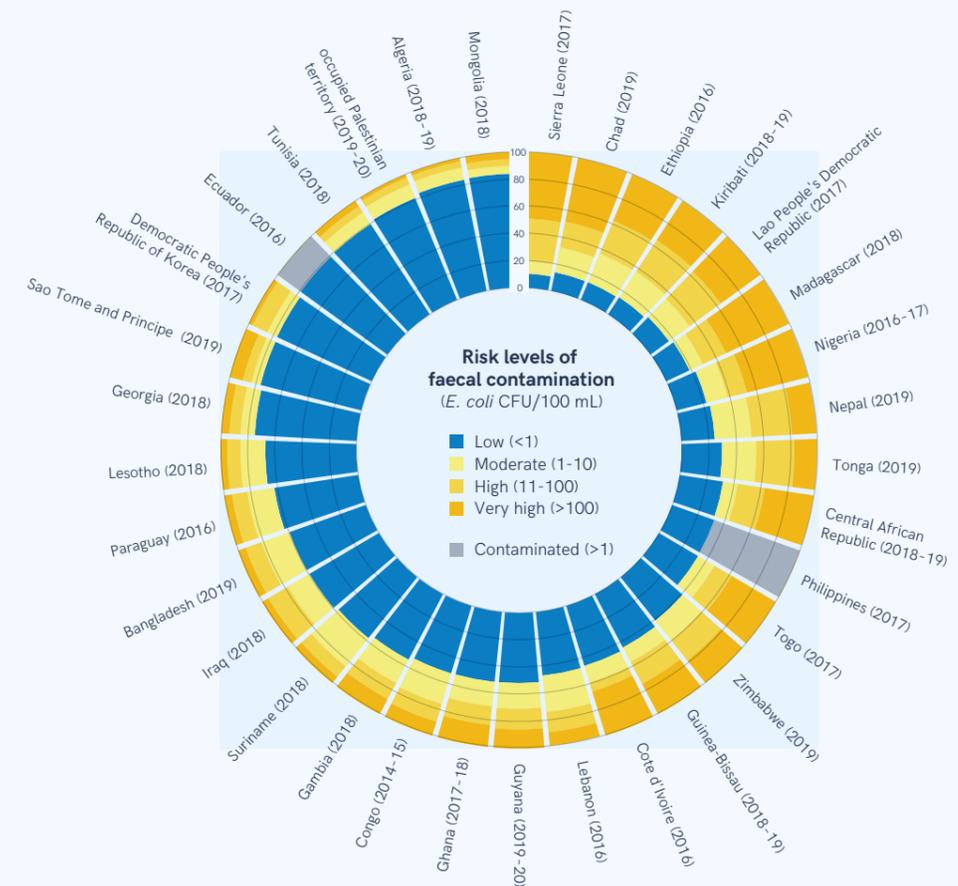


FIGURE 37 Population using drinking water sources by risk of faecal contamination, selected surveys, 2014-2020 (%)

Basic drinking water services

By 2020, 84 countries had already achieved universal access (>99%) to at least basic drinking water services

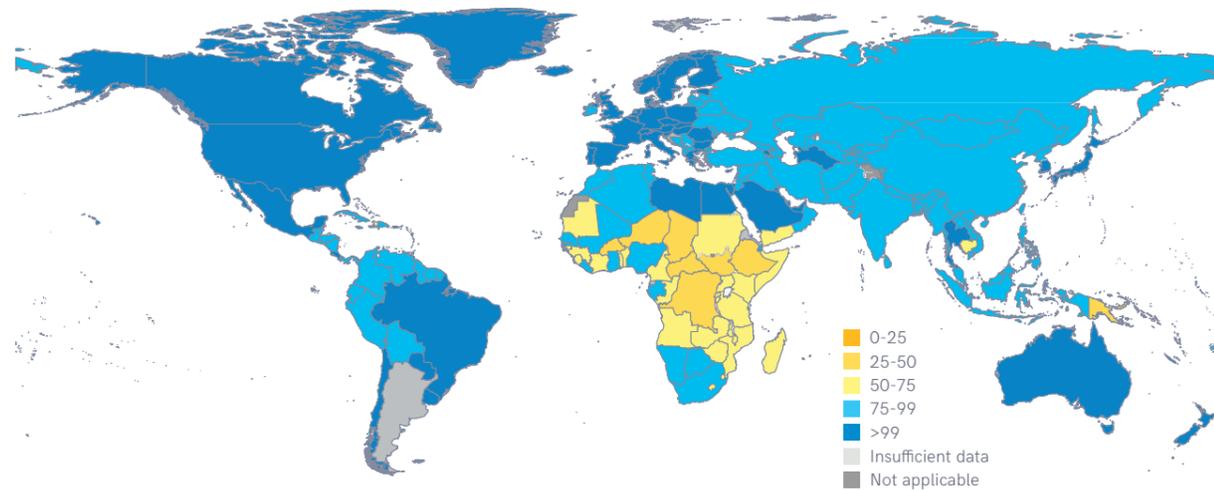


FIGURE 38 Proportion of the population using at least basic drinking water services, 2020 (%)

In 2020, 90% of the world's population (7 billion people) used at least basic drinking water services, rising from 88% in 2015. Over the first five years of the SDG period, urban coverage has remained unchanged at 96% while rural coverage has increased from 79% to 82%. By 2020, 84 countries had already achieved universal access (>99%) to at least basic drinking water services (compared with 77 countries in 2015). Eight out of nine countries that still had less than 50% coverage were in sub-Saharan Africa (Figure 38).

If current trends continue, the world will reach 94% coverage by 2030, falling short of universal access. Figure 39 shows that only four out of eight SDG regions are on track to achieve >99% coverage by 2030. Australia and New Zealand had already reached >99% by 2015 and Europe and Northern America passed the threshold in 2018. At current rates of progress, Latin America and the Caribbean and Eastern and South-Eastern Asia will achieve universal access in 2025 and 2028 respectively, but Northern Africa and Western Asia

Four out of eight SDG regions are on track to achieve universal access (>99%) to at least basic drinking water services by 2030

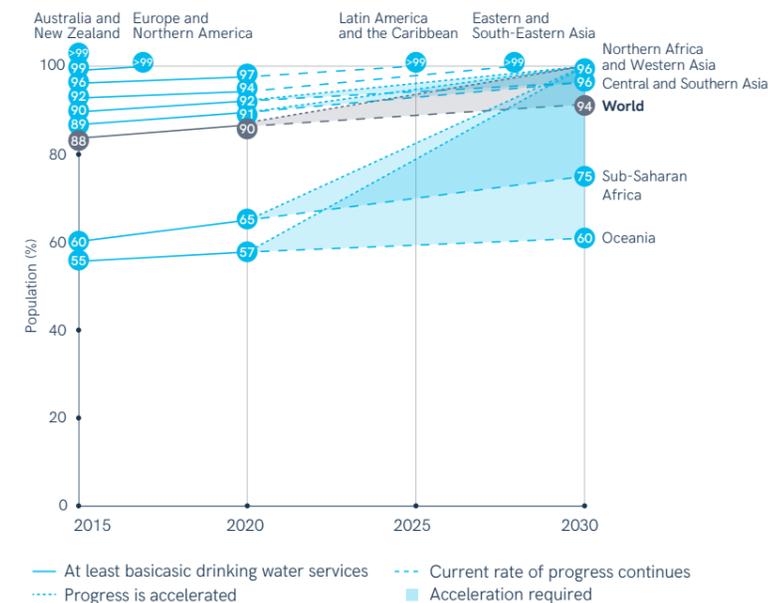


FIGURE 39 Progress in at least basic drinking water services, 2015-2020, and acceleration required to reach universal coverage by 2030

and Central and Southern Asia will only reach 96% by 2030. The most off-track regions are sub-Saharan Africa and Oceania. Since 2000, sub-Saharan Africa has increased coverage by 0.99 percentage points per year (% pts/yr), three times

faster than Oceania (0.31 % pts/yr). Achieving universal coverage of at least basic drinking water services by 2030 requires a 4x increase in current rates of progress in sub-Saharan Africa and a 14x increase in Oceania.

Coverage of at least basic drinking water services has increased in all SDG regions, but progress has varied widely between countries (Figure 40). Countries recording the most significant improvements mostly had <75% coverage in 2015, and countries that had already achieved >90% coverage by 2015 have generally progressed more slowly. However, some countries

with similar starting points have fared very differently. In 2015, 51% of the population in Mozambique and 42% of the population of the Central African Republic used at least basic drinking water services, but while coverage in Mozambique has increased by 12 % pts, coverage in the Central African Republic has decreased by 5 % pts.

Among countries with <99% in 2020, coverage of at least basic services was higher in urban areas but rates of change were faster in rural (Figure 41). Mozambique and Morocco recorded the fastest rates of progress in urban and rural areas respectively but most countries were progressing too slowly to achieve universal access by 2030.

By 2020, 84 countries had already achieved universal access (>99%) to at least basic drinking water services

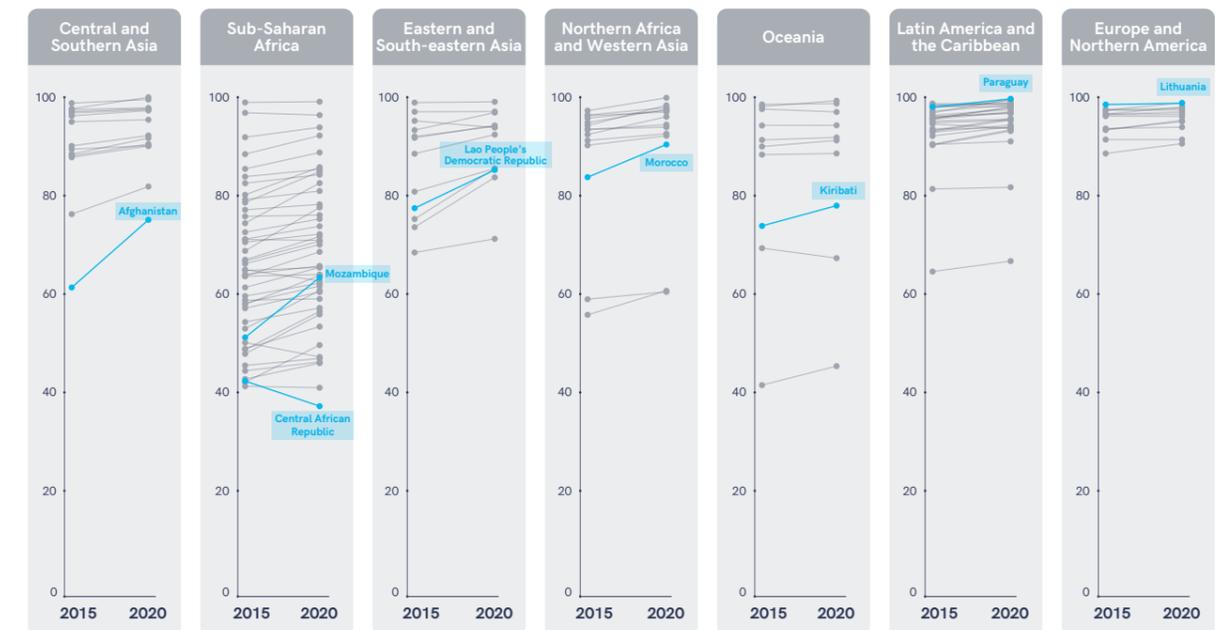


FIGURE 40 Proportion of the population using at least basic drinking water services, by country and SDG region, 2015-2020 (%)

Urban coverage of at least basic drinking water services is higher but the rate of change in rural areas is faster

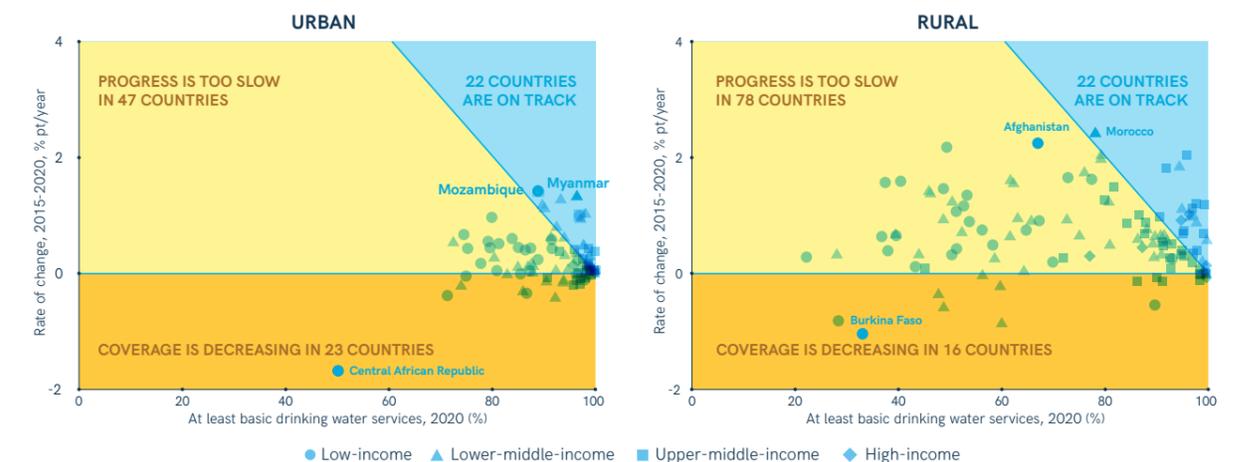


FIGURE 41 Progress in at least basic drinking water services, 2000-2020, among countries with <99% coverage in 2020 in urban (n=92) and rural (n=116) areas, by income

Notes: A) Urban: Includes 92 countries with at least 1% lacking basic drinking water services in 2020. Does not include 80 countries that already had >99% basic drinking water services in 2020. Does not include 3 countries that have estimates for 2020 but not 2000. B) Rural: Includes 116 countries with at least 1% lacking basic drinking water services in 2020. Does not include 43 countries that already had >99% basic drinking water services in 2020. Does not include 5 countries that have estimates for 2020 but not 2000.

Leaving no one behind

Significant inequalities persist between and within countries (Figure 42). In 2020, nine out of ten people worldwide used at least basic drinking water services, but regional coverage varied from 100% in Australia and New Zealand to just 57% in Oceania and 65% in sub-Saharan Africa. Within sub-Saharan Africa, national coverage ranged from just 38% in the Central African Republic to universal (>99%) coverage in Réunion, but there were also significant disparities within countries. For example, the Uganda 2019 Malaria Indicator Survey revealed a 31% pt gap in coverage between urban (79%) and rural (48%) areas, a 36% pt gap between the richest (80%) and poorest (44%), and a 59% pt gap between the capital Kampala (97%) and Karamoja region (38%).

The JMP database on inequalities now includes estimates for more than 100 countries disaggregated by wealth quintile and sub-national region. While the number of sub-national regions varies widely, different patterns of inequality can be seen in countries with disaggregated data available. In some countries (Egypt, Jordan, Costa Rica), almost all sub-national regions are approaching universal coverage (>99%) of basic drinking water services, while in others there are large disparities in coverage (Figure 43). For example, Panama, Afghanistan and United Republic of Tanzania all have gaps in coverage between the highest and lowest region of more than 50 % pts. In Ukraine, Guyana and Senegal, basic water coverage in one or two regions lags far behind other parts of the country.



Coverage of basic drinking water services varies widely between and within countries

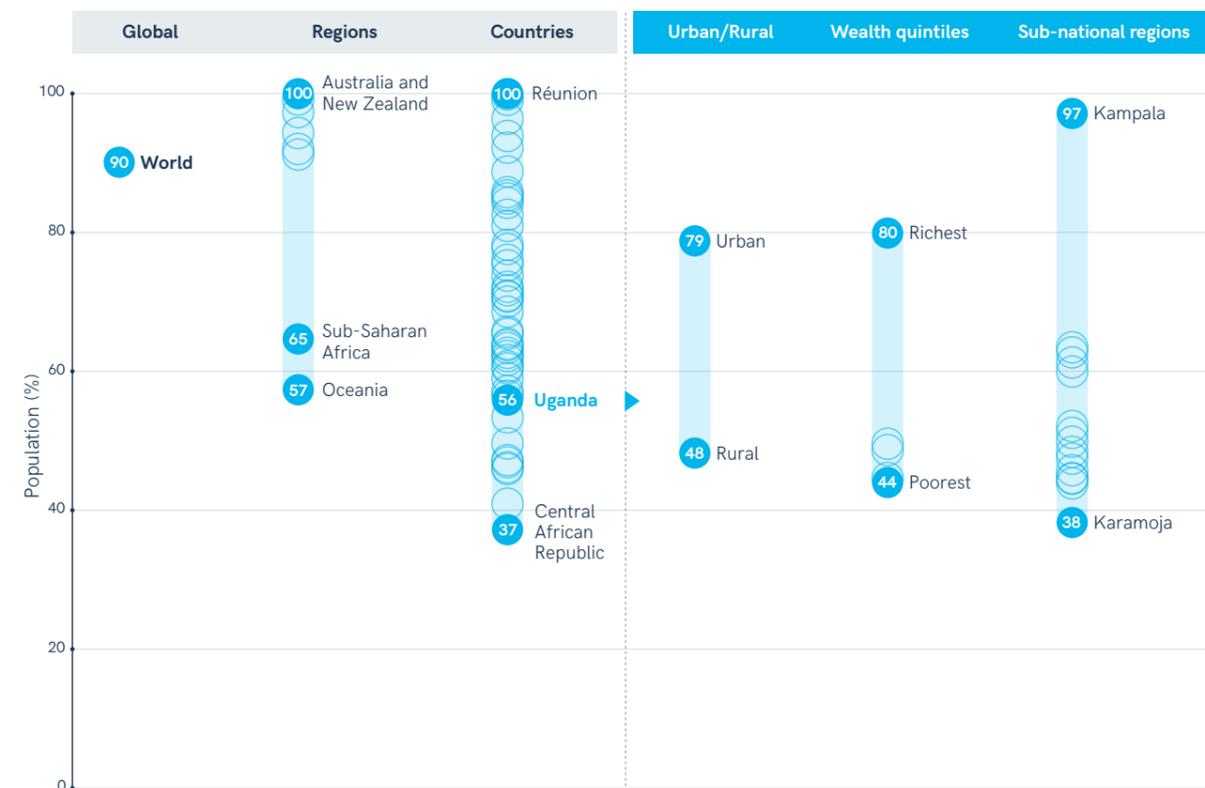


FIGURE 42 Inequalities in the use of at least basic drinking water services, Uganda, 2019 (%)

Note: Wealth quintiles and sub-national inequalities from Uganda 2018-2019 Malaria Indicator Survey

Disaggregated data reveal significant inequalities between sub-national regions

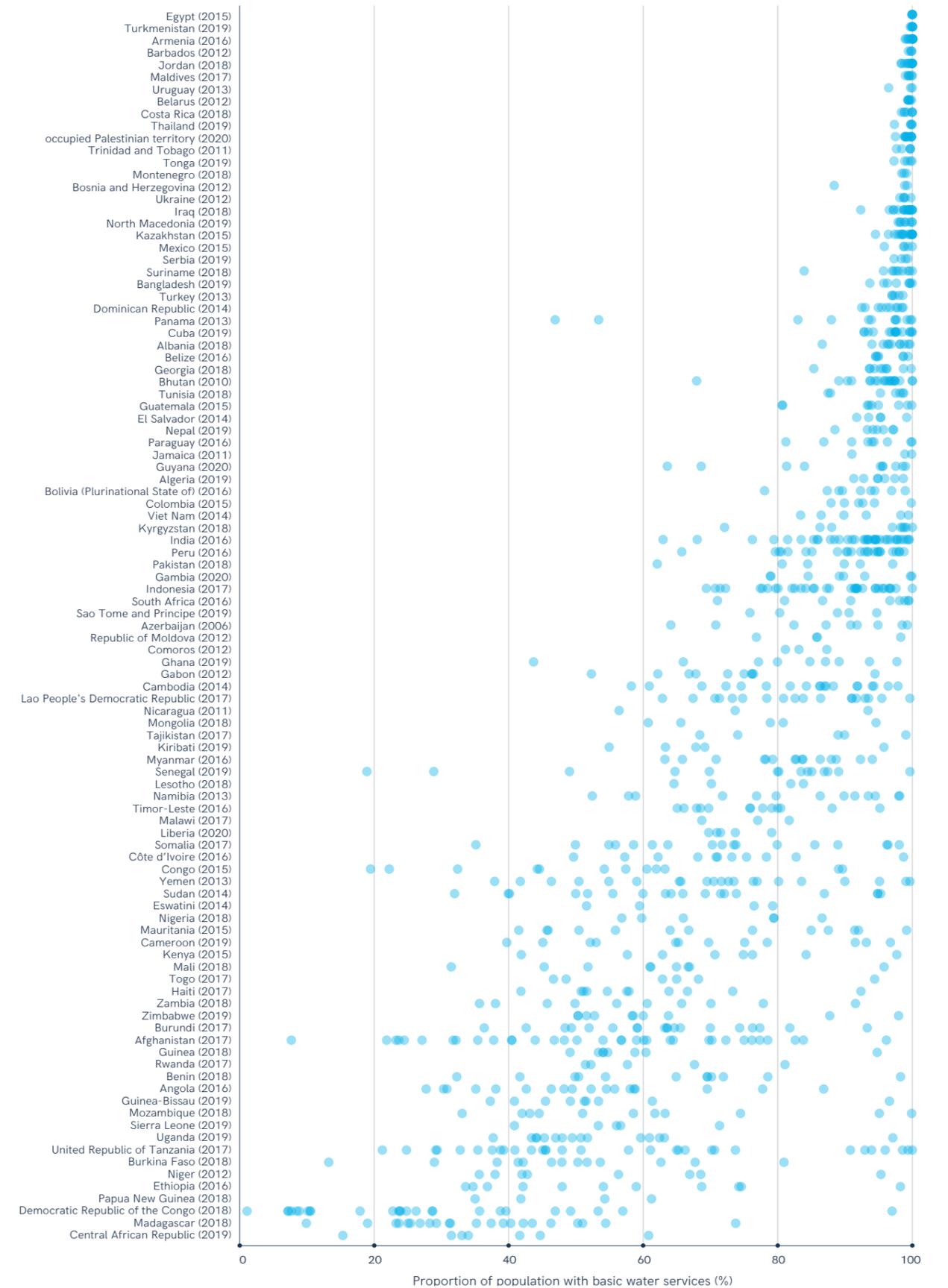


FIGURE 43 Inequalities in the proportion of the population with basic drinking water services, by sub-national region, 2010-2020 (%)

Another way of visualising inequalities is by calculating the ratio of service coverage between advantaged and disadvantaged groups. A ratio of 1 indicates equal coverage, but ratios greater than 1 indicate that coverage is higher in one group than the other. The higher the ratio, the larger the relative gap in coverage between the two groups. The ratio of basic drinking water coverage between the richest and poorest wealth quintile is generally greater in rural than urban areas (Figure 44). For example, in Papua New Guinea, the wealth quintile inequality ratio in rural areas is 3.7, compared with 1.9 in urban areas. But in Madagascar, inequalities are greater in urban (4.9) than rural (3.5) areas. At the national level, the largest inequality ratios are found in the Democratic Republic of Congo, where basic drinking water coverage among the richest is almost 5 times greater than coverage among the poorest.

Between 2000 and 2020, the number of people who still lacked even basic drinking water services was reduced by a third, from 1123 million to 771 million. The number of people without basic services decreased in all SDG regions except sub-Saharan Africa. Eastern and South-Eastern Asia achieved a two-thirds reduction, from 379 million to 133 million people, while in sub-Saharan Africa, the population without basic services increased from 350 million to 387 million. This means sub-Saharan Africa accounted for half of the global population without basic drinking water services in 2020. Eight out of ten (614 million) of those in sub-Saharan Africa without basic drinking water services in 2020 lived in rural areas, and nearly half (351 million) lived in the LDCs.

Coverage of at least basic drinking water services varies widely between and within countries

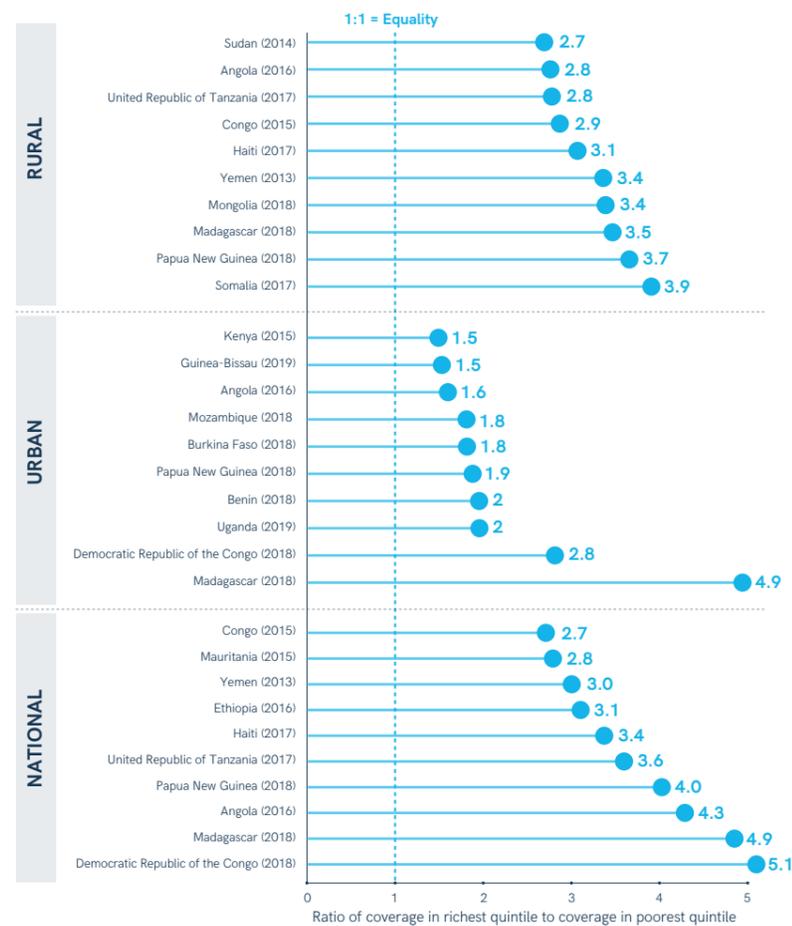


FIGURE 44 Ratio of basic drinking water coverage in richest to poorest wealth quintiles, selected surveys, 2014-2019

Sub-Saharan Africa now accounts for half of the global population without basic drinking water services

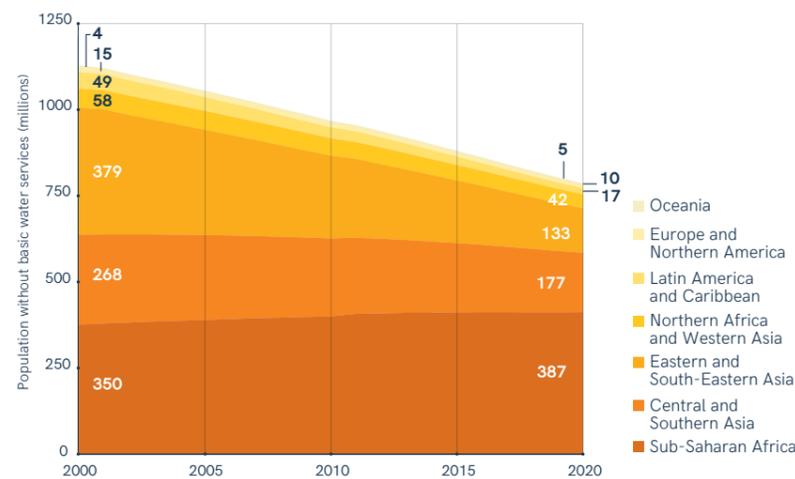


FIGURE 45 Population without basic drinking water services, by SDG region, 2000-2020 (millions)



Between 2015 and 2020, the number of countries where at least 1% of the population still relied on collecting surface water directly from rivers, lakes and ponds decreased from 81 to 66. Most of these countries (36) are now concentrated in sub-Saharan Africa,

but there are still cases in five other SDG regions (Figure 46). The largest reductions in each SDG region were recorded by Ethiopia, Papua New Guinea, Lao People's Democratic Republic, Tajikistan, Azerbaijan and Suriname. Still, there were several countries in which the proportion

of the population using surface water did not change, and in eight countries it increased. If current rates of change continue, just 29 out of 66 countries where at least 1% had no service in 2020 are on track to eliminate the use of surface water by 2030.

Many countries reduced the use of surface water between 2015 and 2020

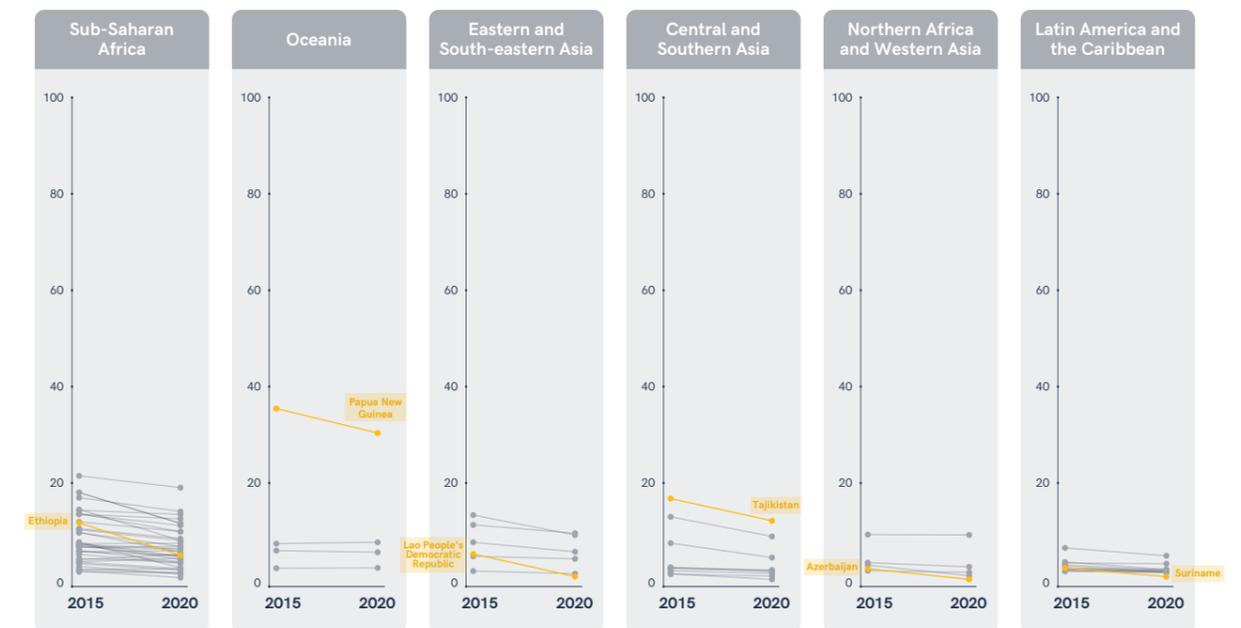


FIGURE 46 Population using surface water, by country and SDG region, 2015-2020 (%)

In 2021, UNICEF launched a campaign to 'Reimagine WASH and to assure water security for all'. The goal is, by 2025, to reach 450 million children and their families (more than 1.4 billion people) living in areas of high or extremely high water vulnerability with water security solutions. And, by 2030, for all children have access to a safe and affordable water supply and live in water secure communities.

To support this effort, UNICEF developed an Extreme Water Vulnerability Index. It combined data from the World Resources Institute (WRI) and the United Nations Environment Programme (UNEP) on physical water scarcity risks (water stress, interannual variability, seasonal variability, groundwater table decline, and drought events) with data from the JMP on drinking water service levels (surface water, unimproved, limited, at least basic). Combined scores were calculated for polygons corresponding to hydrological boundaries, and the frequency distribution was analysed to determine thresholds for water vulnerability (Natural Breaks). The Gridded Population of the World version 4 (GPWv4) was then used to overlay the latest population density data and calculate the total population living in areas with high and extremely high vulnerability.

It is estimated that worldwide over 1.4 billion people lived in areas of high (1 billion) or extremely high (489 million) water vulnerability in 2020. A further 3.0 billion were classed as medium vulnerability and the remaining 3.1 billion were classed as low (2.0 billion) low and very low (1.1 billion) vulnerability. Central and Southern Asia region had the highest number of people (765 million) and

corresponded to almost 50 per cent of the total number of people living in areas of high or extremely high water vulnerability, followed by Sub-Saharan Africa and East/South-eastern Asia regions, with 278 and 225 million respectively.

Further work is required to integrate datasets for populations, administrative and hydrological units at sub-national levels and produce higher resolution maps of water vulnerability. Importantly, while the analysis focuses on vulnerability due to low levels of access, additional analysis is required to identify those who have water accessible on premises, but the availability and quality of water is not sufficient to deliver services consistently, or safely.



1.4 billion people lived in areas of high or extremely high water vulnerability in 2020



FIGURE 47 UNICEF Extreme Water Vulnerability Index

Leaving no one behind

Global data coverage is much higher for basic drinking water services (210 countries, representing 99% of the population) than for safely managed drinking water (138 countries, representing 45% of the population), but the latter has improved steadily with each JMP progress update. Data coverage for basic services has remained high in most SDG regions, except for Latin America and the Caribbean, where the number of countries with estimates has fallen from 46 in the 2017 baseline report to 36 in the 2021 progress update (Figure 48). During the same period,

there has been a steady increase in data coverage for safely managed drinking water services. The number of countries with estimates has doubled in Latin America and the Caribbean, from 9 to 18, and tripled in sub-Saharan Africa, from 7 to 21. But in five out of eight SDG regions, estimates were only available for less than half of the regional population. In Oceania, data coverage has increased from 3 to 11 out of 21 countries, but these still only represent 11% of the regional population.



Data coverage for safely managed drinking water services has increased in seven out of eight regions

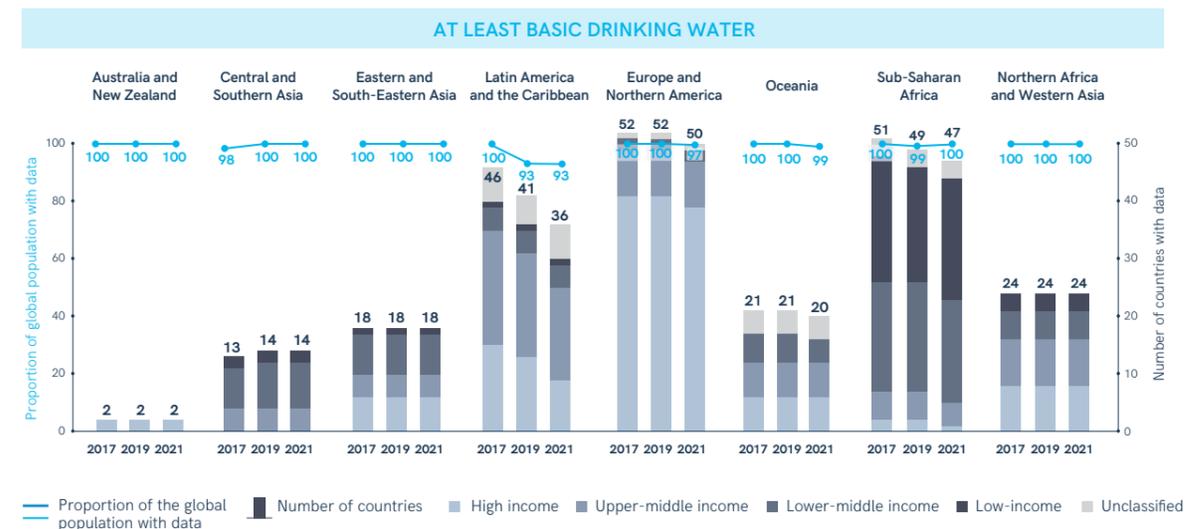


FIGURE 48 Data progression: safely managed and at least basic drinking water services in 2017, 2019, and 2021 progress reports



03.

Sanitation services

The JMP ladder for sanitation defines five service levels, ranging from open defecation to safely managed sanitation services, which is the principal sanitation indicator for SDG target 6.2 (Figure 49). The ladder builds upon and extends the MDG indicator of 'use of improved sanitation facilities', by including additional aspects of the quality of

service. If people share an improved facility with other households, they are counted as having a 'limited service'. Those that use an improved facility that is not shared are counted as having either a 'basic service' or, if the excreta are safely disposed of in situ or removed and treated off-site, a 'safely managed service'.

SERVICE LEVEL	DEFINITION
SAFELY MANAGED	Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or removed and treated offsite
BASIC	Use of improved facilities that are not shared with other households
LIMITED	Use of improved facilities that are shared with other households
UNIMPROVED	Use of pit latrines without a slab or platform, hanging latrines or bucket latrines
OPEN DEFECCATION	Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches or other open places, or with solid waste

FIGURE 49 SDG ladder for sanitation services

Note: Improved facilities include flush/pour flush toilets connected to piped sewer systems, septic tanks or pit latrines; pit latrines with slabs (including ventilated pit latrines), and composting toilets.



Since households with safely managed services also meet the requirements for basic services, these two levels can be grouped together as 'at least a basic service', which is used in the monitoring of SDG target 1.4.

Households with sewer connections have 'safely managed services' if the sewer delivers wastewater to a treatment plant that provide secondary treatment or better²⁰. Households with improved facilities that store and treat excreta on-site (for example, in septic tanks and improved pit latrines, or in decentralized wastewater treatment systems) have safely managed services if the on-site storage facilities effectively separate excreta from users and the surface environment (**containment**) and the excreta are either removed and treated off-site in facilities designed to receive faecal sludge (**emptied and treated**), or treated and then buried locally (**disposed of in situ**). Households are also classified as having safely managed services if their on-site storage facilities effectively separate excreta from the surface environment and have never been emptied (**disposed of in situ**).

Between 2000 and 2020, the world population increased by 1.7 billion people, but 2.4 billion people gained access to safely managed sanitation services. Still, in 2020 3.6 billion people lacked safely managed services, of which approximately half (1.9 billion) had basic services. Among the 1.7 billion people lacking even basic services, 580 million had limited services, 616 million used unimproved facilities, and 494 million practised open defecation (Figure 50).

²⁰ Wastewater discharged through long ocean outfalls after primary treatment is also counted as safely managed.



Between 2000 and 2020, 2.4 billion people gained access to safely managed sanitation services

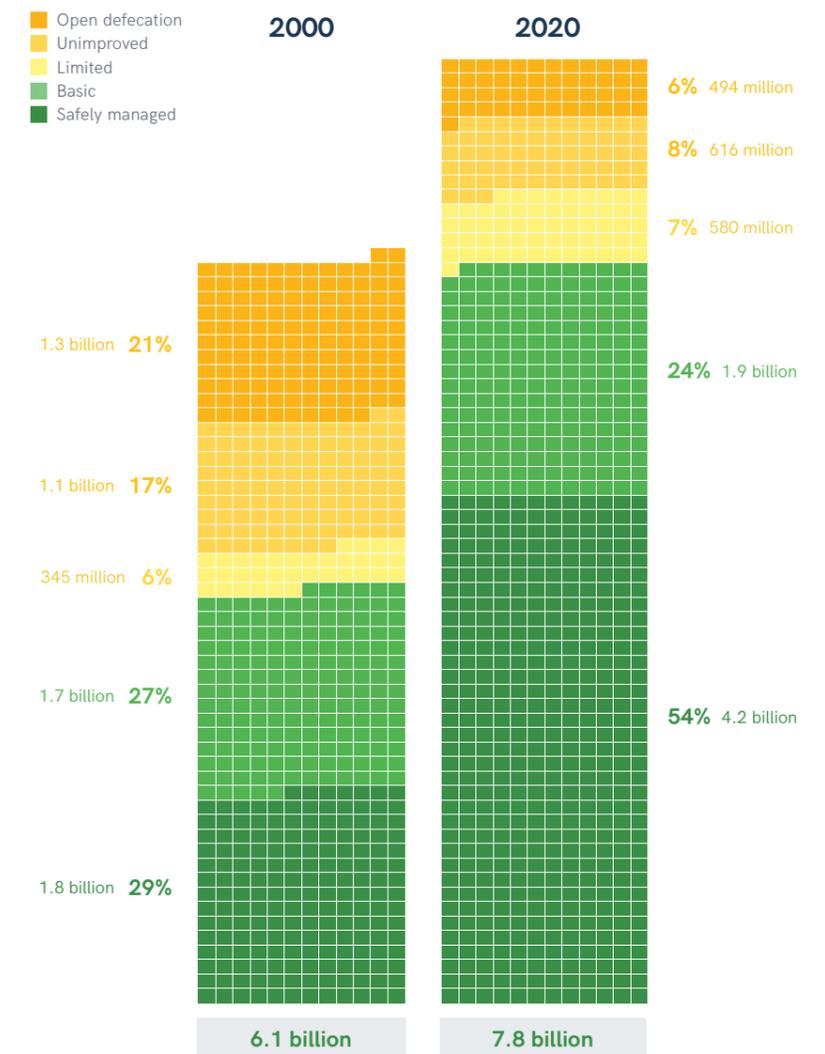


FIGURE 50 Global population using different levels of sanitation services, 2000 and 2020 (each unit represents 10 million people)



Services levels in 2020 could be disaggregated by urban and rural areas for all SDG regions except Australia and New Zealand, though no rural estimates were available for safely managed sanitation services in Latin America and the Caribbean or for Northern Africa and Western Asia (Figure 51).

Safely managed sanitation services

In 2020, 120 countries, representing 81% of the global population, had estimates for safely managed sanitation services. Eight countries had already reached universal (>99%) coverage, but in 48 countries, less than half of the population had safely managed services (Figure 52).

Globally, access to safely managed sanitation services has increased over the 2000 to 2020 period²¹ by an average of 1.27 percentage points per year (% pts/yr).

²¹ In this report, with a focus on 'five years into the SDGs' many figures focus on the progression from 2015-2020, although the JMP produces estimates of annual rates of change using all available data points for the entire reference period, 2000-2020.

Safely managed and basic sanitation coverage is higher, but rates of progress lower, in most urban areas

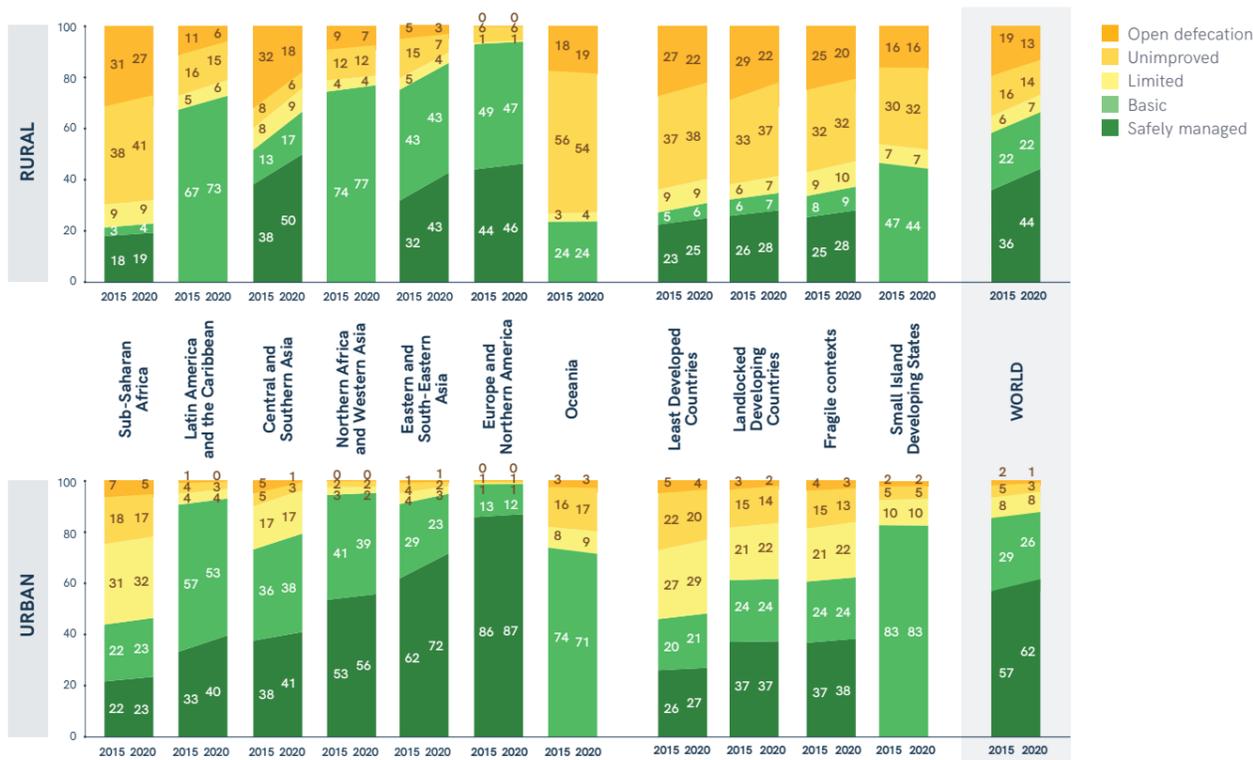


FIGURE 51 Urban and rural sanitation coverage by service level and SDG region, 2015-2020 (%)

Coverage of safely managed sanitation services varied widely between countries in 2020

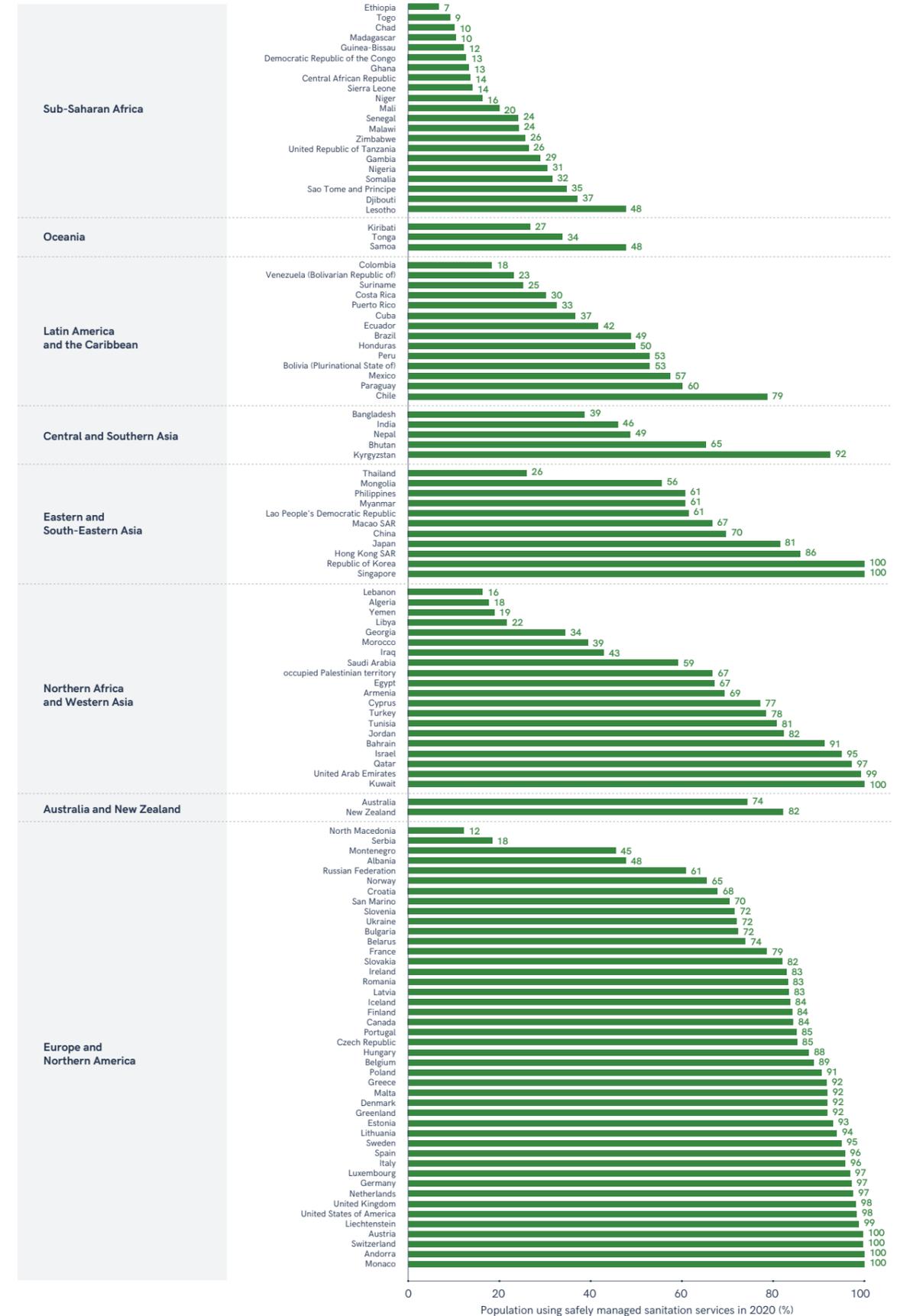


FIGURE 52 Coverage of safely managed sanitation services varied widely between countries in 2020

Global coverage has increased from 47% in 2015 to 54% in 2020 but at current rates of progress the world will only reach 67% coverage by 2030, leaving 2.8 billion people without safely managed services (Figure 53). Progress rates are highest in Eastern and South-Eastern Asia (1.97 % pts/yr) and Central and Southern Asia (1.68 % pts/yr), but no region is on track to achieve universal coverage by 2030.

Only eight countries are on track to reach universal coverage with safely managed sanitation by 2030 (Figure 54), all of which are high-income countries²². China, an upper-middle-income country, has shown the greatest rate of progress (2.82% pts/yr) and is nearly on track for universal coverage, while Slovenia and Lesotho have achieved the fastest progress among high-income and lower-middle-income countries (2.34 and 2.03% pts/yr, respectively).

Either sewerage or non-sewered (on-site) sanitation technologies can be safely managed, but the information needed for classification is different. Households with sewerage are considered to have safely managed services if the blackwater²³ flushed out of the household is transported to an off-site treatment plant where it receives secondary or higher-level²⁴ treatment (or primary treatment²⁵ with effluent discharged through a long ocean outfall). Households using toilets or improved latrines connected to on-site storage/treatment in septic tanks or pits

²² Using the World Bank's classification by income, updated in June 2020. <http://databank.worldbank.org/data/download/site-content/CLASS.xls>
²³ Blackwater is a mixture of urine, faeces and flushwater along with anal cleaning water (if water is used for cleansing) and/or dry cleansing materials
²⁴ Secondary treatment is a process that follows primary treatment of water and generally involves biological or other treatment with a secondary settlement or other process that results in a biochemical oxygen demand (BOD) removal of at least 70% and a chemical oxygen demand (COD) removal of at least 75%. Tertiary treatment is a process that follows secondary treatment and removes nitrogen, phosphorous or any other pollutant, such as microbiological pollution or colour, that affects the quality or a specific use of water.
²⁵ Primary treatment is a mechanical, physical or chemical process involving settlement of suspended solids or any other process in which the BOD of the incoming water is reduced by at least 20% before discharge, and the total suspended solids of the incoming water are reduced by at least 50%.

No SDG region is on track to achieve universal access to safely managed sanitation services by 2030

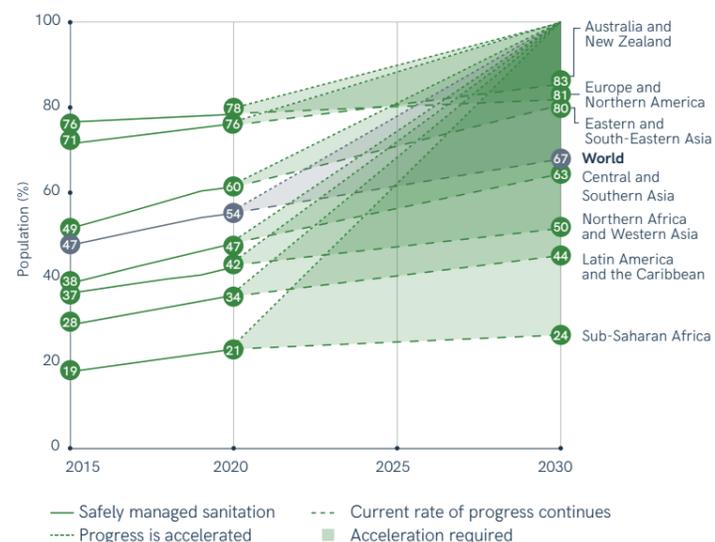


FIGURE 53 Progress in safely managed sanitation services, 2015-2020 (%), and acceleration required to reach universal coverage by 2030

Only 8 out of 109 countries are on track for universal coverage by 2030

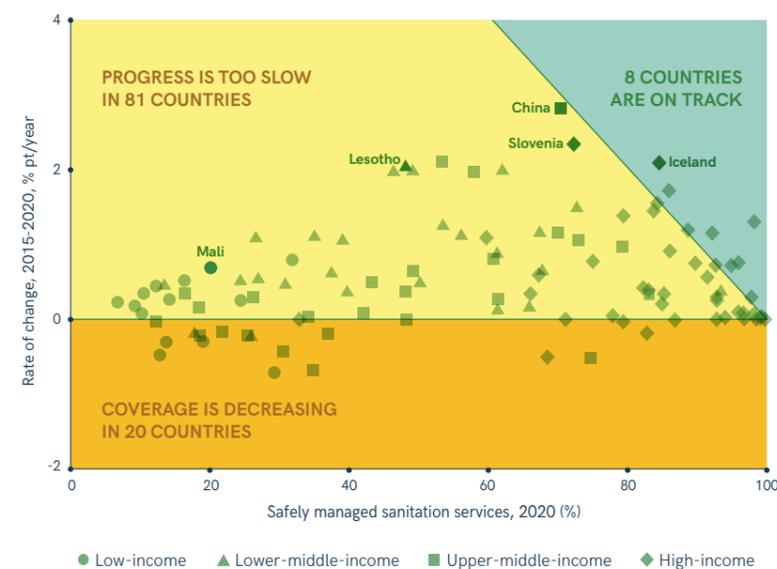


FIGURE 54 Progress towards universal access to safely managed sanitation 2015-2020, among countries with <99% coverage in 2020, by income

Note: Does not include eight countries that already had universal (>99%) coverage in 2020, or three countries that have estimates for 2020 but not for 2030.

are classified as having a safely managed service when the pit/tank contents effectively separate excreta from users and the environment (containment), and the excreta are either removed and treated off-site, or remain stored and are considered treated and disposed of in situ. In 2020, 34% of the global population

had safely managed sanitation through sewer connections, while 20% had safely managed on-site sanitation facilities (including septic tanks and improved latrines) that were treated and disposed of in situ. There were insufficient data to estimate the global population with excreta removed and treated off-site.



Since 2000, the population with sewer connections has been increasing at an average of 0.51 percentage points per year (% pts/yr), but growth in on-site systems has been faster, at 0.46 and 0.25 % pts/yr for septic tanks and improved latrines, respectively. In 2020, for the first time, more people used on-site sanitation technologies than sewer connections, with the change driven by strong growth in on-site sanitation in rural areas (Figure 55). This signals a need for strengthening systems for monitoring safe management of on-site sanitation systems, and for investing in formal services for emptying, removal, and treatment of faecal sludge.

Two out of five people globally (43%), two thirds of those in urban areas (64%) and one in seven people in rural areas (15%) report having sewer connections, but there are large regional variations (Figure 56). In urban areas, twice as many people have sewer connections than use on-site sanitation facilities (64% and 31% in 2020, respectively). However, in Central and Southern Asia, Oceania, and sub-Saharan Africa on-site sanitation is more common than sewer connections even in urban settings. On-site sanitation in urban areas has been increasing (septic tanks and pit latrines at rates of 0.24 and 0.06

% pts/yr, respectively) at twice the rate of sewer connections (0.14 % pts/yr), and includes communal decentralized wastewater treatment systems, for instance serving blocks of apartment buildings, as well as individual septic tanks and improved latrines. In rural areas on-site sanitation is more prevalent than sewer connections in all regions except Europe and Northern America, and growth in septic tanks and improved latrine coverage (0.68 and 0.63 % pts/yr, respectively) is faster than growth in sewer connections (0.40 % pts/yr).

Beginning in 2020, more people used improved on-site sanitation facilities than had sewer connections

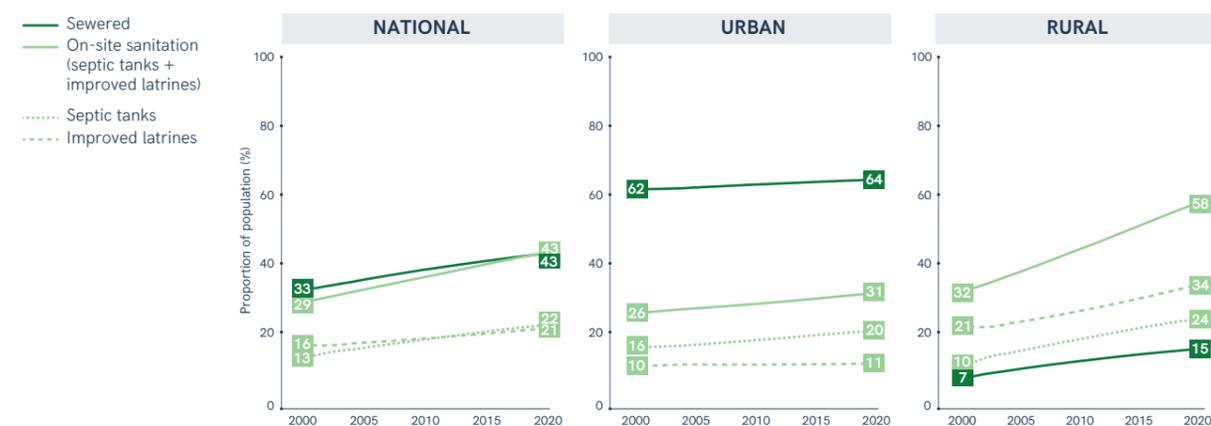


FIGURE 55 Global trends in sewer and improved on-site sanitation, 2000-2020

The distribution of on-site and sewer sanitation varies widely by region and location

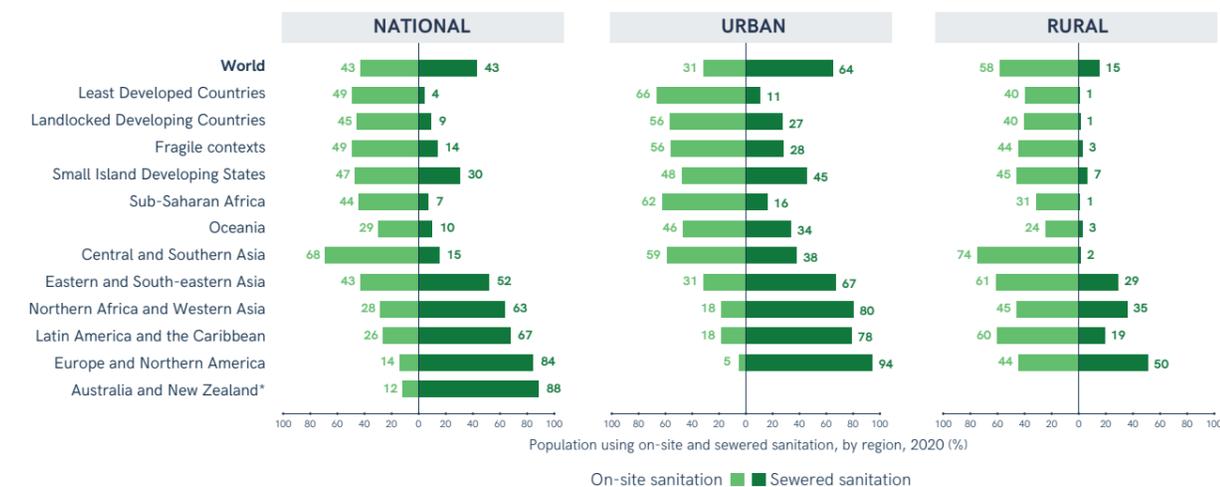


FIGURE 56 Population using on-site and sewer sanitation, by region, 2020 (%)

*Disaggregated data unavailable for urban and rural areas



Data on off-site wastewater treatment were available for 103 countries, representing 92% of the global population with sewer connections. Globally, four out of five people with sewer connections (82%) are estimated to be connected with plants providing at least secondary treatment. However, this value varies widely between and within SDG regions (Figure 57). For example, in Europe and Northern America,

22 countries had universal (>99%) wastewater treatment, but in Albania, Bermuda, North Macedonia and Serbia less than 50% of sewer wastewater received secondary or better treatment. In Northern Africa and Western Asia, nine countries had universal wastewater treatment, but in Algeria, Lebanon and Libya less than 20% of sewer wastewater was treated. Globally, 594 million people have sewer connections that don't

receive sufficient treatment to count as a safely managed service. Many more are connected to wastewater treatment plants that do not provide effective treatment or comply with effluent requirements²⁶.

Since 2010 more people have reportedly been using septic tanks than improved latrines, although latrines still dominate in rural areas (Figure 55). However, many so-called 'septic tanks' don't meet the technical definition of an impermeable septic tank with leachfield, and might be better called a 'cesspool' (a permeable pit without a separate leachfield, similar to a latrine pit but receiving more liquid). Household survey respondents and enumerators often lack the technical knowledge or training to accurately classify on-site sanitation technologies, and many existing survey questionnaires have limited response options.

²⁶ The definition of SDG indicator 6.2.1a 'proportion of population with safely managed sanitation services' does not include compliance with effluent standards, but this is covered by the household portion of SDG indicator 6.3.1 'proportion of domestic and industrial wastewater safely treated'.

Wastewater treatment varies widely within SDG regions

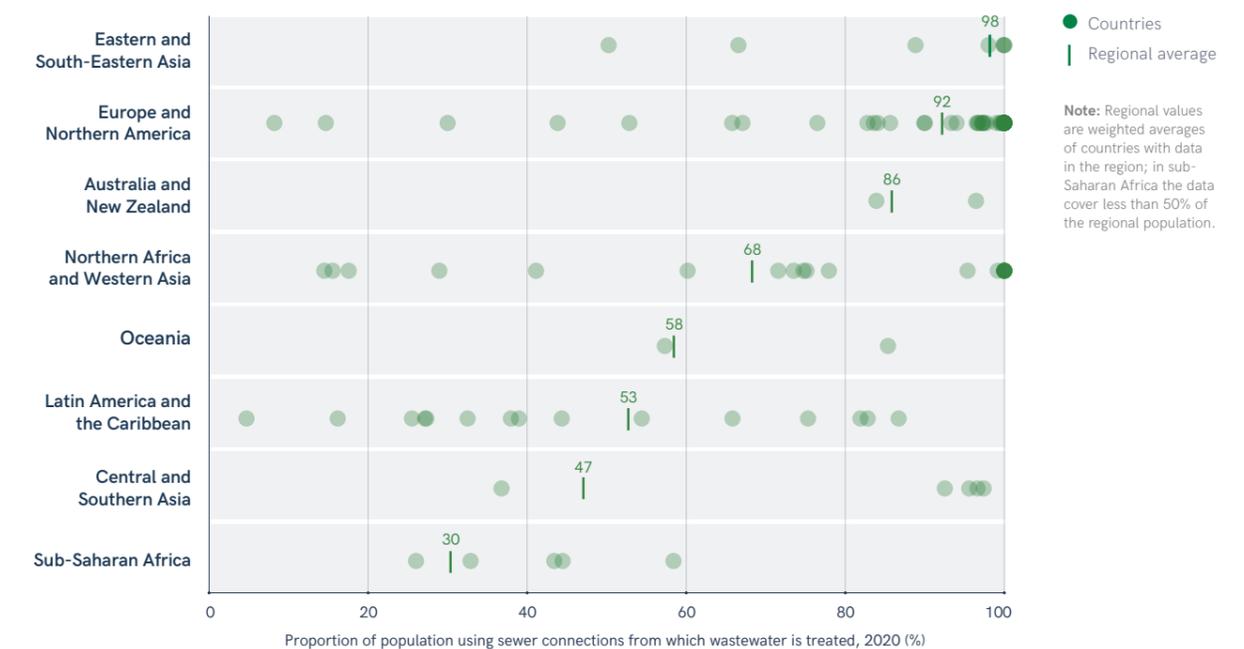


FIGURE 57 Population using sewer connections from which wastewater was treated, by SDG region and country, 2020 (%; n=103).

On-site sanitation technologies can be counted as safely managed, if they are improved, not shared, and prevent unsafe exposures along the sanitation chain, from containment to treatment and discharge. On-site storage containers that receive excreta and wastewater, like tanks and pits, are counted as 'containing' waste if they prevent the discharge of wastewater to the surface environment. On-site tanks and pits can be assessed for containment through household surveys and technical inspections, and, in some cases, administrative records can be used to classify tanks and pits as 'contained' or 'not contained' (Table 2). Inspections typically focus on compliance with construction standards and whether facilities are functioning properly or presenting a risk to human health. Further work is needed to harmonize the definitions used in national data sources to enable comparison between countries.

Improved pit latrines receive relatively little liquid inputs, and are designed to allow these liquids to infiltrate directly into the surrounding soil through the permeable sides and/or floor of the pit, while the solid fraction slowly settles and decomposes through biodegradation. Inspections can identify pit latrines that are overflowing or leaking waste directly into the surface environment, and classify these as not contained and therefore not safely managed.

Septic tanks and cesspools receive much larger volumes of liquid inputs, including blackwater and, in some cases, greywater (wastewater generated by households but not from toilets). Septic tanks are usually impermeable, while cesspools have permeable walls or bottoms to allow liquid infiltration. Well designed and operated septic tanks and cesspools retain

most of the solid fraction of wastewater, allowing the liquid fraction to either infiltrate directly into the subsurface or leave the containment through an overflow or effluent line. The solid fraction settles and decomposes over time, and well designed and operated septic tanks can be considered as equivalent to primary treatment (that is, reducing suspended solids by at least 50%, and biochemical oxygen demand (BOD) by at least 20%).

If the liquid or solid fraction overflows from a pit latrine, septic tank or cesspool, or is discharged directly to the surface environment through an effluent line, the wastewater is classified as not contained, and therefore not safely managed. A large number of so-called septic tanks in low- and middle-income countries have overflow lines that connect directly to open drains or water bodies, and household surveys and inspections can identify these as unsafe discharges. For this reason, the JMP applies an assumption of 50% containment for countries that have no data on containment of septic tanks. When the liquid fraction leaving the septic tank through an effluent line connects an infiltration system (for example, a soakaway pit or leachfield), much of the remaining suspended solids, as well as dissolved organic carbon, is removed through biodegradation and adsorption onto soil particles; this can be considered as equivalent to secondary treatment (BOD is typically reduced during infiltration by more than 70%), and therefore counted as safely managed.

If pit latrines or septic tanks have good containment, and have not yet been emptied, the excreta are considered to be safely treated and disposed of in situ. If a pit latrine or septic tank is emptied and the contents are buried on-site, the waste is also considered to be safely treated and disposed of in situ.



Measures of containment, storage and on-site treatment vary widely between countries

Country	Source	Year(s)	Measurement of containment	Classification
Survey/Census				
Canada	Households and the Environment Survey	2013, 2015	"No problems last time pumped, maintained or inspected"	Contained
Nigeria	Water, Sanitation and Hygiene National Outcome Routine Mapping	2019	"No leaks or overflow"	Contained
Philippines	Annual Poverty Indicators Survey	2019, 2020	Septic outlet connects to sewer lines or soakage pit	Contained
USA	American Housing Survey	2013-2019	Households with septic tanks that report no breakdowns in the last three months	Contained
Bosnia and Herzegovina	Census	2013	On-site facilities classed as "closed septic tank with overflow"	Not contained
Ecuador	Encuesta Nacional de Empleo, Desempleo y Subempleo	2016, 2017, 2019	"Los desechos del pozo séptico/pozo ciego terminan en algún lugar abierto (río, quebrada, acequia, calle, patio, terreno, campo abierto)" "Waste from the septic tank/cesspool end up in an open place (river, stream, ditch, street, patio, land, open field)"	Not contained
Ethiopia, Ghana, Honduras, Kenya, Malawi, Mali, Mozambique, Niger, Rwanda, Uganda, Zambia	World Vision survey	2017	"Closest sanitation is not full, overflowing, or leaking"	Not contained
Senegal	Programme Eau Potable et Assainissement	2017	<i>[fosses septiques ou latrines à fosse améliorée] "endommagées ou trop pleines de sorte qu'elles fuient et/ou se déversent dans des canalisations à ciel ouvert, une masse d'eau ou en terrain découvert plutôt que dans des fosses de décantation ou le réseau d'égouts"</i> "Septic tanks or improved pit latrines are damaged or overloaded so that they leak and/or flow into open drains, water bodies or open ground rather than into soakpits or sewer lines"	Not contained
South Africa	General Household Survey	2016-2018	"During the past 6 months, have you experienced any of the following problems with regard to the toilet facility usually used by this household?" Responses: any of "Toilet blocked up" "Toilet pit or chamber full" "Toilet not enclosed well or structure damaged" "Toilet system overflowing in yard"	Not contained
Inspection				
France	Observatoire des services publics d'eau et d'assainissement	2013-2017	Annual inspections check to see if non-collective systems are in conformity with regulations, and don't present a danger to public health or the environment.	Contained
Japan	Septic Tank Inspection Results	2013-2019	Annual inspections using a checklist with over 120 items, classify systems as "appropriate", "mostly appropriate" and "inappropriate". "Inappropriate" systems are considered as not contained.	Contained
Ireland	Domestic Waste Water Treatment Systems National Inspection Plan	2014-2019	Annual inspection by public health inspectors check if on-site systems pose "risks to human health or the environment", with reference to relevant regulations.	Not contained
Administrative				
Austria, Latvia, Slovenia, Sweden	Eurostat	2013- 2018	Proportion of independent wastewater treatment plants with at least secondary treatment	Contained
Germany	Federal Statistics Office	2013, 2016	The sum of the population with no public sewerage system with small sewage treatment plant and 50% of the population with no public sewerage system with other decentralized disposal divided by the total population with no public sewerage system	Contained
Norway	Statistics Norway	2013-2019	The proportion of independent treatment plants which require emptying, which are classified as having "direct discharges".	Not contained

TABLE 2 Examples of different measurements of containment in on-site storage tanks and pits

Septic tanks and pit latrines are often not emptied, especially in rural areas



FIGURE 58 Proportion of septic tanks and improved latrines that have never been emptied (A) or have been emptied and waste removed off-site (B), in urban and rural areas, 2017-2020

In recent years new questions in household surveys have allowed many countries to collect nationally representative data on pit and tank emptying practices. Many survey respondents indicate that their pit latrine or septic tank has never been emptied; this is particularly common in rural areas (Figure 58A). Some survey respondents don't know if their on-site tanks have ever been emptied, especially in urban multi-unit dwellings and rental properties, where the survey respondents may not be responsible for emptying. Further work is needed to improve methodologies and tools for understanding emptying practices, and other aspects of safe management of on-site sanitation. Emptying and removal for off-site treatment is much more common for septic tanks and for urban areas (Figure 58B). Household survey respondents can't reliably indicate if faecal sludge is treated once it leaves the property; additional information is needed from administrative sources about the amount of faecal sludge that is collected and delivered to plants designed to treat faecal wastes. While such information may be available at the scale of individual municipalities, it is typically not aggregated at the national scale.

People in many SDG regions, in rural and urban areas, lack safely managed sanitation services



FIGURE 59 Population without safely managed sanitation services, by SDG region, 2020 (millions of people)

Note: Separate urban and rural estimates are not available for Northern Africa and Western Asia, or for Latin America and the Caribbean.

No nationally representative data are currently available about the proportion of faecal sludge that is actually treated after removal.

In the absence of information on off-site treatment of faecal sludge, in countries where sewer connections are more common than on-site sanitation facilities, the JMP assumes faecal sludge receives the same level of treatment as sewered wastewater; but in countries where

on-site sanitation is more prevalent, no estimate is made unless data are available on faecal sludge treatment. The 3.6 billion people lacking safely managed sanitation are spread around the globe, and nearly evenly divided between urban and rural areas (1.9 and 1.7 billion, respectively). Three SDG regions (Central and Southern Asia, Eastern and South-Eastern Asia, and sub-Saharan Africa) each account for roughly one billion people lacking safely managed sanitation (Figure 59).

Basic sanitation services

By 2020, 62 countries had achieved universal access (>99%) to at least basic sanitation services

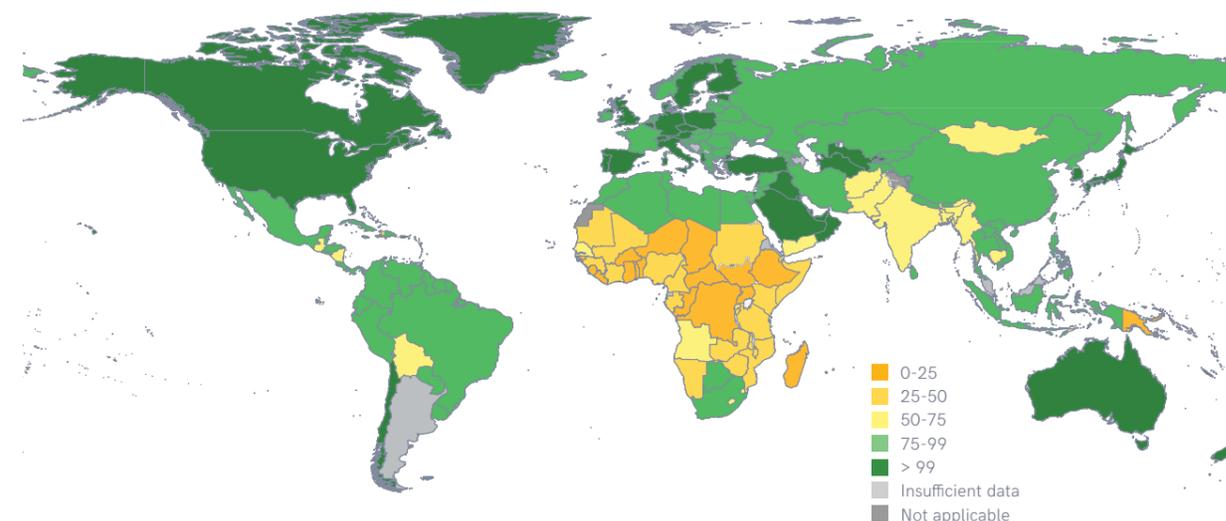


FIGURE 60 Population using at least basic sanitation services, 2020 (%)

In 2020 78% of the global population (6.1 billion people), had at least basic sanitation services. Two hundred and two countries had estimates for basic sanitation, including 62 countries that had already achieved universal (>99%) coverage (Figure 60). Since 2000, 2.7 billion people have gained access to basic sanitation, and the number of people lacking basic sanitation has decreased by one billion: from 2.7 billion in 2000 to 1.7 billion in 2020 (Figure 61).

Progress was most dramatic in Eastern and South-Eastern Asia, where the number of people lacking basic sanitation was cut by three quarters, and Central and Southern Asia where the number was cut in half. In sub-Saharan Africa and Oceania, the number of people lacking basic sanitation increased. In sub-Saharan Africa the proportion of the population with at least basic sanitation increased from 23% to 33% between 2000 and 2020, but the population grew by 73% over the same time period.

The number of people without basic sanitation services has decreased in all regions except for sub-Saharan Africa and Oceania

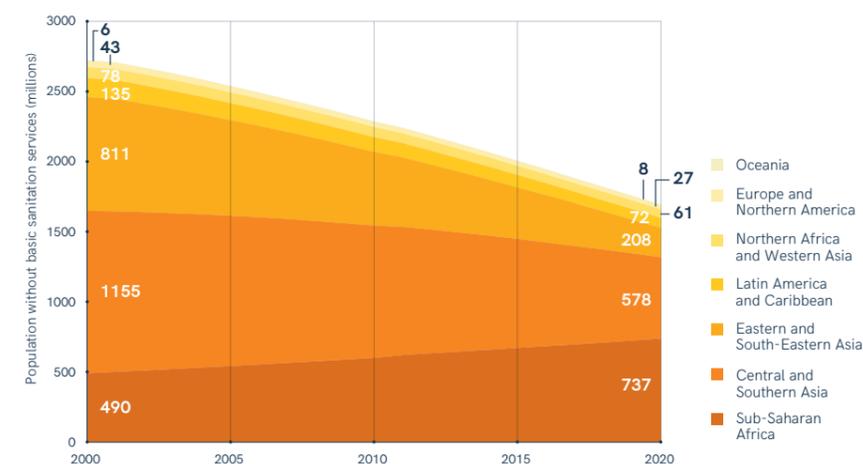


FIGURE 61 Population without basic sanitation services by SDG region, 2000-2020 (millions)



Achieving universal (>99%) coverage with at least basic sanitation services by 2030 would require doubling the historical rate of progress (1.13 percentage points per year [% pts/yr]). If historical rates of progress continue, the world will reach 90% coverage by 2030. Only the Eastern and South-Eastern Asia region (1.54 % pts/yr) is on track to achieve universal coverage by 2030 (Australia and New Zealand have already achieved universal coverage). 34 countries have seen consistent rates of progress in basic sanitation and have increased coverage by more than five % pts between 2015 and 2020 (Figure 62), including seven countries and territories where coverage has increased by at least ten % pts.

Considering historical rates of progress, only 21 of the 124 countries that haven't already achieved universal basic sanitation in urban areas are on track to do so by 2030; the situation is similar in rural areas (23 out of 131 countries on track) where coverage is lower but rates of progress are faster (1.13 % pts/yr in rural areas, compared with 0.43 % pts/yr in urban areas) (Figure 63). Cambodia, Lao People's Democratic Republic, Nepal, Tunisia and Viet Nam are notable as lower-middle-income countries that are on track for universal coverage in urban or rural areas. In a number of countries, in all income ranges, rural or more commonly urban coverage is actually decreasing.

In 34 countries, at least basic sanitation increased by at least five percentage points between 2015 and 2020

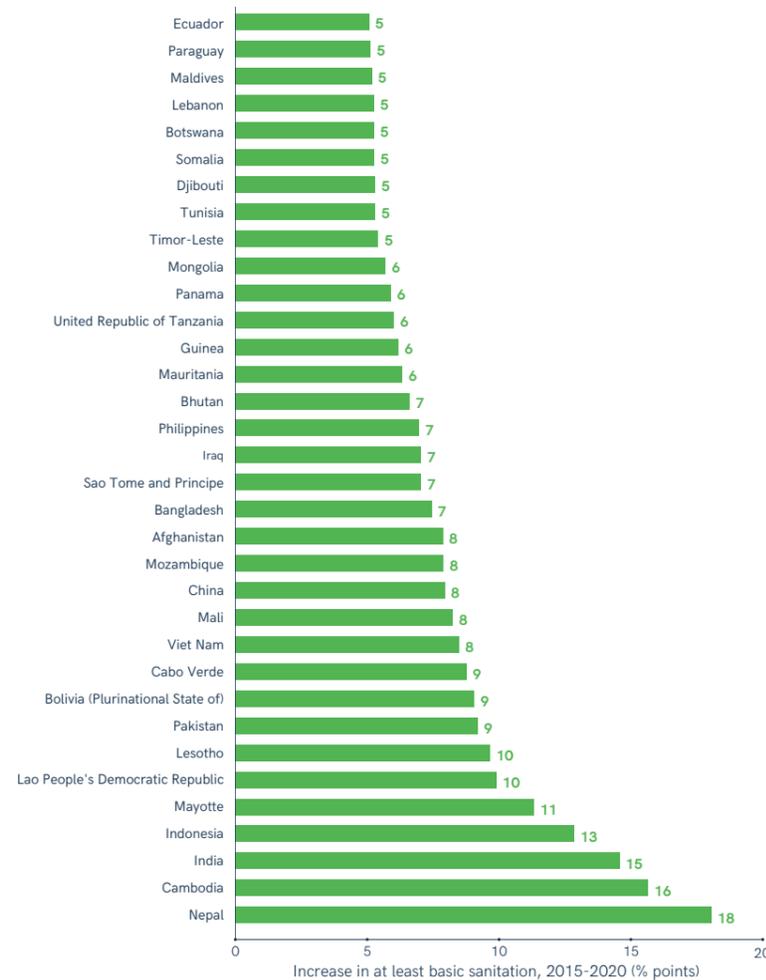


FIGURE 62 Countries with the greatest progress in increasing at least basic sanitation, 2015-2020

Coverage of at least basic sanitation is higher in urban, but progress is faster in rural areas

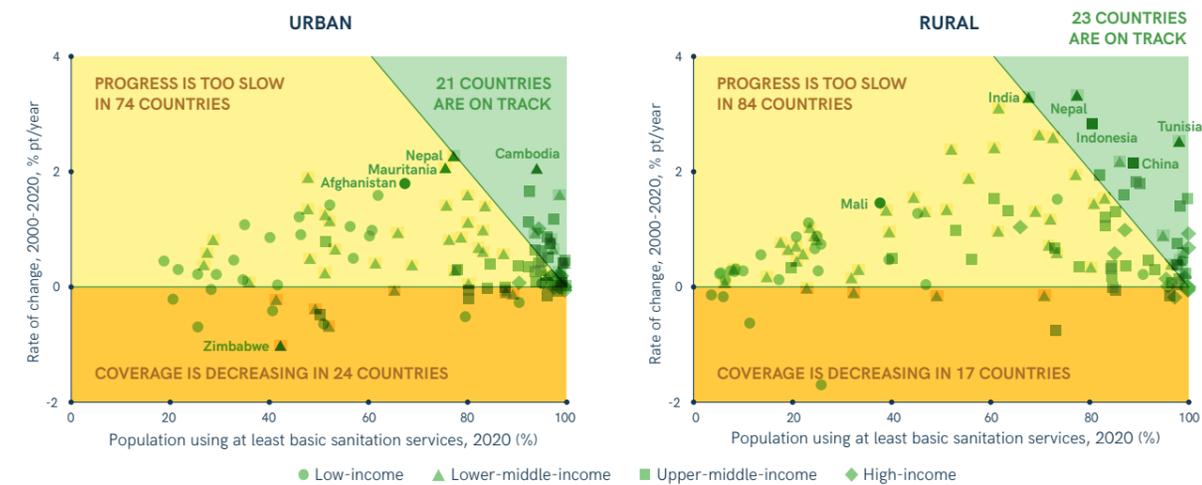


FIGURE 63 Progress in at least basic sanitation services, 2000-2020, among countries with <99% coverage in 2020 in urban (n=119) and rural (n=124) areas.

Note: figure does not include countries that have estimates for 2020 but not for 2000: 5 for urban and 7 for rural settings.

Leaving no one behind

Basic sanitation coverage can vary widely by sub-national region within a country (Figure 64). In some countries (Honduras, Panama, Suriname), a few regions lag behind most, while in others (India,

Mozambique, Yemen), a few regions approach universal coverage while many have much lower coverage. In 15 countries, the gap between the highest and lowest regions was more than 50 % pts, and in Panama

and Yemen, the inter-regional gap was bigger than 80 % pts. Eswatini, Jamaica and Papua New Guinea all had relatively low inter-regional gaps (less than 10 % pts) even though the coverage in the highest region was below 90%.

Coverage of at least basic sanitation services varies widely between sub-national regions

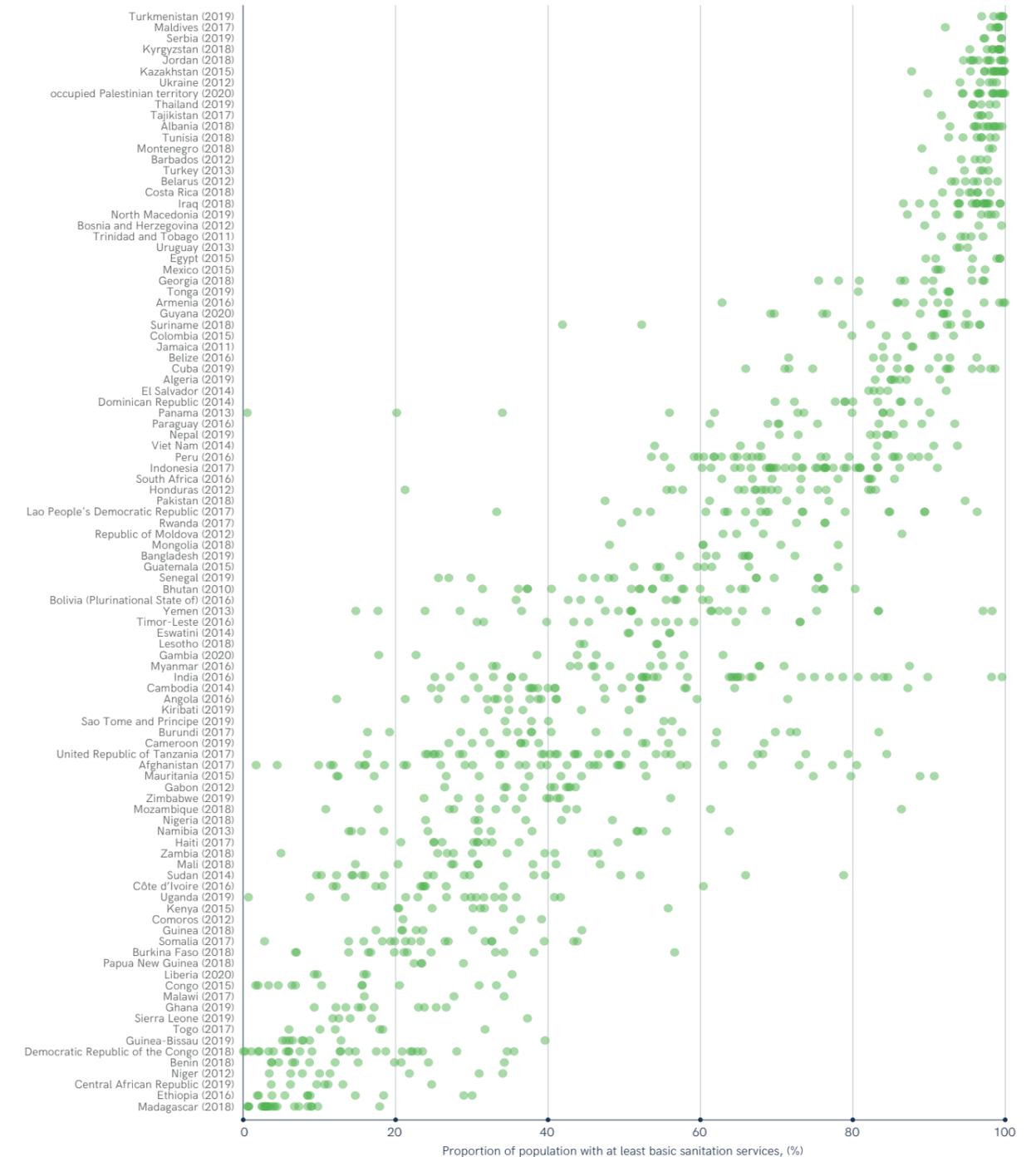


FIGURE 64 Inequalities in the proportion of the population with at least basic sanitation services, by sub-national region 2010-2020 (%)



Wealth inequalities in at least basic sanitation are most pronounced in rural areas and at the national level

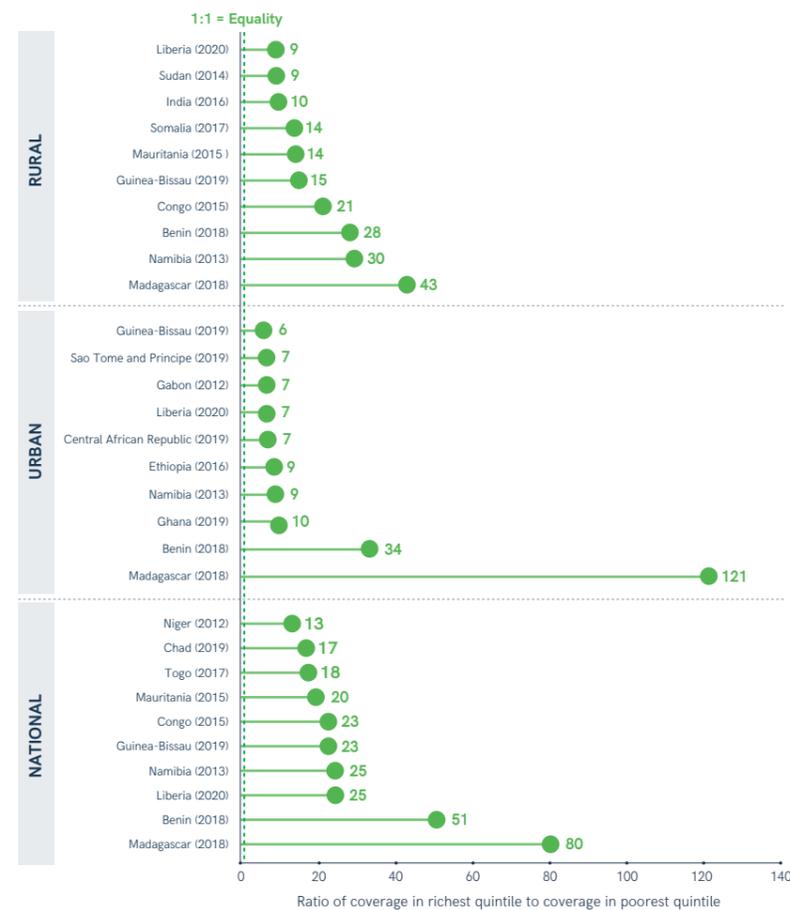


FIGURE 65 Wealth inequality ratios for at least basic sanitation services, selected countries, 2012-2020

If gaps between groups are **absolute** measures of inequalities, ratios between groups are **relative** measures. Figure 65 shows the ratio of basic sanitation coverage in the wealthiest quintile (20% of the population) compared with the poorest quintile. If coverage were the same in the two groups, the ratio would be one, shown by the dotted green line. These 'wealth inequality ratios' tend to be highest for the country as a whole since these ratios compare the wealthiest 20% (often living in urban areas) with the poorest 20% (often living in rural areas). Wealth inequality ratios are highest where the poorest have very low coverage, such as in Benin and Madagascar, where less than 2% of the poorest people in both urban and rural areas have basic sanitation. In urban areas of Madagascar, 45% of the richest but only 0.4% of the poorest people have at least basic sanitation services.

Among the 1.7 billion people without basic sanitation services in 2020, nearly a third (494 million) used no form of toilet and practised open defecation. In 55 countries at least 5% of the population still practised open defecation. Open defecation is most widespread in sub-Saharan Africa, but is also high in Central and

Southern Asia as well as Oceania (Figure 66). There is wide variability within sub-Saharan Africa: from Gambia, Mayotte, Réunion, Saint Helena, Seychelles and South Africa that have eliminated (<1%) open defecation to South Sudan, Chad and Niger where more than 60% of the population practised open defecation

in 2020. Within Madagascar, in 2018 there was a 30 point gap between urban and rural areas, and 62 points separated the richest and poorest quintiles. In Ihorombe region, 85% practised open defecation while in Analamanga region, containing the capital Antananarivo, only 5% did (Figure 67).

In 55 countries, more than 5% of the population practised open defecation in 2020

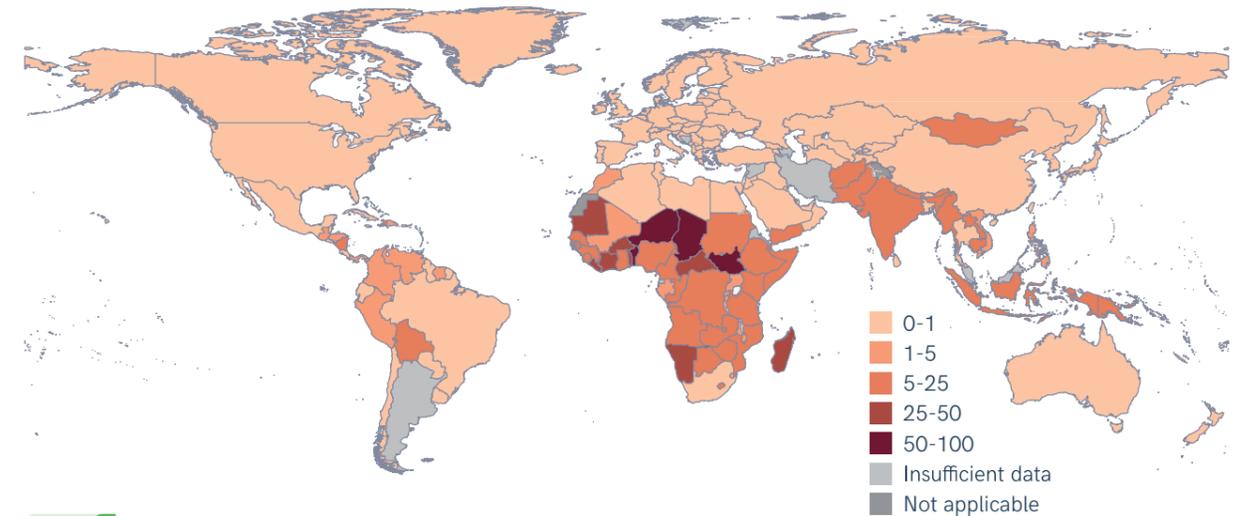


FIGURE 66 Population practising open defecation, 2020 (%)

Open defecation varies widely between and within countries in sub-Saharan Africa



FIGURE 67 Inequalities in open defecation in Madagascar and sub-Saharan Africa, 2020 (%)

Note: Wealth quintiles and sub-national inequalities from the Madagascar 2018 MICS.

Assuming current rates of progress continue, the world and most SDG regions are on track to eliminate open defecation before 2030 (Figure 68). However, progress is slow in sub-Saharan Africa, and open defecation is increasing in Oceania. Within Oceania, Papua New Guinea is by far the country where open defecation is the most prevalent (practised by 1.4 million people, or 16% of the population), but the practice is also common in Kiribati (30%) and the Solomon Islands (45%). Eliminating open defecation in LDCs by 2030 will require a 2x acceleration in current rates of progress and will be especially challenging in fragile contexts where open defecation rates have decreased by just 3 % pts, from 16% in 2015 to 13% in 2020.

Globally, open defecation has been decreasing at an average rate of 0.76 percentage points per year (% pts/yr), but in a number of countries progress has been faster. In 17 countries, the rate is more than one % pt/year, and in five countries open defecation has been reduced by more than ten % pts in the last five years (Figure 69).

India is responsible for the largest drop in open defecation since 2015, in terms of absolute numbers. Within India, open defecation has been highly variable regionally since at least 2006, when the third round of the National Family Health Survey found open defecation to be practised by less than 10% of the population in four states and the Union Territory of Delhi, but by more than half the population in 11 states. By 2016, when the fourth National Family Health Survey was conducted, open defecation had decreased in all states, with the largest drops seen in Himachal Pradesh and Haryana (Figure 70). Open defecation at the national scale dropped by 16 % pts over these ten years. A comparison of Figures 69 and Figure 70 suggests that the pace of reduction picked up after 2016, with open defecation dropping by 14 % pts over only five years.

The world is now on track to eliminate open defecation by 2030

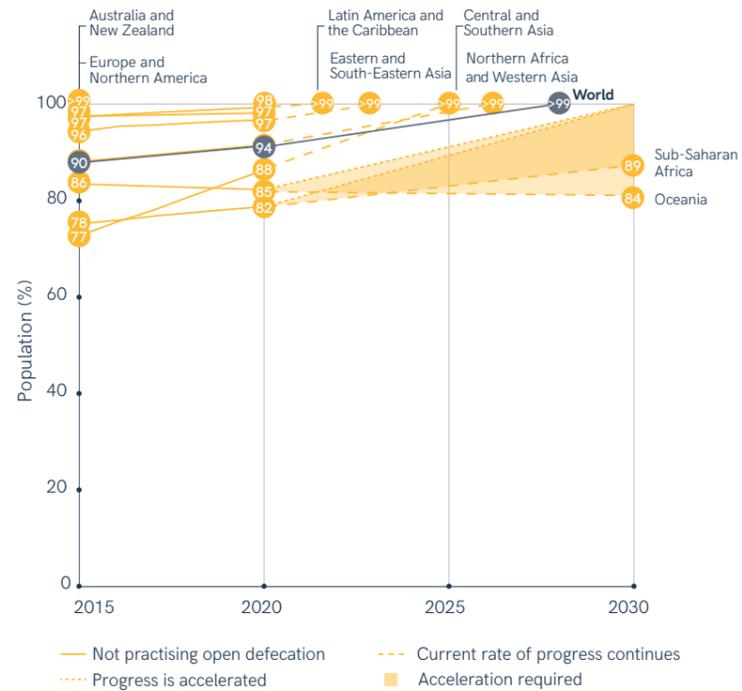


FIGURE 68 Progress in eliminating open defecation, 2015-2020, and acceleration required to reach universal coverage by 2030

In 17 countries, open defecation decreased by more than five percentage points between 2015 and 2020

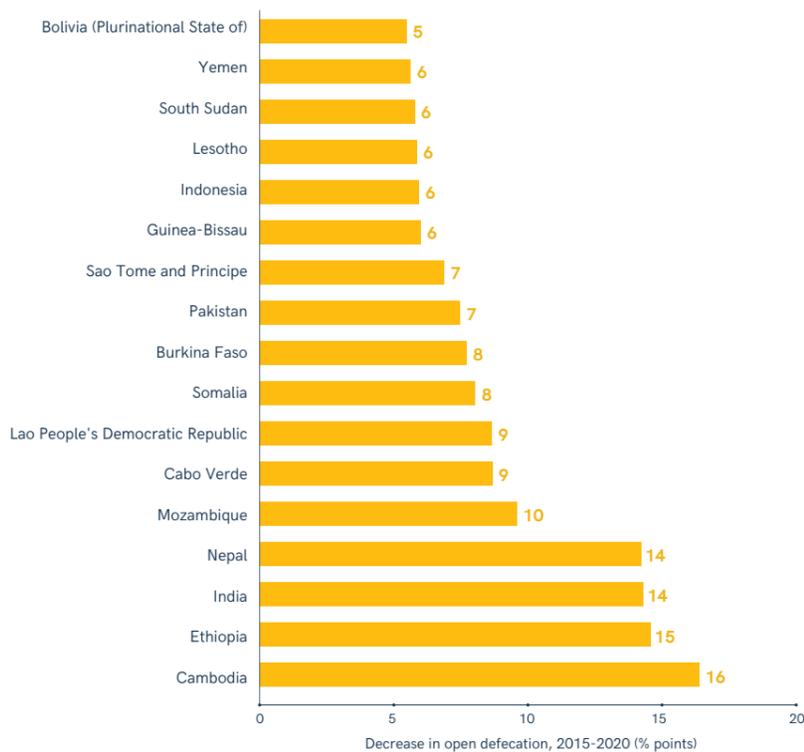


FIGURE 69 Countries with the greatest progress in reducing open defecation between 2015 and 2020



Open defecation has markedly decreased across all states in India

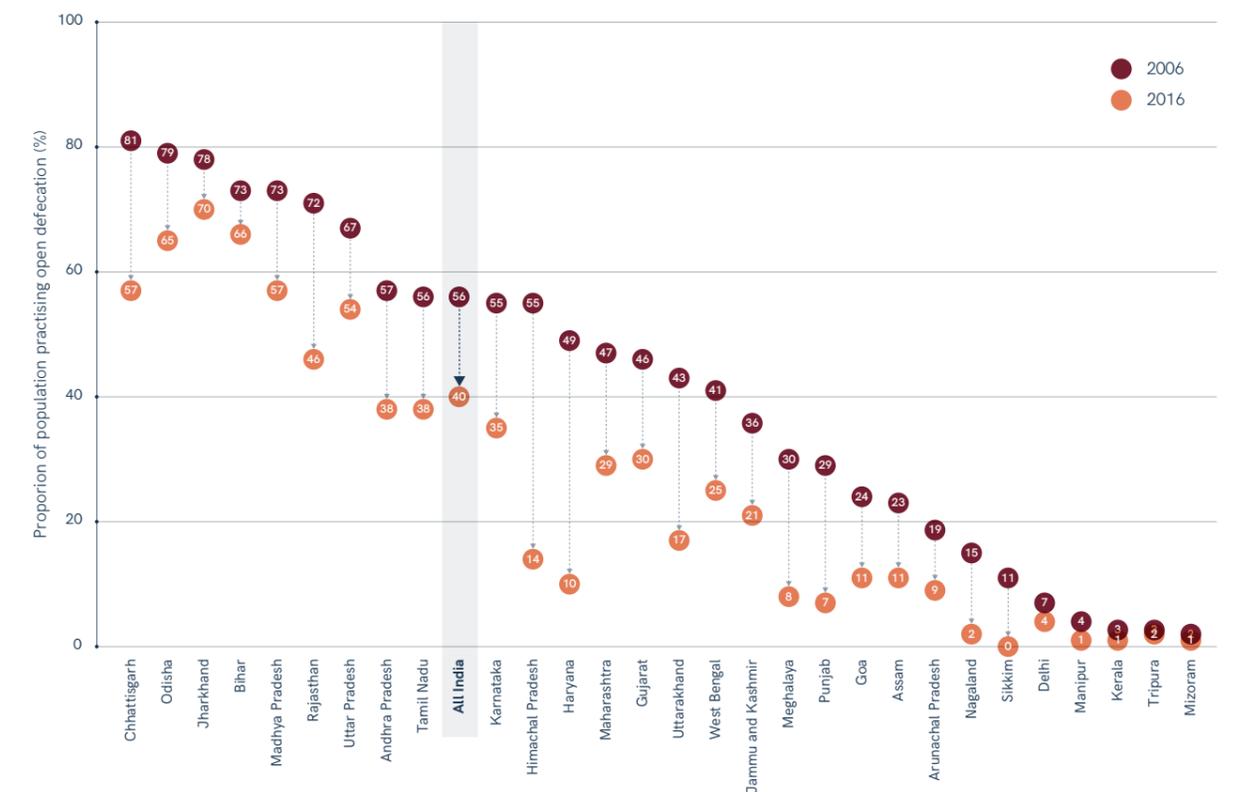


FIGURE 70 Reducing open defecation in India, by state, 2006-2016.

Source: NFHS 2006, 2016

Data coverage and progression

Most countries have data on open defecation and basic sanitation. Estimates are available for countries totaling more than 98% of the population of each SDG region, except for Latin America and the Caribbean, where the number of countries with data on basic sanitation has dropped steadily over the last three SDG reports, from 46 in 2017 to only 35 in 2021 (Figure 71). Several countries and territories have lost estimates because they rely on decennial censuses and the most recent census is too old to use for 2020 estimates. The country with the largest population that has lost estimates is Argentina, where the most recent data source is the 2010 housing and population census. While countries and territories

in most SDG regions have lost estimates due to aging data, in most regions, the countries and territories have small populations and don't appreciably impact regional estimates.

In contrast, data coverage for safely managed sanitation services has steadily increased, and in this third SDG report, data are available for 120 countries representing 81% of the global population. Only Oceania lacks a regional estimate, because data are not available from Papua New Guinea, which represents nearly three quarters of the regional population. The increase in data coverage has come mainly in low- and middle-income countries where on-site sanitation is widespread,

and new questions included in household surveys have collected data on pit-emptying practices. Data coverage is high for safely managed sewer wastewater (91% of the global population with sewer connections) and for safely managed and disposed of in situ (69% of the rural population with on-site sanitation) and 59% of the urban population with on-site sanitation). Data on the off-site treatment of faecal sludge from emptied pit latrines and septic tanks remains scarce, with only seven countries²⁷, representing 1% of the global population with on-site sanitation having data coverage at the national level.

²⁷ Finland, Iceland, Japan, Lithuania, Norway, Poland, and Republic of Korea



Data coverage for safely managed sanitation has increased in seven out of eight regions but is lowest in Oceania



FIGURE 71 Data progression: safely managed sanitation services, at least basic sanitation services and open defecation in 2017, 2019, and 2021 progress reports



04

Hygiene services

In 2020 the COVID-19 pandemic thrust the issue of hand hygiene into prominence like never before. WHO called on countries to provide universal access to public hand hygiene stations and make their use obligatory on entering and leaving public and private commercial buildings as well as public transport facilities. In June 2020, WHO and UNICEF jointly launched the "Hand Hygiene For All" initiative, which aims to improve access to handwashing infrastructure, but also to stimulate changes in handwashing practices where facilities are available. Although it is now recognized the principal mode by which people are infected with SARS-CoV-2 is through exposure to respiratory droplets carrying infectious virus, hand hygiene remains central to the COVID-19 response and is known to be an effective measure to control many other infectious diseases. Accelerating progress towards "adequate and equitable hygiene for all" as called for in SDG target 6.2 is a no-regrets investment that leaves the world better prepared to manage future disease outbreaks and pandemics.



Progress towards the SDG target on hygiene is monitored through indicator 6.2.1b, 'the proportion of the population with handwashing facilities with soap and water at home'. Household surveys increasingly include a handwashing module that involves direct observation of handwashing facilities. Enumerators ask to see the place where household members most often wash their hands and then record the type of facility used and whether water and soap were available at the time of the survey. Data on drinking water and sanitation services have been routinely collected for many years, but collecting data on handwashing has only recently become standardized: both the Multiple Indicator Cluster Surveys (MICS) and Demographic and Health Surveys (DHS) added handwashing questions to their standard questionnaires in 2009. Accordingly, while drinking water and sanitation estimates can be produced from 2000 through 2020, hygiene trends in this report are reported only from 2015 through 2020.

The SDG service ladder for hygiene (Figure 72) defines a 'basic hygiene service' as a having a facility at home for washing hands that has both soap and water available. Households that have a handwashing facility but lack water and/or soap are classified as having 'limited hygiene services'. In some settings, ash, soil, sand, or other materials are used as handwashing agents, but these are less effective than soap and are therefore also counted as a limited service.

Since 2015 the population with access to basic hygiene services has increased by over 500 million, from 5.0 billion (67%) to 5.5 billion (71%) (Figure 73). In 2020 2.3 billion people still lacked basic hygiene, including 670 million with no handwashing facility at all. The global estimate of 71% basic hygiene in this report is higher than initial baseline estimates for the year 2017. This is because a number of countries have collected new data showing higher coverage than in previous surveys. In 13 countries the new estimates for 2020 are at least 10 percentage points higher than the 2017 baseline estimates from the previous JMP report; in Bangladesh, Cameroon, Indonesia and Pakistan (all large countries) the new estimates are more than 20 percentage points higher. Many countries still have relatively few data points - on average only two - and more data is needed for the estimates to stabilize. JMP rules allow for extrapolation of estimates for up to two years and extension for a further four years beyond the last data point. If only one data point is available estimates can be produced for four years after the data point. As such 2020 estimates are only available for countries with two surveys available from 2014 onwards, or one survey from 2016 onwards.

SERVICE LEVEL	DEFINITION
BASIC	Availability of a handwashing facility with soap and water at home
LIMITED	Availability of a handwashing facility lacking soap and/or water at home
NO SERVICE	No handwashing facility at home

FIGURE 72 SDG service ladder for hygiene

Note: Handwashing facilities may be located within the dwelling, yard or plot. They may be fixed or mobile and include a sink 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.

Between 2015 and 2020, half a billion people have gained access to basic hygiene services

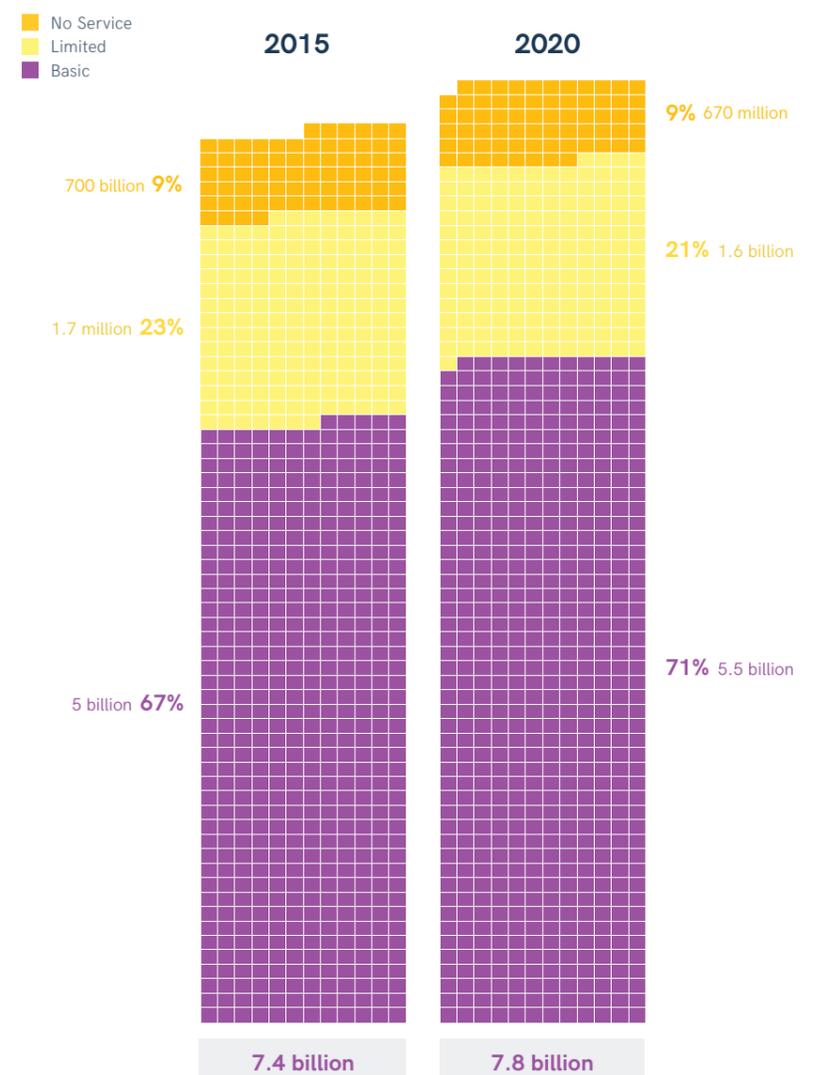


FIGURE 73 Global population with different levels of hygiene service in 2015 and 2020 (each unit represents 10 million people)

Basic hygiene services

In 2020, estimates for basic hygiene coverage were available for 79 countries (Figure 74), ranging from 5% in Rwanda to >99% in Kyrgyzstan, Montenegro, North Macedonia,

and Turkmenistan. Data were most commonly available in sub-Saharan Africa (33 countries) and rarely available for regions with higher incomes. No data on basic hygiene

were available for Australia and New Zealand, and only two countries (both upper-middle income) in Europe and Northern America had estimates.

Coverage of basic hygiene services varied widely between countries in 2020

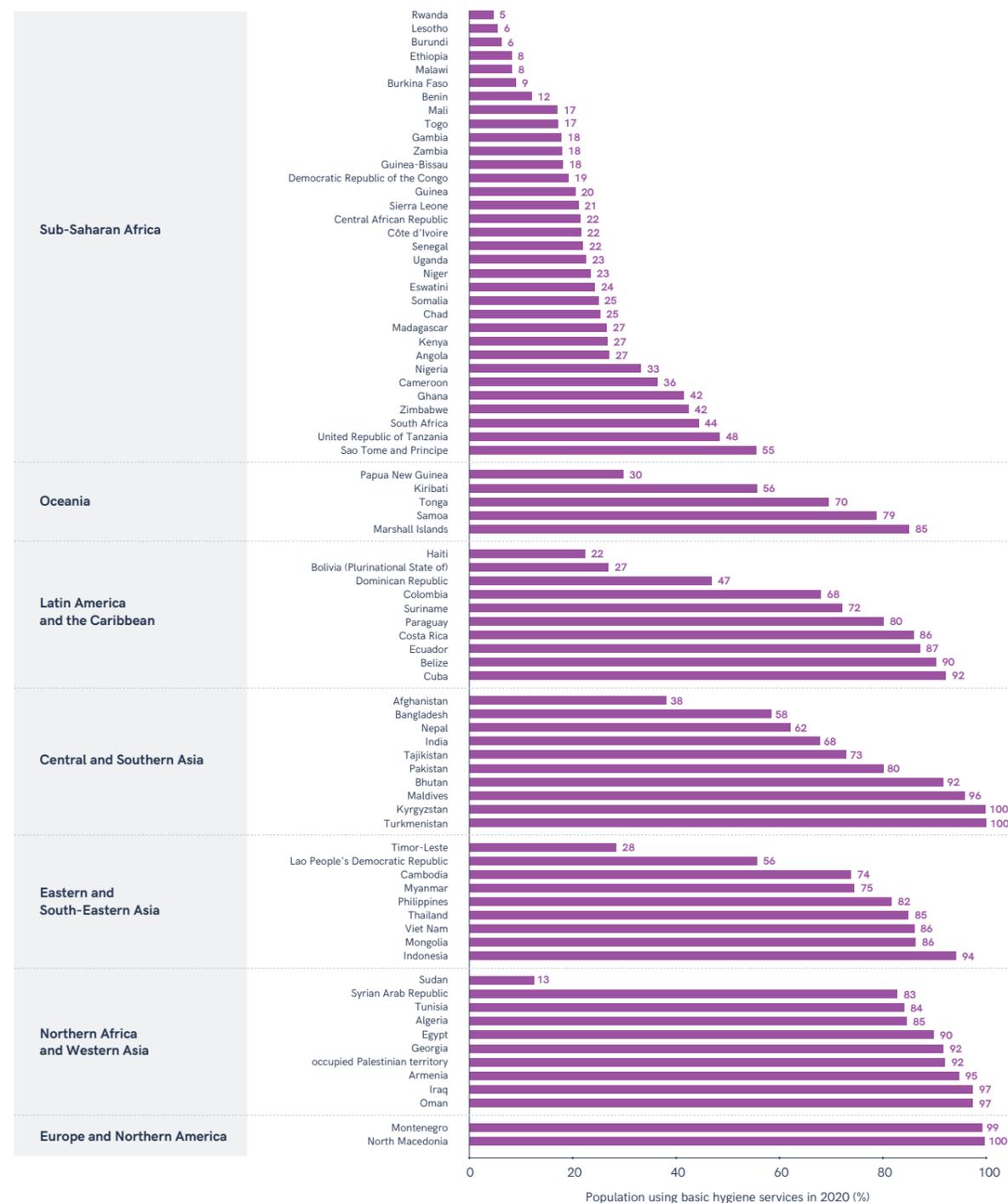


FIGURE 74 Proportion of population with basic hygiene services in 2020 by country (%)



Although most countries have relatively few data, for the first time, there were enough to produce trends for basic hygiene at the global level and for four of the SDG regions where data were available for at least 50% of the population. If current rates of progress continue, the world will reach 78% coverage with basic hygiene in 2030, leaving 1.9 billion people without basic hygiene (Figure 75). Northern Africa and Western Asia would reach universal (>99%) coverage between 2025 and 2030, while available data suggest that there has been relatively little progress in Oceania and sub-Saharan Africa over the first five years of the SDG period. In fragile contexts, at current rates of progress basic hygiene coverage would only reach 58% by 2030. However, until more data points become available these rates of progress should be taken with caution²⁸.

²⁸ In 2020, national estimates were only available for five countries in Oceania and in all cases these were based on a single data point.

One out of four regions is on track to achieve universal (>99%) access to basic hygiene services by 2030

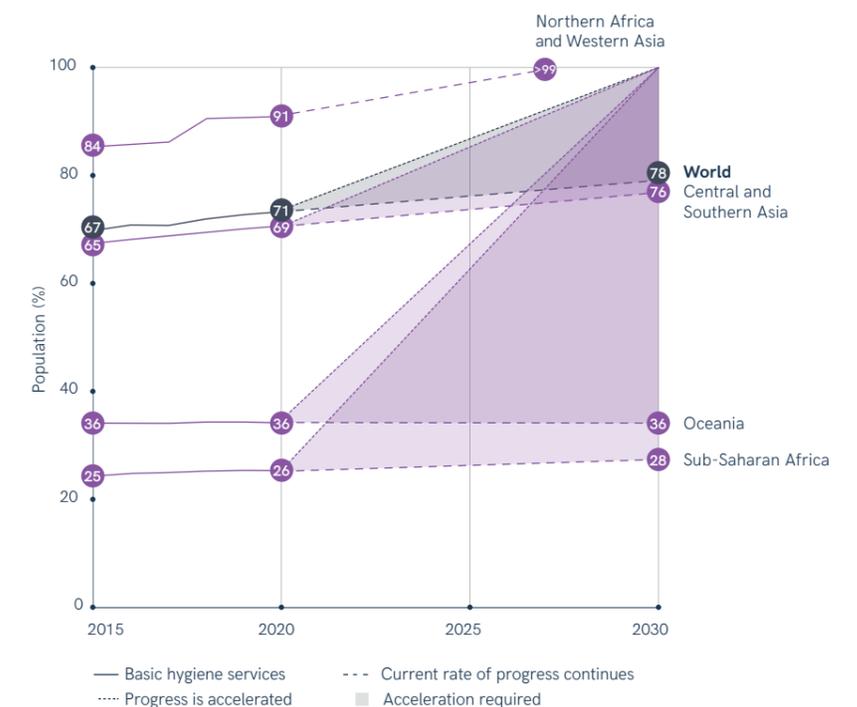


FIGURE 75 Progress in basic hygiene services 2015-2020 (%), and acceleration required to reach universal coverage by 2030

Coverage of basic handwashing facilities is higher in urban than rural but many regions still lack data



FIGURE 76 Urban and rural hygiene coverage by SDG region, 2015 and 2020 (%)

*Insufficient data to estimate hygiene services in 2020

Most of the data sources for hygiene are household surveys which routinely disaggregate data into urban and rural areas. While coverage in urban areas is generally higher than in rural areas, rates of progress tend to be higher in rural areas (Figure 76). Some surveys cover only rural areas (e.g. Perú's Encuesta Nacional de Programas Estratégico). For this reason in Northern Africa and Western Asia, Latin America and the Caribbean, and at the global level there are not enough data to produce urban estimates. Likewise, some countries have only one older data source, so estimates are available for 2015 but not 2020.

Among the 35 countries with multiple data points, 13 have increased basic hygiene by more than five % pts between 2015 and 2020, and five countries have increased coverage by more than ten % pts (Figure 77).

Since 2015, 13 countries have increased basic hygiene by at least 5 percentage points

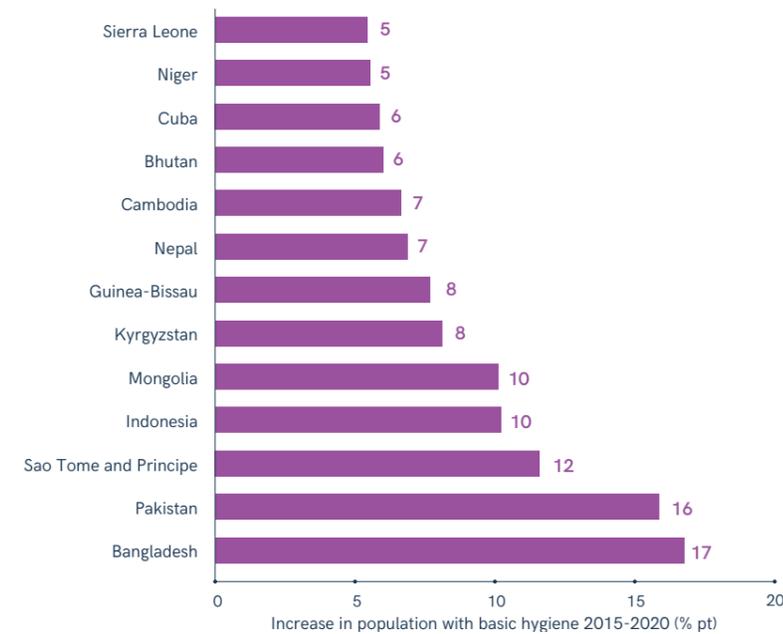


FIGURE 77 Percentage point increase in proportion of population with basic hygiene services, 2015-2020 (% pt)

Only six of the 33 countries (three upper-middle-income and three lower-middle-income) that had yet to achieve universal (>99%) coverage by 2020 were on track to achieve universal coverage by 2030 (Figure 78).

In recent years, household surveys have refined the questions asked about handwashing facilities to include separate response categories for different types of handwashing facilities, including both fixed devices like sinks and taps, and mobile devices like jugs and portable basins. These surveys, which have been used since 2016, have shown that mobile devices are widely used in sub-Saharan Africa (Figure 79). Older surveys that don't include responses for mobile devices (shown in light purple) may significantly underestimate the population with access to handwashing facilities. This may account for the very low figures seen for Liberia (2013) and Rwanda (2015), and other countries

6 out of 33 countries with trend data are on track to achieve universal (>99%) basic hygiene by 2030

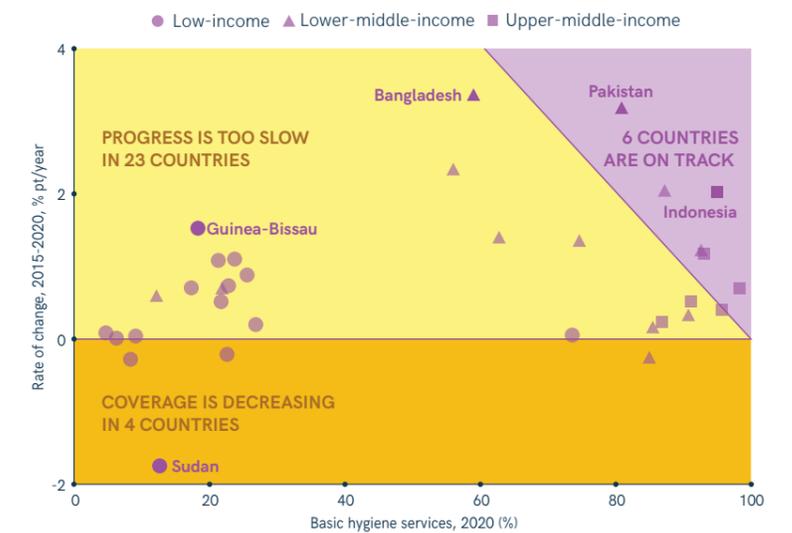


FIGURE 78 Progress towards universal basic hygiene 2015-2020 among countries with <99% coverage in 2020, by income.

Notes: Includes 33 countries with at least 1% lacking access to basic hygiene services in 2020. Does not include 2 countries that already had >99% access to basic hygiene services in 2020.

where the newer questions haven't yet been used. When new surveys become available with information

on both fixed and mobile devices the JMP uses these to update national estimates.

Many people in sub-Saharan Africa use mobile devices for handwashing

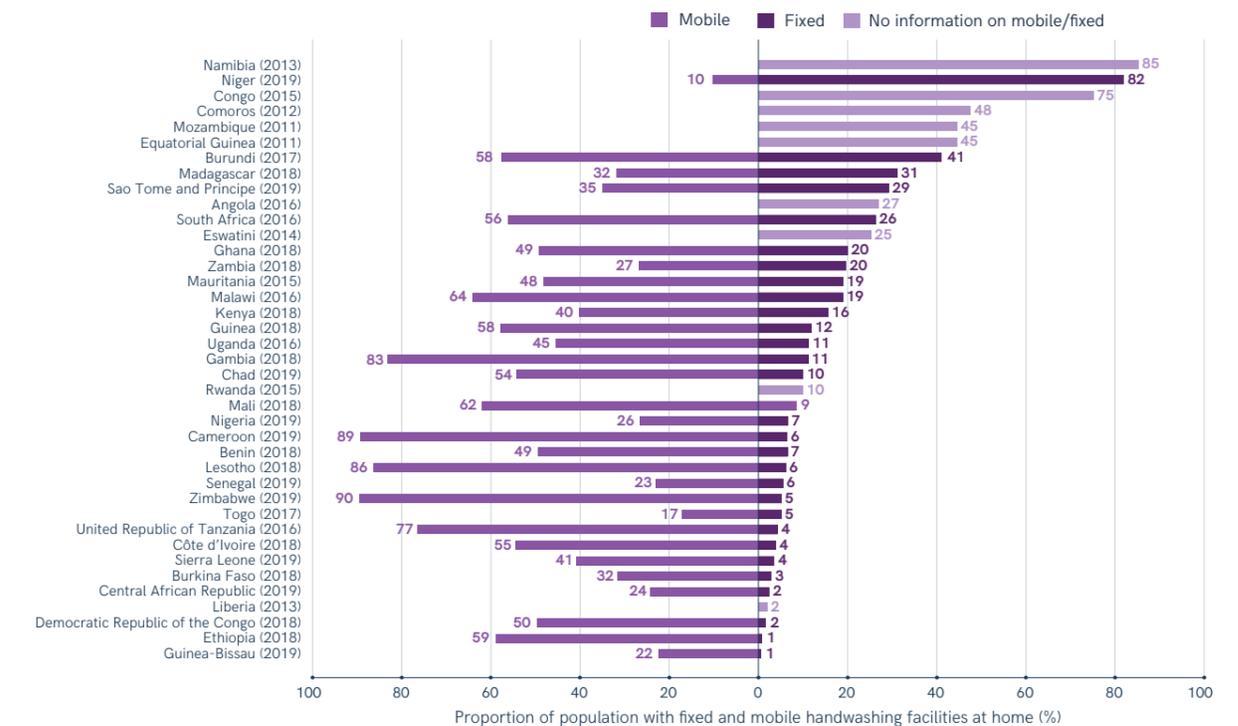


FIGURE 79 Population using fixed and mobile handwashing facilities, selected surveys in sub-Saharan Africa (2011-2019)

People living in households with handwashing facilities that lack water and/or soap are classified as having a limited hygiene service. In many countries, people with limited hygiene services in rural areas either lack water, or lack both water and soap; it is less common to have soap but lack water (Figure 80). There are exceptions: the 2010 MICS in the Democratic Republic of Congo found that 7% of facilities had water only while 26% had soap without water. But of the 73 surveys with data on both water and soap, in only ten cases was having soap without water more likely than having water without soap. In 25 surveys less than half of facilities had both soap and water.

In some countries, households without drinking water on premises still have water for domestic use and soap at household handwashing facilities (Figure 81). For example, in Mongolia 86% of the population in 2020 had basic hygiene services, although only 30% of the population had improved water on premises (85% did have a basic drinking water service – improved water within 30 minutes – and 74% had water available when needed). In other countries, households with drinking water accessible on premises still lack basic hygiene services. In the Plurinational State of Bolivia, where 86% of the population have improved water on premises, only 27% have basic hygiene; availability of soap is the limiting factor.



Handwashing facilities in rural areas are more likely to lack soap than to lack water

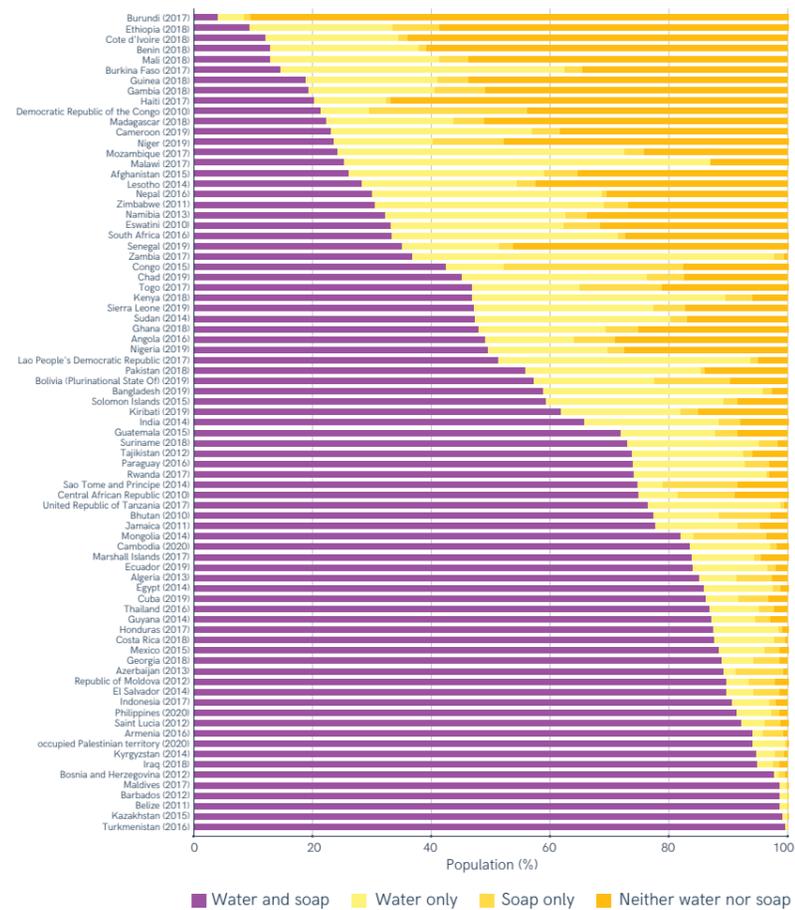


FIGURE 80 Proportion of handwashing facilities in rural areas with water and/or soap, selected surveys 2010–2020.

Populations with drinking water accessible on premises do not always have basic hygiene services

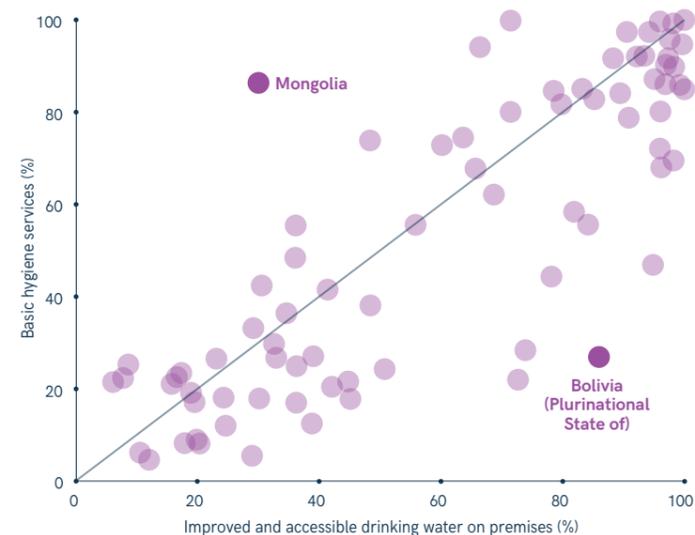


FIGURE 81 Population with basic hygiene services, and with improved drinking water sources accessible on premises by country in 2020 (%)

Leaving no one behind

Access to basic hygiene services varies widely within regions and within countries. Among the SDG regions accessed ranged from 26% in sub-Saharan Africa to 91% in Northern Africa and Western Asia (Figure 82). There weren't enough countries with data in Latin America and the Caribbean to make a regional estimate, due to data gaps in large countries like Brazil and Mexico. Still, country estimates ranged from 22% in Haiti to 92% in Cuba. Within most regions of Haiti, about 20% of people have basic hygiene services, except for Aire Métropolitaine, which includes the capital Port-au-Prince, at 32%, and the landlocked Department of Centre where access is only 14% (Figure 82).



Disaggregated data reveal disparities in basic hygiene between and within countries



FIGURE 82 Population with basic hygiene services disaggregated by SDG region, country, urban-rural, sub-national region and wealth quintiles in Haiti (%)
 Note: Sub-national and wealth quintiles data are extracted from the Haiti 2017 DHS. Other data are JMP 2021 estimates for drinking water.

Household surveys allow disaggregation into different population groups, revealing inequalities that aren't visible with national statistics. Access to basic hygiene services is more common in urban than rural areas; of the 76 countries with data for both urban and rural areas, only Bhutan and Gambia have higher basic hygiene in rural areas (Figure 83). In 16

countries, the urban-rural gap is more than 20 % pts; in Colombia it is 45 pts. The gaps in access between different sub-national regions within one country can be even more pronounced. Among 75 surveys with sub-national data on basic hygiene, in 12 cases the coverage gap between the highest and lowest regions is more than 50 % pts (Figure 84). These gaps can be especially pronounced in

countries with a large number of sub-national regions; for example, the 2016 survey for India included data for 35 States and union territories, with access to handwashing facilities ranging from 96% in Sikkim to 29% in Odisha. See Annex 7 for the complete list of surveys with subnational inequalities, and the highest and lowest levels of coverage.

Basic hygiene services are usually higher in urban than in rural areas

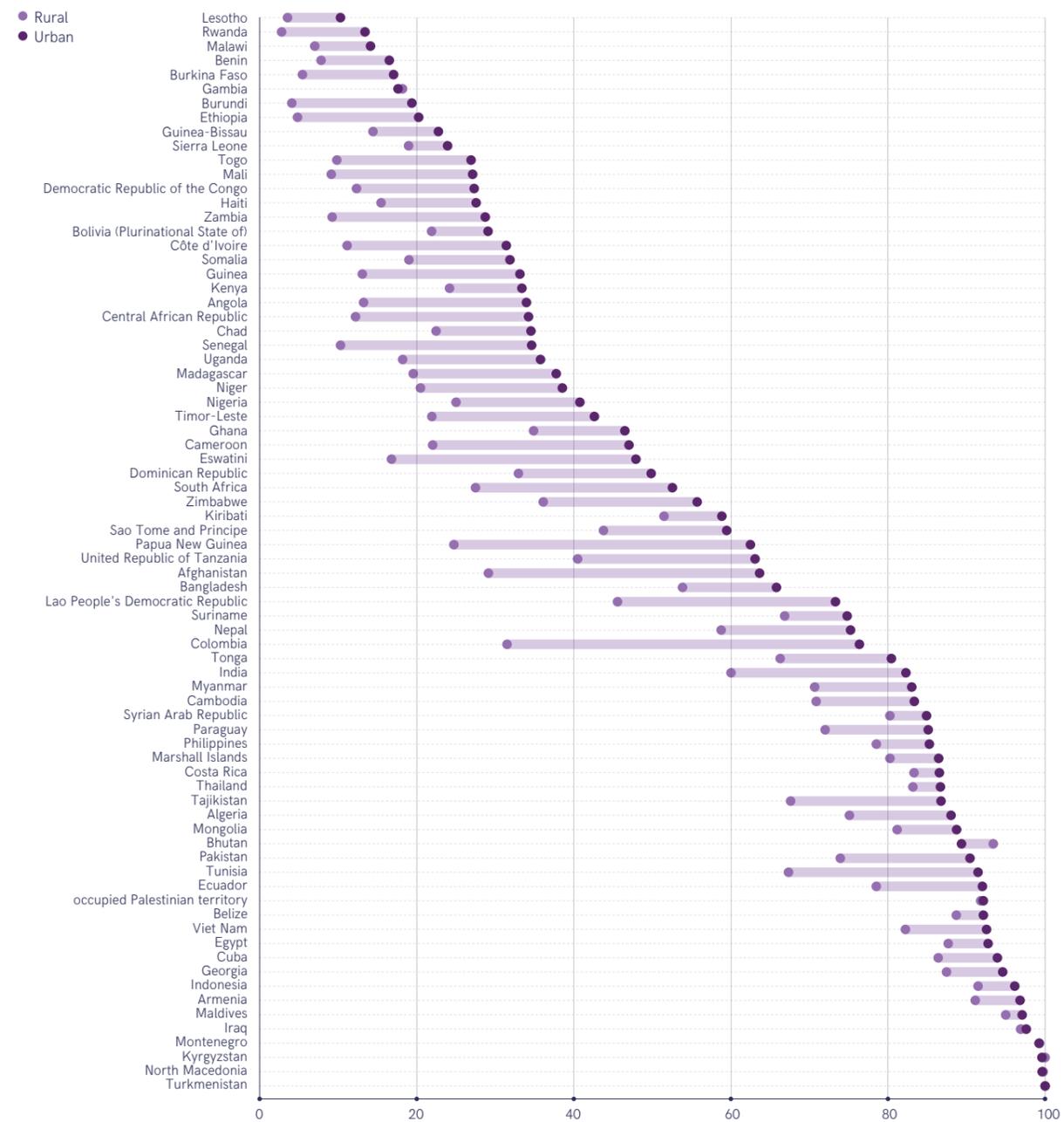


FIGURE 83 Population with basic hygiene services in urban and rural by country in 2020 (%)

Figure 83 and Figure 84 show absolute measures of inequality, as gaps between the groups with the highest and lowest basic hygiene services. Figure 85 shows a relative measure of inequality, the ratio between basic hygiene between the richest and poorest wealth quintiles.

In some cases, inequality ratios can be very high even if absolute gaps are not very large. For example, in urban Liberia in 2020, the richest were 32 times as likely to have access to basic handwashing as the poorest, because even though coverage was fairly low among the richest (17%) it was

exceedingly rare among the poorest (0.5%). In other cases, high inequality ratios reflect large gaps in absolute access, such as urban Burundi where in 2017, the richest (62%) were 30 times as likely to have access as the poorest (2%). In this case both relative and absolute inequalities are large.

In some countries there were large disparities in coverage of basic handwashing facilities between sub-national regions in 2020

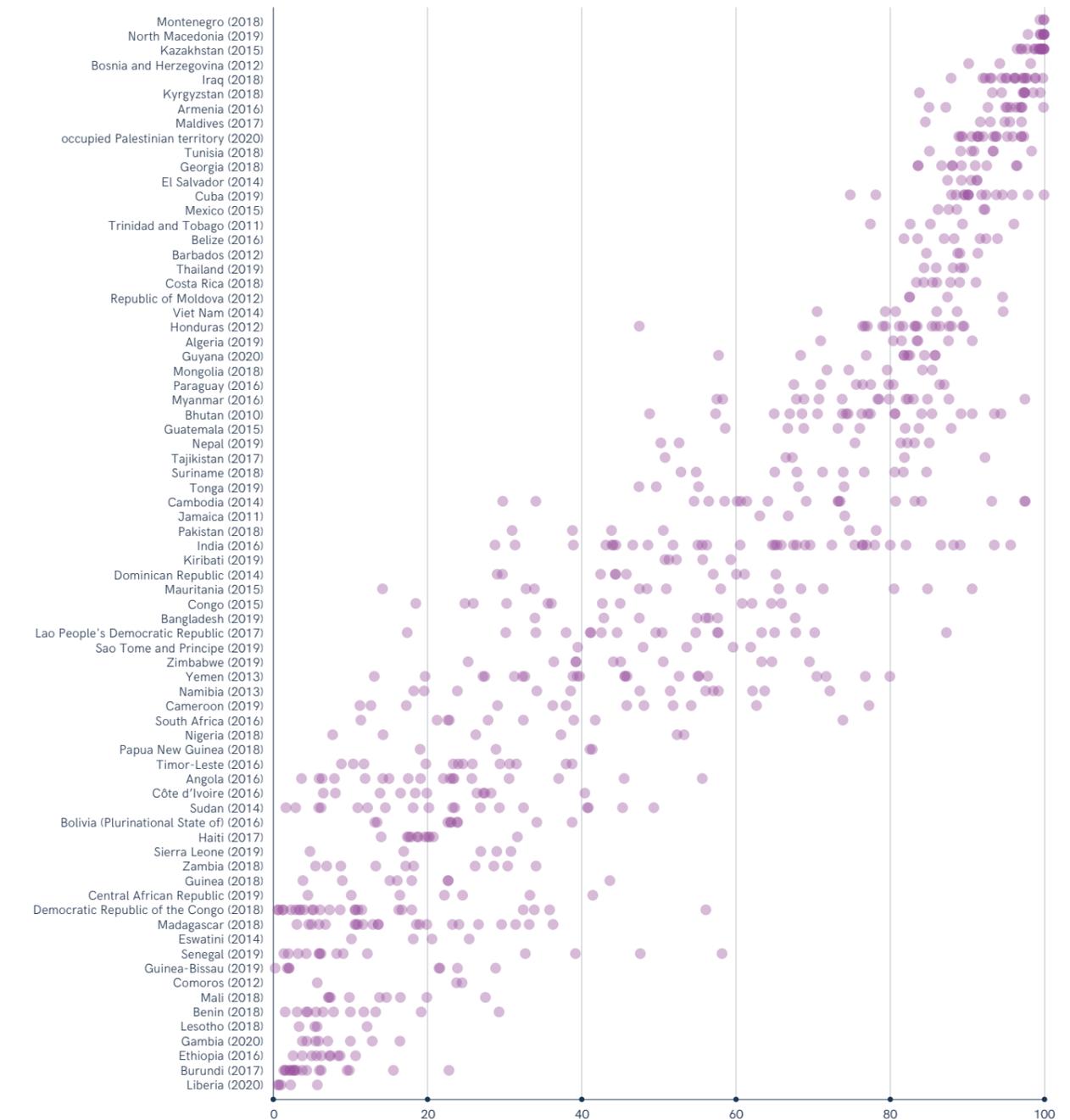


FIGURE 84 Population with basic hygiene services, by sub-national region, 2011-2020 (%)

The ratio of richest to poorest highlights significant inequalities in basic hygiene coverage

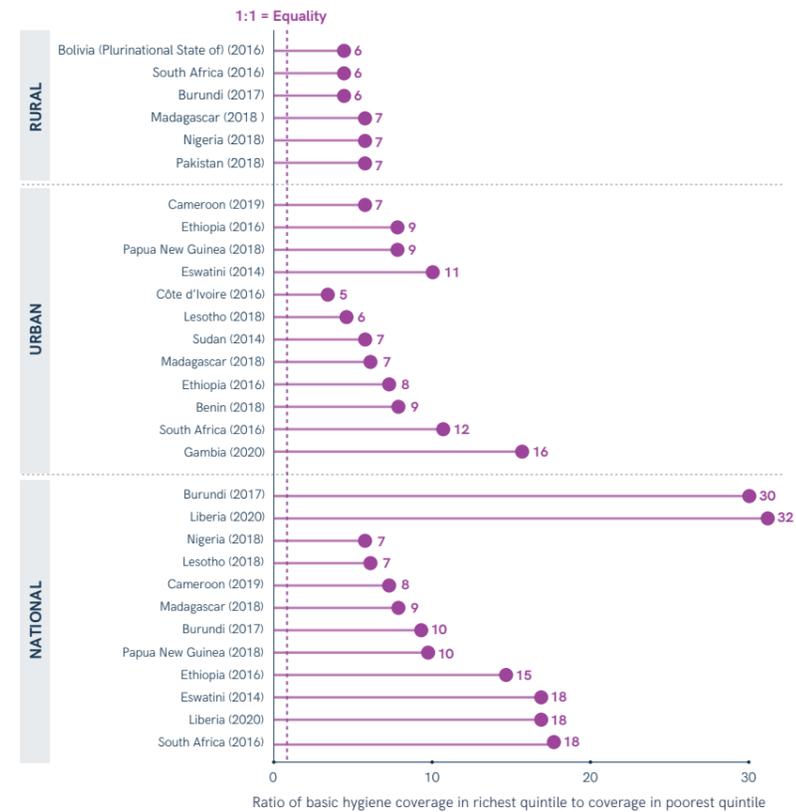


FIGURE 85 Wealth inequality ratios in the proportion of population with basic handwashing facilities

In 28 countries, at least a quarter of the population had no handwashing facility at home in 2020

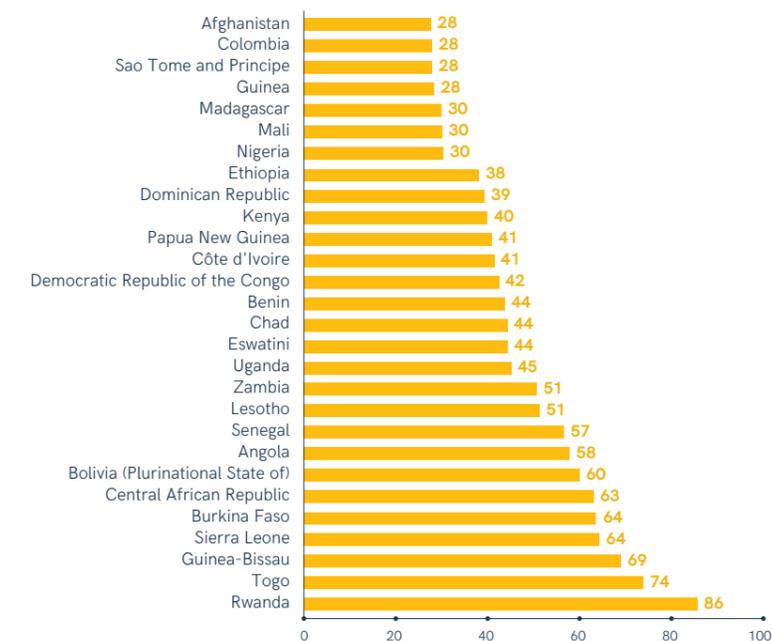


FIGURE 86 Population with no handwashing facility in 2020 (%)



The people least able to manage hand hygiene in the home are those with no handwashing facilities at all. Over the first five years of the SDG period the number of people with no handwashing facility has only decreased slightly from 700 million in 2015, to 630 million in 2020. Over half of these people (374 million) live in fragile contexts. In sub-Saharan Africa and in Oceania the number of people with no handwashing facility has increased slightly due to population growth (by 35.4 million and 0.5 million, respectively), although in both regions the proportion without handwashing facilities has stayed steady at about one third.

In 11 countries, at least half of the population had no handwashing facilities at home (Figure 86). In some of these countries, surveys have not counted mobile handwashing devices and may significantly underestimate access to handwashing facilities – this may be the case for Rwanda and Eswatini. In Togo the 2017 MICS, with response categories for mobile devices, found nearly twice as many households to have basic handwashing facilities as the 2014 DHS, which didn't include responses for mobile devices. However, even when considering mobile devices, the large majority of households in Togo had no handwashing facility at all.

Data coverage and progression

Hygiene services are much less likely to be tracked by routine administrative monitoring systems than drinking water and sanitation services. The most reliable way of collecting data on hygiene services at home is through household surveys. It is well known that people over-report their own handwashing practices, so rather than asking survey respondents about when or how often they wash their hands, it is recommended for survey teams to ask to see the place where household members reportedly wash their hands, and then to record if water and soap are available at the handwashing facilities. Handwashing data has been collected in household surveys with methods like these for over ten years, but still, many countries have not integrated such questions into their national surveys or censuses. By now, most countries that participate in internationally-managed household survey programmes like the MICS and DHS, have collected one or more rounds of data on hygiene services. However, upper-middle and high-income countries rarely include questions about handwashing facilities in household surveys, and as such, have very low data coverage.



These countries may have regulatory requirements about bathrooms and running water in homes, or may simply assume that access to basic hygiene services is universal. However, the JMP doesn't use regulations as data sources for SDG estimates. Only one high-income country (Oman) currently has survey data about access to basic hygiene services in the home.

In low- and middle-income countries, data coverage has steadily progressed over the three SDG reports (Figure 87), with large increases in coverage at the regional level as populous countries collected data for the

first time (e.g. India in Central and Southern Asia; Papua New Guinea in Oceania). However, some countries have not collected data on basic hygiene in recent years; in Mexico, the only available survey was the 2015 MICS, which by JMP rules can be used for estimates only through 2019. Accordingly, regional data coverage in Latin America and the Caribbean dropped from 42% in the 2019 report (estimates for 2000-2017) to 20% in the 2021 report (estimates for 2000-2020). Only four SDG regions have data for over 50% of the population, and can produce regional estimates for basic hygiene.

Data coverage for basic hygiene has stagnated and has decreased in four SDG regions

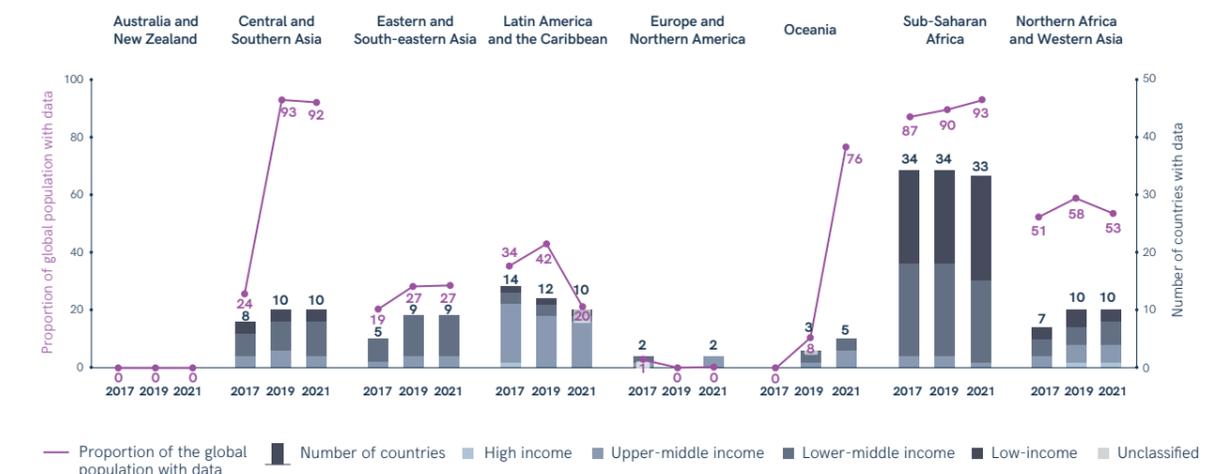


FIGURE 87 Data progression: basic hygiene services in 2017, 2019, and 2021 progress reports

Monitoring of safely managed drinking water and sanitation services requires information about drinking water quality and wastewater management that are difficult or impossible to collect in household surveys. However, the basic water, sanitation and hygiene service indicators can all be easily monitored with a few core questions. This allows the calculation of how many people have all three basic services, within the same household. This 'basic WASH services' indicator is close to the lowest of the basic water, sanitation and hygiene service indicators, among 41 recent surveys (Figure 88). Among both the richest and the poorest, basic hygiene tends to be the lowest, and thus the limiting factor for basic WASH, while basic water is the

highest of the indicators. There are exceptions: in Myanmar in 2016, basic hygiene was 12 percentage points higher than basic sanitation among the richest, and 32 points higher among the poorest. In Tunisia in 2018, basic sanitation was about 9 points higher than basic water for both the richest and the poorest; for the richest basic water was the limiting factor for basic WASH.

As for the individual basic service indicators, basic WASH is highly variable. There is often a significant gap between the richest and the other quintiles in low-coverage countries, or one region (often the capital) and the rest of the country (Figure 89). The reverse can be seen in high-coverage countries, where the poorest, and one or two regions, often lag behind the rest of the population.



Hygiene is often the limiting factor for basic WASH services

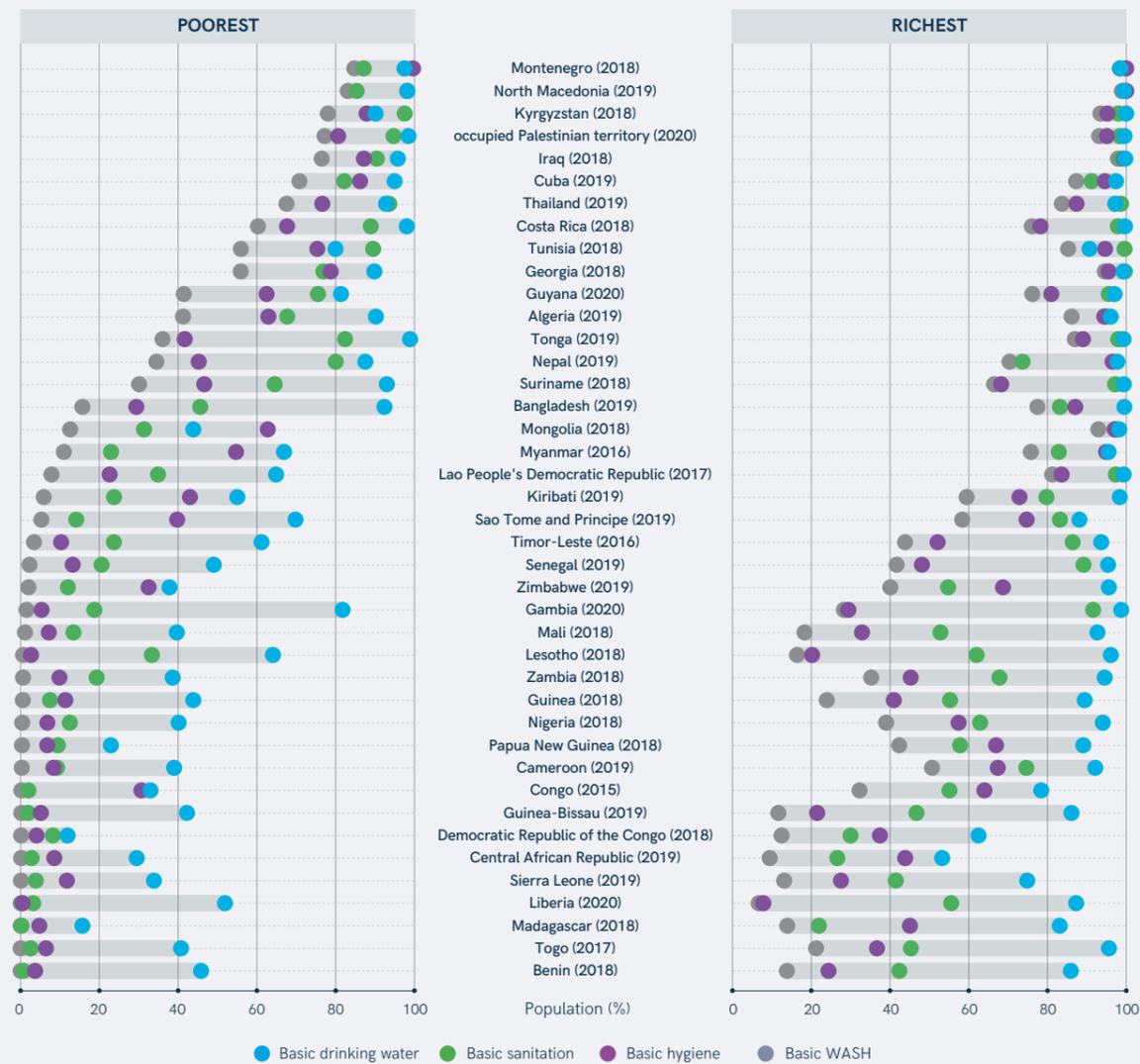


FIGURE 88 Basic drinking water, sanitation, hygiene and WASH among the richest and poorest quintiles, selected surveys 2015-2020

Inequalities in basic WASH show similar patterns over sub-national regions and wealth quintiles

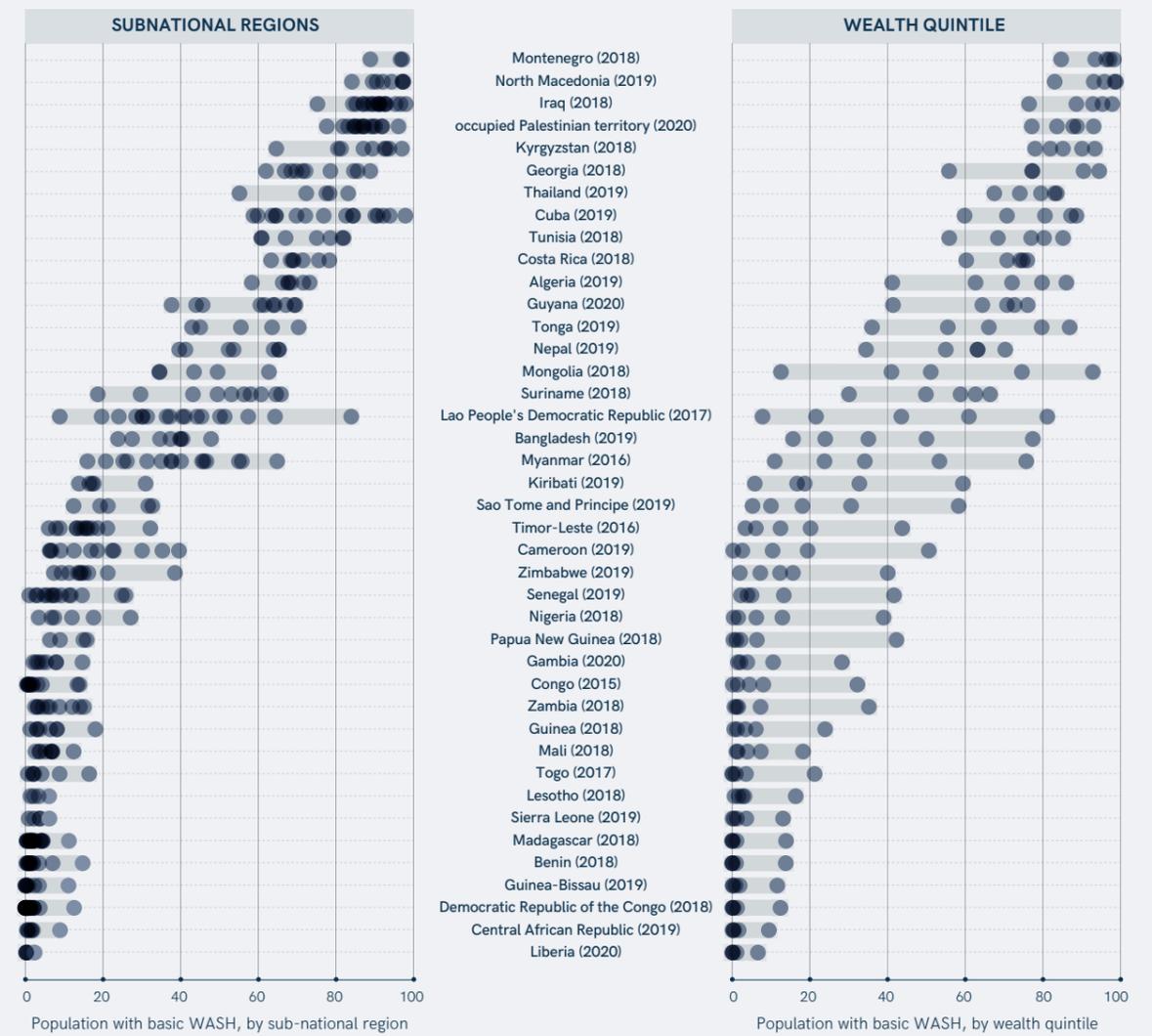


FIGURE 89 Basic WASH services by sub-national region and wealth quintile, selected surveys 2015-2020.



05.

Menstrual Health

Menstruation is experienced by a large portion of the global population but until recently relatively little attention has been paid to defining and monitoring menstrual health at national levels. While the age at menarche varies, information about menstrual health is increasingly included in surveys of women and girls age 15-49. In 2020, the global population of females in this age group was 1.9 billion (up from 1.6 billion in 2000). In addition, many people start menstruating before the age of 15 and there are also transgender, intersex, and non-binary people who experience a menstrual cycle. While menstruation can be a taboo topic, the importance of menstrual health is increasingly recognized, and advances have been made both in terms of norms and monitoring, including

a recently published global definition of menstrual health²⁹.

Menstrual health is linked to SDG target 6.2, which aims to achieve 'access to adequate and equitable sanitation and hygiene for all... paying special attention to the needs of women and girls...', and in recent years, WASH programmes have dedicated more attention to menstrual health needs. The JMP has expanded its database to incorporate harmonized menstrual health indicators, including a new tab in the JMP Country Files, and this is the first JMP progress update to include a dedicated section on menstrual health.

²⁹ Hennegan, J, et al., 'Menstrual health: a definition for policy, practice, and research', *Sexual and Reproductive Health Matters*, 29(1), 2021.



While the definition of menstrual health (Box 5) is multi-faceted and spans different sectors, new questions related to menstrual health indicators have been progressively included in household surveys used for national and global WASH monitoring. These indicators can be grouped into the following four areas:

- **Awareness** of menstruation before menarche (first menstruation).
- **Use of menstrual materials** to capture and contain menstrual blood, such as sanitary pads, cloth, tampons, or cups. These can also be grouped into single-use and reusable materials.
- Access to a **private place to wash and change** while at home.

- **Participation** in activities during menstruation, such as school, work and social activities.

National data on these indicators are typically collected through household surveys that include a women's questionnaire, with a range of questions for women and girls age 15 to 49, administered by female enumerators. The questions are only asked of those who have menstruated recently (that is, during the past 3 months (Performance Monitoring and Accountability 2020 (PMA) surveys) or the last 12 months (Multiple Indicator Cluster Survey 6 (MICS6)).

Emerging national data on each of these indicators have been compiled

and harmonized across countries and surveys, to the extent possible, to support cross-country comparison. The data presented in this chapter are based on the most recent available surveys. Examples of questions used in national surveys are presented at the beginning of each sub-section that follows. The JMP does not currently use a service ladder for menstrual health, as norms and standards relating to menstrual health and associated water, sanitation, and hygiene needs are still evolving. Further work is needed to refine these indicators and evaluate if others may be more relevant³⁰.

³⁰ Recommended indicators for global monitoring are anticipated from the Menstrual Health and Hygiene Global Advisory Group, which may inform future national surveys. For more information see: <www.publichealth.columbia.edu/sites/default/files/green_paper_monitoring_menstrual_health_and_hygiene.pdf>.

BOX 5 DEFINITION OF MENSTRUAL HEALTH²⁹

The following definition of menstrual health was published in 2021 based on a multi-stage process led by the Terminology Action Group of the Global Menstrual Collective³¹. Elements related to the four emerging indicators for global monitoring of menstrual health as presented in this report are highlighted in bold text.

Menstrual health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in relation to the menstrual cycle. Achieving menstrual health implies that women, girls, and all other people who experience a menstrual cycle, throughout their life-course, are able to:

- access accurate, **timely**, age-appropriate **information** about the menstrual cycle, **menstruation**, and changes experienced throughout the life-course, as well as related self-care and hygiene practices.
- care for their bodies during menstruation such that their preferences, hygiene, comfort, **privacy**, and safety are supported. This includes accessing and using effective and affordable **menstrual materials** and having **supportive facilities and services, including water, sanitation and hygiene services, for washing the body and hands, changing menstrual materials**, and cleaning and/or disposing of used materials.
- access timely diagnosis, treatment and care for menstrual cycle-related discomforts and disorders, including access to appropriate health services and resources, pain relief, and strategies for self-care.

³¹ The Global Menstrual Collective was established in 2019 to bring together multi-sectoral stakeholders and coalitions working on menstrual health with the purpose of supporting coordination and bolstering collective, evidence-based advocacy to drive investment. For more information see: <www.globalmenstrualcollective.org>.



- experience a positive and respectful environment in relation to the menstrual cycle, free from stigma and psychological distress, including the resources and support they need to confidently care for their bodies and make informed decisions about self-care throughout their menstrual cycle.
- decide whether and how to **participate in all spheres of life, including civil, cultural, economic, social, and political**, during all phases of the menstrual cycle, free from menstrual-related exclusion, restriction, discrimination, coercion, and/or violence.

Data coverage

Data on menstrual health are already available in many countries. By 2020, national data on at least one of the four emerging indicators had been collected in 42 countries, 31 of which had information on at least three of the four indicators. While 39 countries had data on the use of menstrual materials and access to a private place to wash and change, and 34 countries had data on participation in activities

during menstruation, Bangladesh and Egypt were the only 2 countries with national data on awareness of menstruation before menarche.

Nearly half (19) of the 42 countries with national data on the menstrual health indicators were in the sub-Saharan Africa region (Figure 90), and most were either low-income (13) or lower-middle-income countries (18). No high-income

countries had national data on any of the emerging menstrual health indicators. In addition to questions about menstrual health, many national surveys collected data on the area (urban/rural) and sub-national region where women live, in addition to age, education level, wealth quintile, ethnicity, and disability, which allow for disaggregation and a better understanding of inequalities in menstrual health.

Nearly half of the countries with data on menstrual health were in sub-Saharan Africa

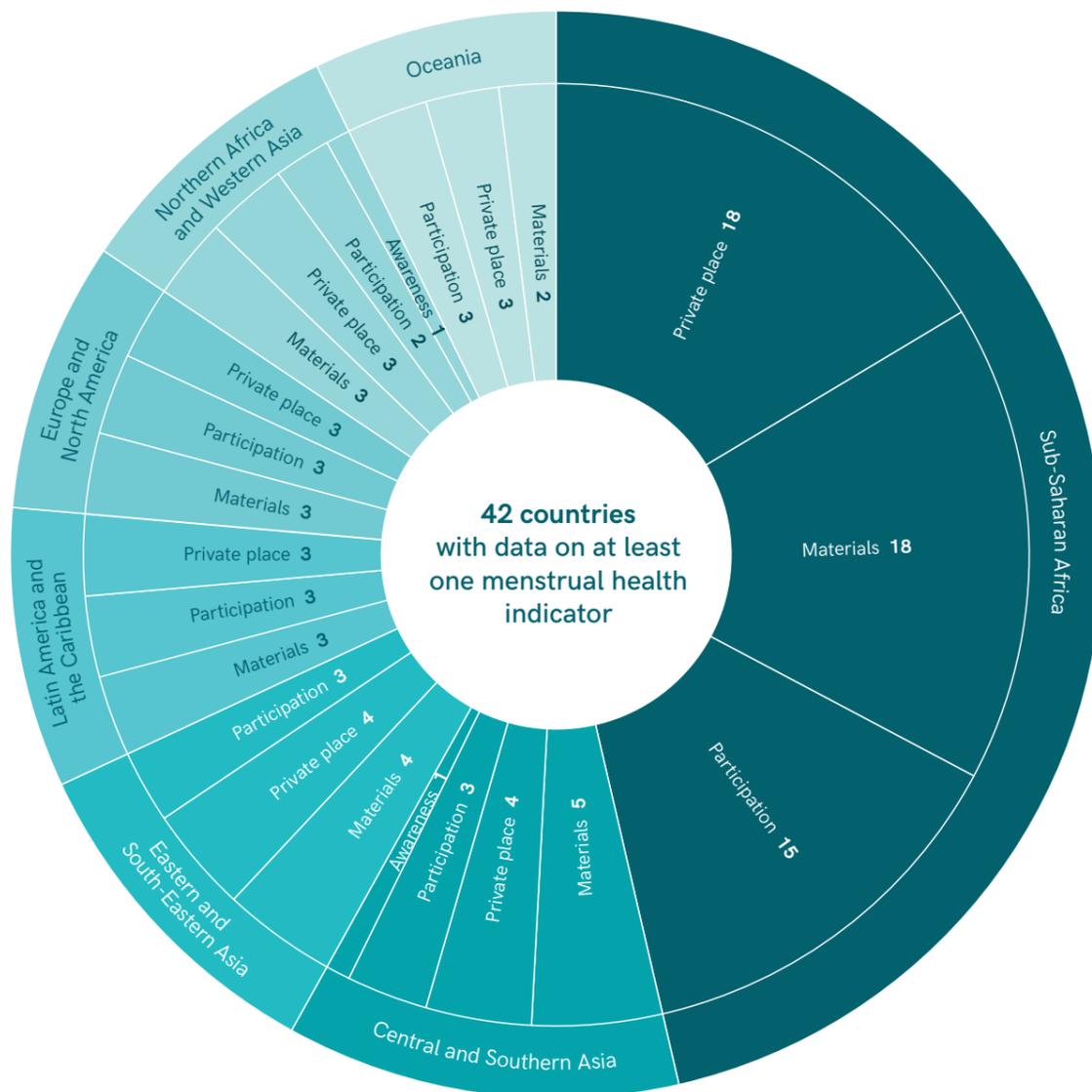


FIGURE 90 Number of countries with national data on emerging menstrual health indicators

Awareness

Awareness of menstruation before menarche is a cross-cutting indicator with links to social support and implications for sexual and reproductive health, family planning, education, and psychosocial well-being. For these reasons, it was recommended as a key indicator by the Menstrual Health and Hygiene (MHH) Global Advisory Group in 2019³², and the associated question was included in UNICEF's *Guidance for Monitoring Menstrual Health and Hygiene*³³. Examples of questions used to gather data on awareness of menstruation before menarche are provided in Table 3, starting with the recommended question from expert review.

³² Recommended indicators for global monitoring are anticipated from the Menstrual Health and Hygiene Global Advisory Group, which may inform future national surveys. For more information see: <www.publichealth.columbia.edu/sites/default/files/green_paper_monitoring_menstrual_health_and_hygiene.pdf>.

³³ United Nations Children's Fund. *Guidance for Monitoring Menstrual Health and Hygiene* (version 1), UNICEF, New York, 2020 <<https://www.unicef.org/media/85461/file/MHM-Monitoring-Resource.pdf>>. Note that questions are based on existing questions from multiple surveys and expert review. They are not intended to be prescriptive or comprehensive and additional work on recommended questions and indicators is underway by the Menstrual Health and Hygiene Global Advisory Group.

COUNTRY	SOURCE	YEAR	QUESTION
N/A	Guidance on Monitoring Menstrual Health and Hygiene ³³	2020	Before you had your first menstrual period, were you aware of menstruation?
EGYPT	Survey of Young People	2014	Did you know prior to having it that there is something called a menstrual period?
BANGLADESH	National Hygiene Survey	2018	আপনি মাসিক শুরুর আগে মাসিক সংক্রান্ত বিষয়ে কোন কিছু জেনেছেন বা শুনছেন Did you know or hear anything about menstruation before the start of menstruation?

TABLE 3 Example questions used to collect data on awareness of menstruation before menarche

While Bangladesh and Egypt were the only countries identified with nationally representative data on this indicator, findings suggest that a significant proportion of girls were not aware of menstruation when they had their first period. Only 32% and 66% of respondents knew about menstruation before menarche, respectively (Figure 91).

In Egypt, a higher proportion of women in urban areas (72%) were aware of menstruation before menarche than those living in rural

areas (63%), but in Bangladesh there was little difference. Although there may be a decrease in ability to recall menarche over time, data suggest that younger women and adolescent girls (age 15 to 19) in Bangladesh were nearly twice as likely to know about menstruation when they had their first period compared with older women (age 45 to 49), while the gap between age groups was much narrower in Egypt³⁴.

³⁴ Egypt data were collected from women and girls age 15 to 35, while Bangladesh data were collected from women and girls age 15 to 49. The gap between age groups is narrower in Egypt, even taking this into account.

Awareness of menstruation at menarche varies widely between and within countries

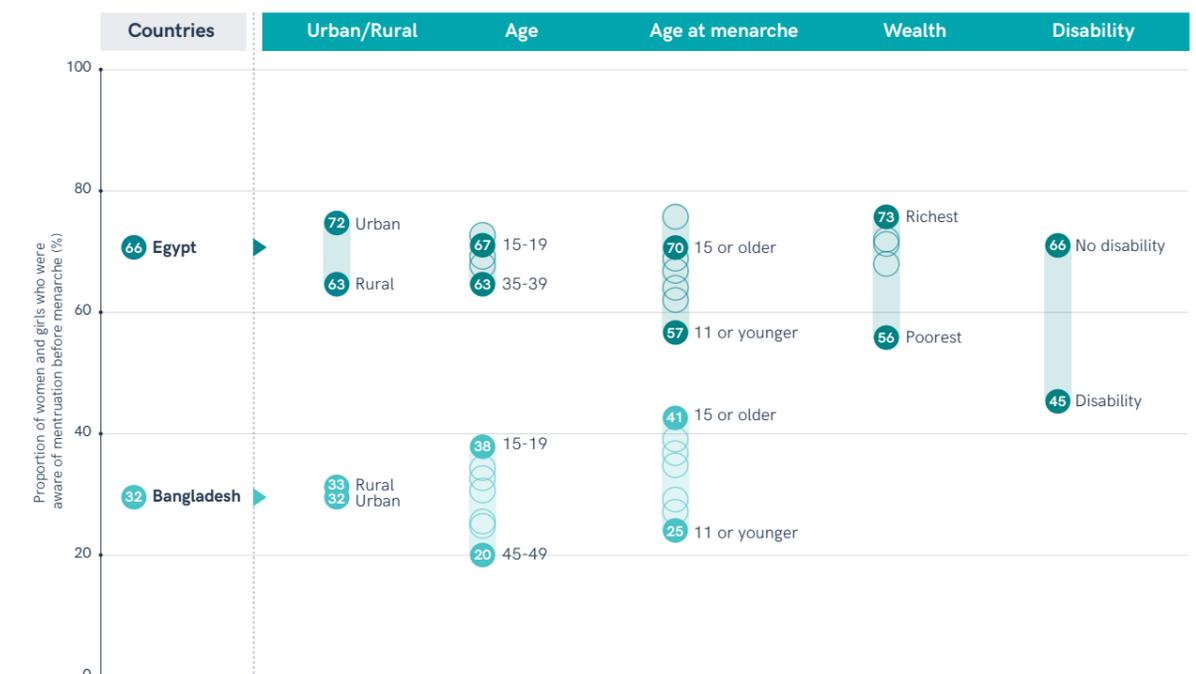


FIGURE 91 Proportion of women and girls aware of menstruation at menarche, in Egypt, 2014, and Bangladesh, 2018

In both countries, those who reached menarche at a later age were more likely to be aware of menstruation than those who had their first period earlier in life. In Bangladesh, the proportion of girls age 15 or older at menarche who knew about menstruation during this life transition was 16 % pts higher than those who were 11 or younger. It was also possible to disaggregate data by wealth quintile and disability status in Egypt. Just over half (56%) of women from the poorest households were aware of menstruation at menarche, compared with nearly three quarters (73%) of women from the richest households. Similarly, only 45% of women with a disability knew

what was happening during their first period, compared with 66% of women without a disability.

Awareness of menstruation before menarche can also influence how girls feel when they have their first menstrual period. While there is a complex relationship between age, awareness, and socio-emotional response at menarche, on average, girls that were already aware of menstruation were less likely to report feeling shock or fear when they had their first menstrual period. In Egypt, 74% of girls who were unaware of menstruation felt shocked, afraid or cried at menarche, while only 40% of those who knew why they were bleeding had a similar

reaction. Similarly, in Bangladesh, 69% of girls who were not aware of menstruation felt scared at menarche compared to 55% of those that were aware of menstruation. However, knowledge of menstruation is not necessarily linked to positive feelings or the knowledge and skills needed to manage menstruation. In Bangladesh, 8% of girls that didn't know about menstruation felt shame at menarche while over double the proportion (17%) of those who knew about menstruation beforehand felt shame. In Egypt, 19% of those that were unaware of menstruation didn't know what to do at menarche, but a similar proportion (23%) of those that did know about menstruation also didn't know what to do.



Materials

Various types of menstrual materials are used to capture and contain menstrual blood. These can include single-use and reusable materials, as well as purchased products and non-purchased materials. The use and type of menstrual materials have implications for WASH service needs, such as water and soap to wash hands and reusable materials and a safe place to dispose of single-use materials.

Several surveys have included questions on the types of menstrual materials used, including international survey programmes such as MICS and PMA, as well as country-specific surveys (Table 4). Many surveys also specifically ask if the respondent used reusable materials. While some surveys ask the respondent to indicate the materials they most commonly

used, others allow multiple options to be selected. For the purposes of global monitoring, women who used materials such as sanitary pads, tampons, menstrual cups, cloth, or cotton wool during their last menstrual period were classified as using menstrual materials, while those who only used toilet paper, underwear alone, or nothing were classified as not using menstrual materials. Those reporting that they used reusable materials at any point during their last period were classified as using reusable materials.

Information on the type of menstrual materials used supports a better understanding of menstrual experiences, associated WASH service needs, and knowledge required for hygienic use and safe

disposal. However, there is no commonly agreed definition of 'appropriate' menstrual materials, and how and when materials are used may be more important than the specific type of material. It is also important to consider the accessibility, quality and cost of menstrual materials. Monitoring the use of reusable materials is not intended to suggest that reusable materials are the better option, rather to understand the prevalence of different practises. While the impacts of disposable products on the environment and the functioning of sanitation facilities deserve greater research and consideration, menstrual health experts have highlighted that women should be able to use their preferred materials without additional shame or judgement.

COUNTRY	SOURCE	YEAR	QUESTION
N/A	Guidance on Monitoring Menstrual Health and Hygiene	2020	<p>During your last menstrual period, what materials did you use most often to absorb or catch menstrual blood?</p> <ul style="list-style-type: none"> · Cloth · Reusable sanitary pads · Single-use sanitary pads · Tampons · Menstrual cup · Toilet paper · Cotton wool · Underwear alone · Other · No materials used
MULTIPLE	MICS6 Questionnaire for Individual Women	2017-2020	<p>Did you use any materials such as sanitary pads, tampons or cloth? (some surveys add cotton wool and menstrual cups to the list). Were the materials reusable?</p>
MULTIPLE	PMA 2020 Female Questionnaire	2016-2019	<p>During your last menstrual period, what did you use to collect or absorb your menstrual blood? (options vary slightly by country)</p> <ul style="list-style-type: none"> · Disposable sanitary pad (commercial) · Reusable sanitary pad · New cloth · Old cloth · Cotton wool · Diaper · Tampons · Toilet paper · Underwear alone · Bucket · Other · No materials used · No response <p>Did you wash and reuse pads, cloths, or other sanitary materials during your last menstrual period?</p>
ZIMBABWE	MICS6 Questionnaire for Individual Women	2019	<p>What do you usually use during your menstrual period?</p> <ul style="list-style-type: none"> · Sanitary pads · Tampons · Cotton wool · Cloth · Menstrual cup · Tissue paper · Cow dung · Paper · Leaves/Grass/Cobs · Other (Specify) · Nothing

TABLE 4 Examples of questions used to collect data on the use of menstrual materials by source

The use of menstrual materials was high in most countries, ranging from 81% to universal (> 99%) (Annex 6). There was little variation between urban and rural areas, except in Lao People's Democratic Republic, Ethiopia and Niger, where there was a difference of more than ten % pts for the use of menstrual materials in urban areas compared with rural areas (Figure 92). The proportion of women who used reusable materials varies widely between countries. In

Sao Tome and Principe, and Chad, most women used reusable materials, while in North Macedonia, Tonga, Turkmenistan and Serbia almost all women used single-use materials. On average, the use of reusable materials was more common in rural areas. In Nigeria and Lesotho, women living in rural areas were more than four times as likely to use reusable materials compared with women living in urban areas. In other countries, the difference was much less substantial.

Of the 39 countries with data on the use of menstrual materials, only Madagascar and Zimbabwe collected data on the use of menstrual cups. In both countries, they were used by less than 1% of women. The types of menstrual materials used are often highly context-specific and further work is required to develop a comprehensive set of response categories that can be used for cross-country comparison.

Use of single-use and reusable materials varies widely, between countries but reusable materials are more commonly used in rural areas than urban settings

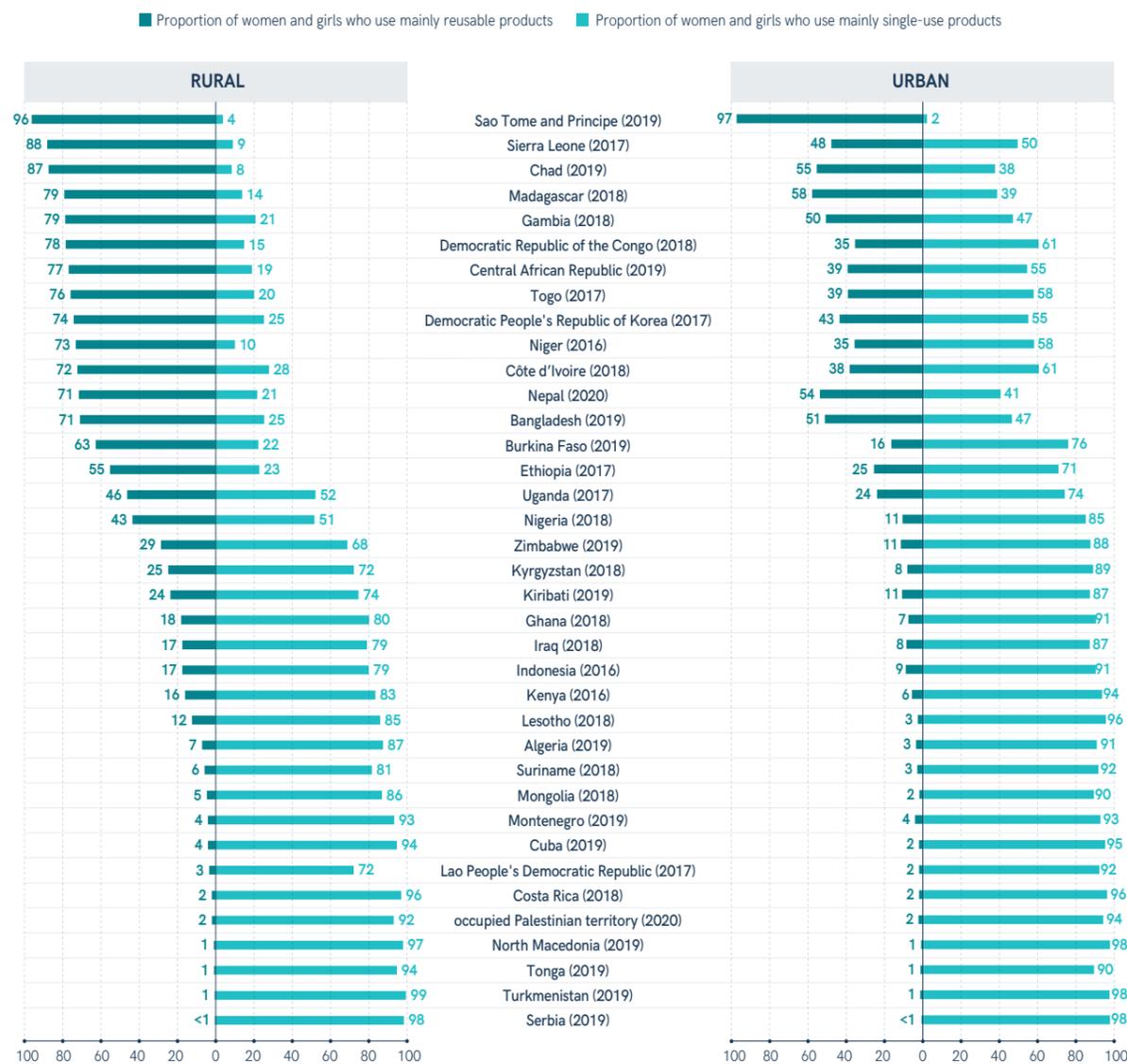


FIGURE 92 Proportion of women and girls who mainly use reusable and single-use materials, in rural and urban areas, by country

In five out of nine countries, most women and girls used disposable pads

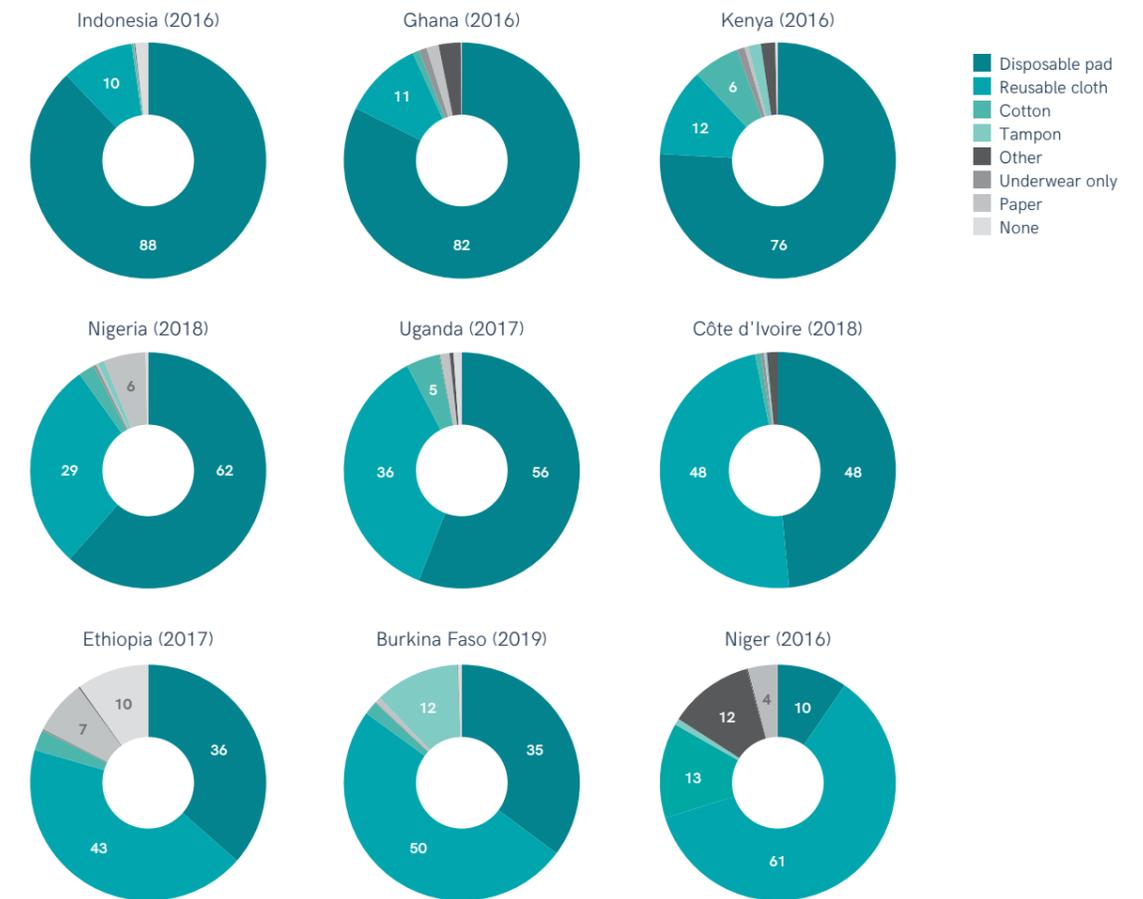


FIGURE 93 Proportion of women and girls age 15-49, who used a particular type of menstrual material during their previous menstrual period, selected PMA surveys, 2016-2019

Note: Women were asked to select all types of absorbents they use.

Based on data from nine countries with consistent response categories, the great majority of women reported using either disposable pads or reusable cloth, but the most common type of menstrual material varied widely between countries (Figure 93). In five of the nine countries, disposable pads were most common, while in three countries reusable cloth was more common, and in Côte d'Ivoire there was a similar usage level for disposable pads and reusable cloth. In some countries, many women used other types of menstrual materials. In Niger, 14% of women used cotton. Tampons were uncommon in all nine countries, with the highest proportion of women using tampons, in Kenya and Ghana, at just over 1%. Many women used nothing or materials

that were not classified as menstrual materials. In Nigeria, 6% of women used paper, in Burkina Faso, 12% used underwear only, and in Ethiopia, 11% used nothing.

The type of material used also varied by age. For example, in Côte d'Ivoire, 65% of those age 15-19 used disposable pads compared to 30% of women age 45-49. Reusable cloth was more commonly used by older women (73% of those age 45-49) than by younger women and girls (36% of those age 15-19). Similarly, in Nigeria, 69% and 58% of women and girls age 15-19 and age 45-49, respectively, used disposable pads.

For women using single-use materials in these nine countries,

disposal locations also varied between and within countries. In four of the nine countries (Nigeria, Ghana, Côte d'Ivoire, and Indonesia), the most common place that women disposed of used materials was in the waste bin (ranging from 52% of women in Nigeria to 74% in Indonesia). In the other five countries (Ethiopia, Niger, Kenya, Burkina Faso, and Uganda), the most common disposal location was in the pit latrine (ranging from 53% of women in Ethiopia to 87% in Uganda). Many women disposed of used materials by flushing them down a toilet in Indonesia (13%), Nigeria (13%), and Niger (11%) and many burned their used menstrual materials in Indonesia (13%), Ghana (10%), and Niger (10%).

Private place to wash and change

The latest MICS6 and DHS8 women's questionnaires each include a single question about women's ability to wash and change in privacy while at home during their last menstrual period (Table 5). Other surveys, including the PMA and individual national surveys, such as the Bangladesh National Hygiene Survey, ask about privacy while changing materials. For the purposes of global monitoring, data on privacy while changing materials is used as a proxy of women and girls having a private place to wash and change.

While the single question from MICS6 and DHS8 is well-aligned with the global indicator, separate questions would permit disaggregated information on access to a private place to change and a private place to wash the body and menstrual materials. Research is needed on the reliability and utility of asking separately about changing, bathing or washing materials, as well as the performance of different approaches to assess privacy, which can be interpreted differently³⁵.

³⁵ Larson, E, et al., "Capturing menstrual health and hygiene in national surveys: insights from performance monitoring and accountability 2020 resident enumerators in Niamey, Niger". *Journal of Water, Sanitation and Hygiene for Development*, 11(2), 295-303, 2021.

The proportion of women and girls, age 15 to 49, who reported having a private place to wash and change during menstruation was high in most of the 39 countries with data available. While only 52%, 56% and 74% of women and girls had a private place to wash and change in Niger, Tunisia and Burkina Faso, respectively, coverage in the remaining 36 countries ranged from 80% (Côte d'Ivoire, Ethiopia, and the occupied Palestinian territory) to 99% (Costa Rica, the Democratic People's Republic of Korea, Serbia, and Turkmenistan) (Annex 6). However, coverage was often lower in rural areas compared to urban settings (Figure 94). In 12 of the 39 countries, at least 10% of women and girls living in rural areas did not have a private place to wash and change. Over half of those living in rural areas of Niger lacked a private place.

In Kenya, 69% of women changed their menstrual materials in a sanitation facility at home, 5% used sanitation facilities at school, work or other public facilities, 23% changed in their sleeping area, and 3% used their backyard, no facility, or other. In Burkina Faso, the most common location was the sleeping area (46%); followed by a sanitation facility at home (43%); backyard, no facility, or

other (11%); and a sanitation facility in a public location (<1%). Further research is required to understand the menstrual health-related WASH needs of women and girls at home, work, school and other public places.

PMA surveys from seven countries had additional details on the condition of the place where women wash and change their menstrual materials, including if the location is private, clean, safe, had a lock, and had soap and water available. In all seven countries, over half of women reported that the place was private (ranging from 52% in Niger to 95% in Indonesia). Availability of soap and water was the least prevalent feature in four of the seven countries (Côte d'Ivoire, Ghana, Kenya and Niger), while having a lock was the feature most often missing in the other three (Ethiopia, Indonesia and Uganda). Less than 10% of women in Niger reported that they had soap and water available in the place they most often wash and change during menstruation, and only 1% of women had all the elements for which data were collected. In Ethiopia, nearly two-thirds (63%) of women reported that the location was private, but only 38% and 40% of women reported that that it was clean and safe, respectively.



While few surveys gathered data on the availability of water and soap where women wash and change their menstrual materials, household data on basic hygiene services reflect a lack of soap and water more generally. This may suggest that the current indicator often reflects access to a private place to change more than a private place to wash though further research is needed.

Figure 95 shows national data on the proportion of women, age 15 to 49, with a private place to wash and change from surveys conducted between 2016 and 2020, compared with JMP estimates for basic hygiene service in 2020. In Burkina Faso, 74% of women had a private place to wash and change during menstruation, while 9% had a handwashing facility with water and soap available at home. Similarly, in Lesotho, 95% had a private place compared with only 6% with basic hygiene services. In the occupied Palestinian territory, including east Jerusalem, and Iraq, 80% and 94% of women had a private place and 92% and 97% had basic handwashing facilities, respectively.

In 12 countries with data, at least 1 in 10 women in rural areas lacked a private place to wash and change during their last period

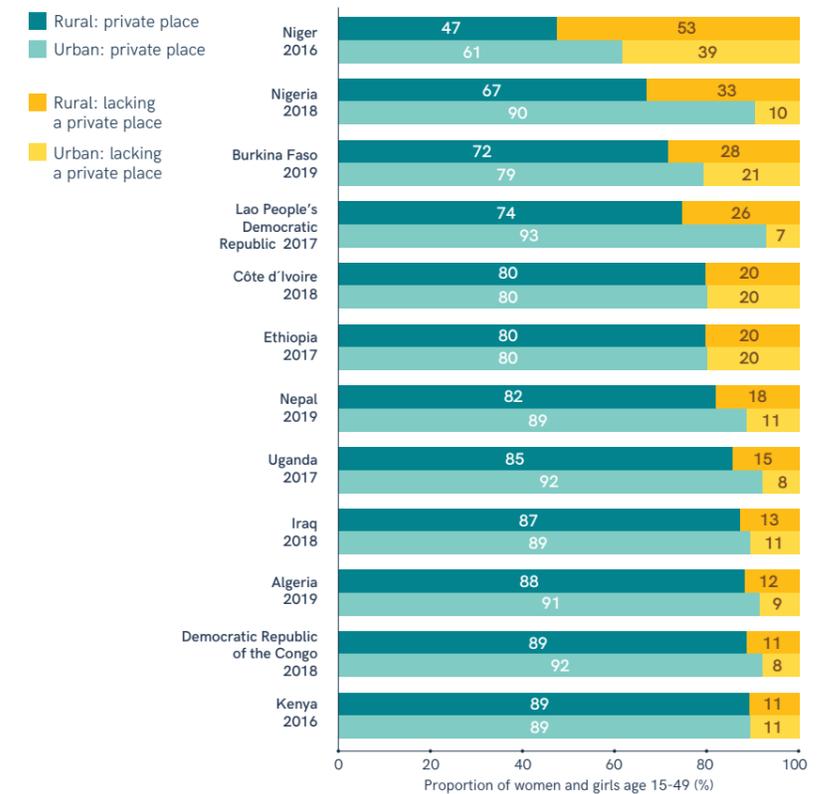


FIGURE 94 Proportion of women who had a private place to wash and change, selected surveys, 2016-2019

In most countries with data, women and girls were more likely to have a private place to wash and change than access to handwashing facilities with soap and water at home

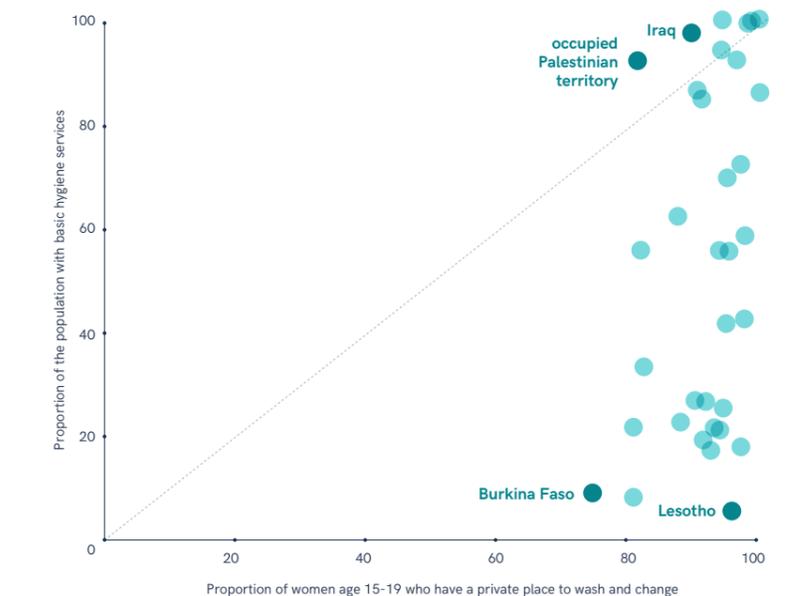


FIGURE 95 Proportion of women and girls, age 15-49, with a private place to wash and change, latest survey with data available, 2016-2020, and proportion of the population with handwashing facilities with soap and water available at home based on 2020 JMP estimates

COUNTRY	SOURCE	YEAR	QUESTION
MULTIPLE	Guidance on Monitoring Menstrual Health and Hygiene	2020	During your last menstrual period, were you able to wash and change in privacy while at home?
	MICS6 Questionnaire for Individual Women	2017-2020	
	DHS-8 Woman's Questionnaire	2020	
MULTIPLE	PMA 2020 Female Questionnaire	2016-2019	Where do you most often change your used pads, cloths, or other sanitation materials? While managing your menstruation, was this place private?
BANGLADESH	National Hygiene Survey	2018	আপনার পরিবারে মাসকিরে কাপড়/ প্যাড বদলানোর সময় আপনার ব্যক্তিগত গোপনীয়তা রক্ষা করতে কোন সমস্যা হয় কি? Is there any problem with privacy when changing menstrual cloths/pads?

TABLE 5 Examples of questions used to collect data on having a private place to wash and change

Participation

Questions on participation during menstruation often vary between survey programmes and countries, due to context-specific activities, social norms and taboos. However, most surveys ask about participation in school, work and social activities for those who typically participate in these activities. The standard MICS questionnaire asks about participation in a single question, while other surveys, such as the PMA and Bangladesh National Hygiene Survey, or the question added to the MICS in Nepal, ask about different activities separately (Table 6).



COUNTRY	SOURCE	YEAR	QUESTION
N/A	Guidance on Monitoring Menstrual Health and Hygiene	2020	<p>During your last menstrual period, did you miss any of the following activities due to your period? Select NA (not applicable) if the woman would not normally do this activity, for example she does not normally attend school, work, or social activities.</p> <ul style="list-style-type: none"> · Attending school: Yes/No/NA · Paid work: Yes/No/NA · Participating in social activities: Yes/No/NA · [Other context specific activity]: Yes/No/NA
MULTIPLE	MICS6 Questionnaire for Individual Women	2017-2020	<p>Due to your last menstruation, were there any social activities, school or work days that you did not attend?</p>
MULTIPLE	PMA 2020 Female Questionnaire	2016-2019	<p>Aside from your own housework, have you done any work in the last month? (If yes) Due to your last menstrual period, were there any work days in the last month that you did not attend?</p> <p>Did you attend school at any time in the past 12 months? (If yes) Due to your menstrual period, were there any school days in the past 12 months that you did not attend?</p>
BANGLADESH	National Hygiene Survey	2018	<p>মাসিকি চলাকালীন সময়ে কোন কাজগুলো করতে নষিধে করা হয়? What activities are forbidden during menstruation?</p> <ul style="list-style-type: none"> · Can't go to certain places · Can't catch certain things · Cannot take certain foods · Not allowed to cook · Not allowed to go out · Abstain from religious work · Nothing is forbidden · Other
NEPAL	MICS6 Questionnaire for Individual Women	2019	<p>Do you have to have the following conditions during your menstrual period?</p> <ul style="list-style-type: none"> · Staying in an chaupadi/chhapro · Staying in a separate room in the same house · Staying in the cowshed · Eating in a separate place · Bathing in a separate place · Staying away from school or work · Staying away from social gatherings/meetings · Staying away from religious work/temple visit

TABLE 6 Examples of questions used to collect data on participation in activities during menstruation



Non-participation during menstruation varies by geographical, socio-economic and individual characteristics

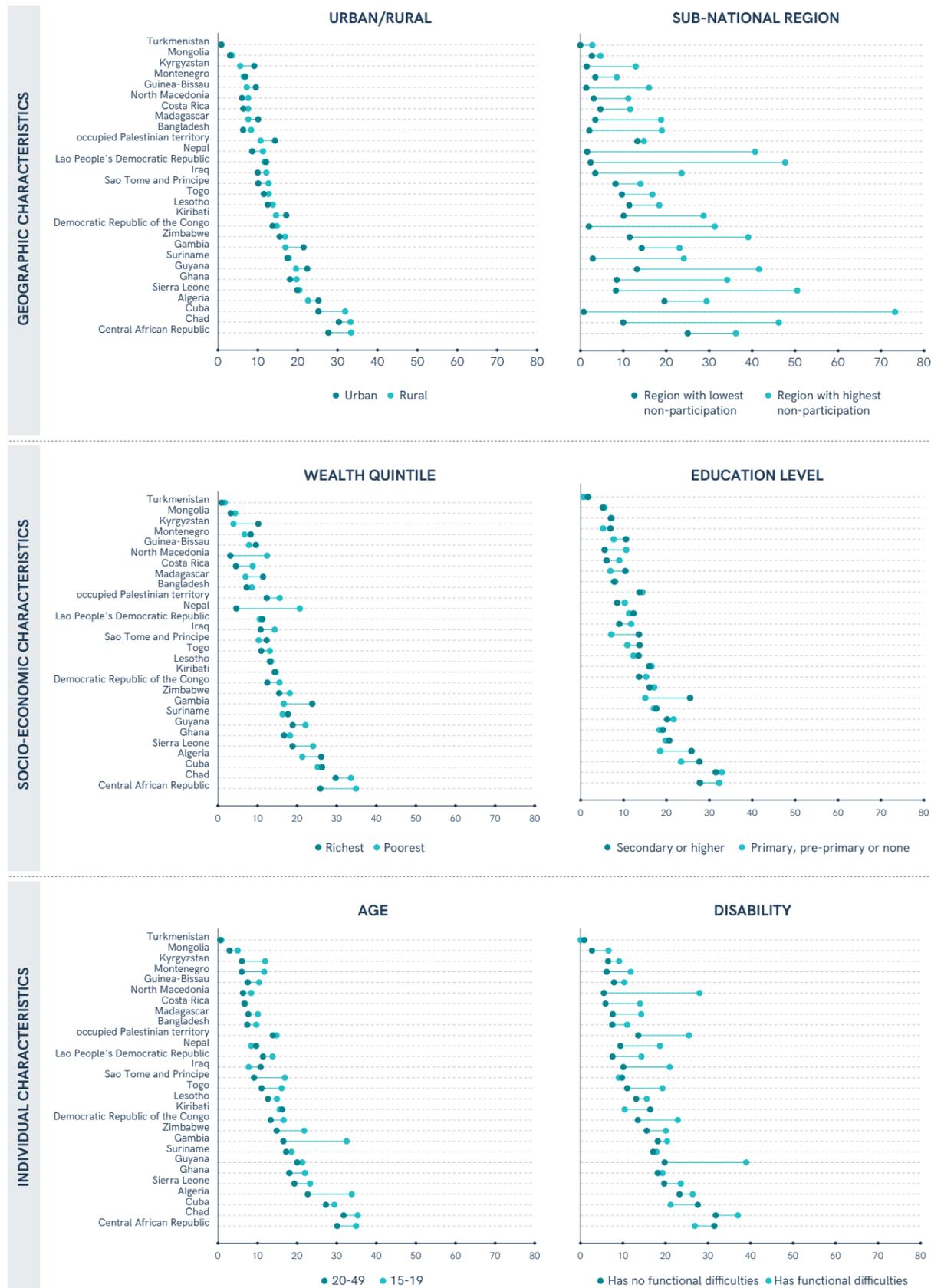


FIGURE 96 Proportion of women and girls, age 15-49, not participating in school, work or social activities during their last period, by population sub-groups (%)

Harmonized data from the MICS survey on participation in school, work and social activities, as well as disaggregates of area (urban/rural), sub-national region, wealth quintile, education level, age, and disability, were available for 28 countries (Figure 96).

On average, non-participation was higher among girls and younger women (age 15 to 19, compared with women age 20 to 49). However, since respondents were asked about school, work and social activities in a single question, this difference may reflect a difference in the typical activities for each age group. For example, girls and younger women may be more likely to be enrolled in school compared with older women who may be more likely to work. PMA surveys in Burkina Faso, Côte d'Ivoire and Nigeria collected data on school and work separately, and found that 15%, 20% and 23% missed school in the past 12 months, respectively, while 16%, 22% and 17% missed work in the last month.

There was no clear pattern for participation disaggregated by area (urban/rural), wealth quintile or education level. However, in some countries, there were significant gaps between population sub-groups. For example, in Cuba, 32% of women in rural areas did not participate in one or more of the three activities during their last menstrual period, compared

with 25% of women in urban areas. Women from the poorest households in Nepal were four times less likely to participate than women from the richest. And non-participation was 11 % pts higher for women in Gambia with primary school education or lower (26%) compared with women who completed secondary school or higher (15%). Non-participation does not necessarily reflect restrictions or exclusion but may also be a reflection of not having the resources to meet their menstrual needs at school, work, or where social activities take place, or women's choice to not participate. While in some countries, wealthier women and women with a higher level of formal education were, on average, more likely to participate in their typical activities during menstruation, in other countries they were not. The proportion of women who participate in their typical activities does not always reflect women's freedom to participate.

Large gaps in non-participation were identified between sub-national regions and between women with and without a disability³⁶. The number and size of sub-national regions varies widely between countries, but there were often big differences in participation between the highest

³⁶ Respondents were classified as having a disability if they had some difficulty in at least one functional domain. Questions on disability in the MICS6 questionnaire cover six functional domains: seeing, hearing, walking, cognition, self-care, and communication. Each question has four response categories: (1) No, no difficulty, (2) Yes, some difficulty, (3) Yes, a lot of difficulty and (4) Cannot do it at all. <<https://www.washingtongroup-disability.com/>>.

and lowest sub-national regions. For example, in Cuba less than 1% of women in Las Tunas Province did not participate in school, work or social activities during their last menstruation, while 73% of women in Camagüey did not participate. The average gap between sub-national regions was four-fold across the 28 countries. In Nepal and Lao People's Democratic Republic, women in some sub-national regions were more than 20 times more likely to not participate in their usual activities due to their menstrual period than women in other sub-national regions. In many countries, women with a disability were half as likely to participate during menstruation. In North Macedonia, women with a disability were five times less likely to participate compared with women without a disability.

The additional question asked in the Nepal 2019 MICS highlights much higher rates of non-participation for activities other than school, work or social activities, particularly for women from the poorest households (Figure 97). Many of the poorest women ate, bathed and/or slept in a separate place from family members. There was only one activity where levels of non-participation were not correlated with wealth: nearly all women across all wealth quintiles stayed away from religious work and temples during their menstrual period.

In Nepal, the poorest women and girls are less likely to participate in activities during their periods



FIGURE 97 Proportion of women and girls age 15-49, not participating in activities during their last period, by wealth quintile (%)

Leave no one behind

Some national data sources also report menstrual health indicators disaggregated by nationally-defined ethnicity, ethno-linguistic group, or skin color (Figure 98).

In some countries, the gap for some indicators between ethnic groups was small, while in others it was substantial. In Lao People's Democratic Republic, the gap between population sub-groups was small for participation in activities during menstruation, but there was a gap of more than 30 % pts between Mon-Khmer and Lao-Tai for the proportion with a private place to wash and change and the proportion who use menstrual materials. In the Central African Republic, there was a smaller gap between ethnic groups for a private place to wash

and change and use of menstrual materials, while Haoussa women (80%) were much more likely to participate in school, work and social activities during their menstrual period than Mboum women (59%). The gap between ethnic groups in Kyrgyzstan was less than 3 % pts for all three indicators.

Managing menstruation can be an even greater struggle for the more than 2.6 million women and girls living in emergency settings³⁷. The United Nations High Commissioner for Refugees (UNHCR) set a target that in post-emergency contexts at least 90% of women of reproductive

³⁷ Columbia University Mailman School of Public Health, 'GATE: Menstruation & emergencies', Columbia University Mailman School of Public Health, <www.publichealth.columbia.edu/research/gate/menstruation-emergencies>, accessed 3 June, 2021.

age should be satisfied with the menstrual materials and facilities available to them³⁸. This indicator is monitored through annual Knowledge, Attitudes and Practices surveys. Data from refugee camps in eight countries show a wide range of satisfaction levels, with only two of the eight meeting the 90% target (Figure 99). Nearly all women reported they were satisfied with the menstrual materials and facilities in Mozambique and Iraq, compared with less than half of women in refugee camps in South Sudan, Malawi and Cameroon.

³⁸ UNHCR, *UNHCR Refugee WASH Indicators and Targets*, UNHCR, 2020, <<https://wash.unhcr.org/download/wash-indicators-and-targets>>. The UNHCR defines an emergency as the first six months after the population movement has stabilized but notes that the definition is context specific and should only serve as general guidance.



Disaggregated data reveal significant inequalities in menstrual health between ethnic groups

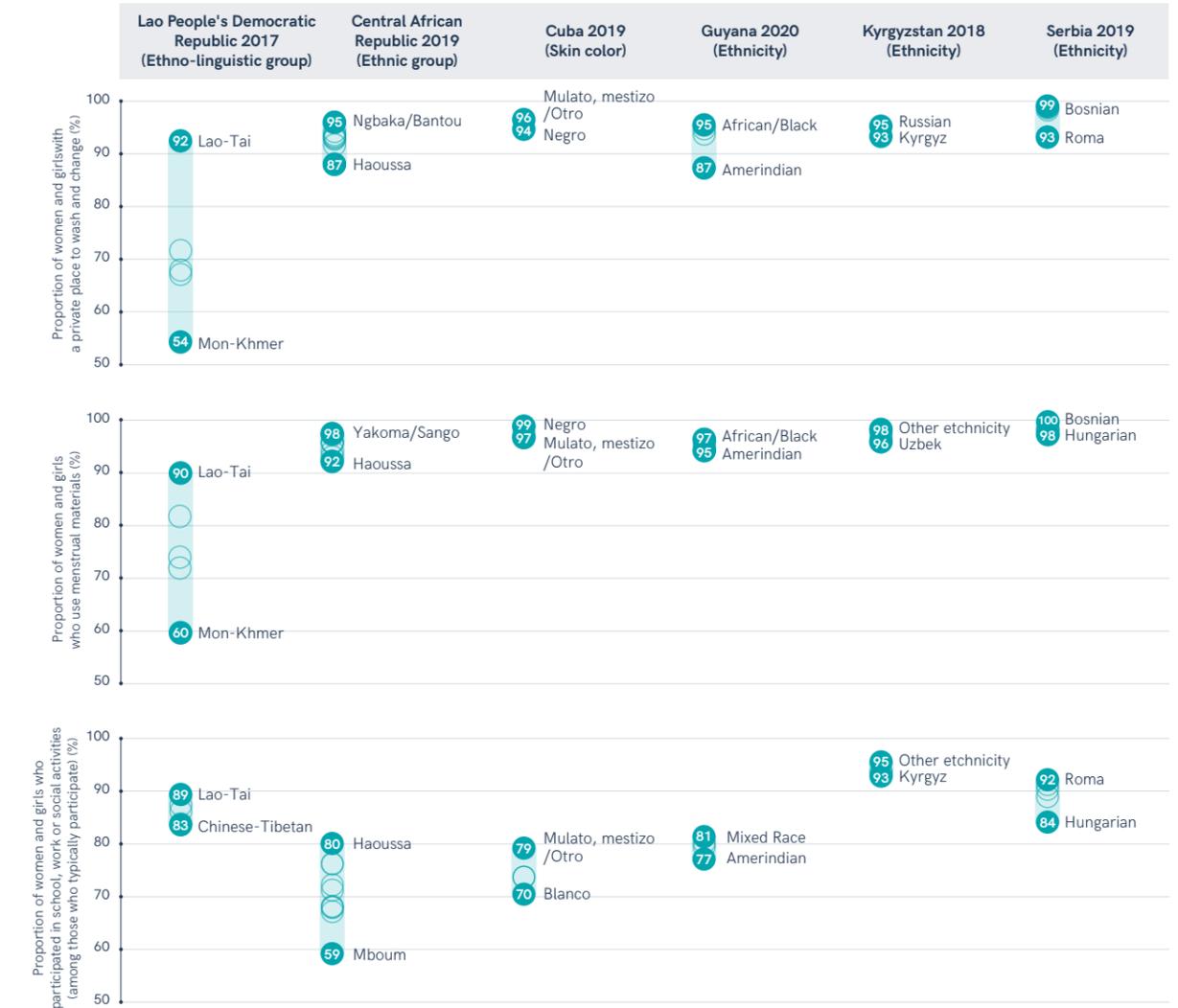


FIGURE 98 Proportion of women and girls participating in activities, using materials, and with a private place to wash and change during their last period, by nationally defined ethnic group, selected surveys, 2017-2020 (%)

Note: Y-axes are from 50% to 100% for readability. Group names are shown as reported in the original survey reports.

Women and girls living in refugee camps are often not satisfied with menstrual materials and facilities

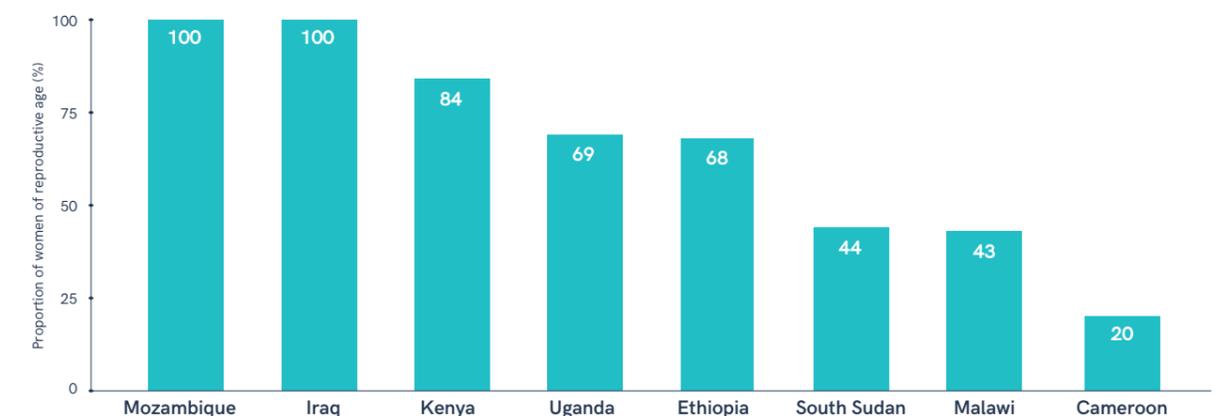


FIGURE 99 Satisfaction with menstrual materials and facilities among women and girls living in refugee camps, by country (%)



06.

Annexes

Annex 1: 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 global norms to benchmark progress on drinking water, sanitation and hygiene (WASH), and has produced regular progress updates on country, regional and global trends. The JMP is responsible for global monitoring of SDG targets related to WASH and collaborates with other custodian agencies through the UN-Water Integrated Monitoring Initiative for SDG6 (IMI-SDG6).

The JMP regularly convenes expert task forces to provide technical advice on specific issues and methodological challenges related to WASH monitoring,

and has established a Strategic Advisory Group to provide independent advice on the continued development of the global monitoring programme. The JMP works with a wide range of WASH sector stakeholders to progressively improve the availability and quality of national data on WASH services, and on disaggregations to highlight inequalities³⁹.

The following is a brief summary of the JMP methodology⁴⁰ used for the 2021 progress update. Methodological refinements since the 2019 progress update are listed in Box A-1.

³⁹ For further details on how the JMP works, see <<https://washdata.org/how-we-work/about-jmp>>.

⁴⁰ JMP methodology: 2017 update and SDG baselines, WHO and UNICEF <<https://washdata.org/report/jmp-methodology-2017-update>>.



BOX A1

REFINEMENTS TO JMP METHODS IN THE 2021 UPDATE

1. Increase in number of datasets used to generate estimates, from 3,838 to 4,426
2. Producing estimates up to the year prior to publication, rather than two years prior to publication (the 2019 report covered the period 2000 to 2017).
3. Producing estimates for trends in hygiene services, in light of increased data availability.
4. Extrapolating current trends to 2030, and calculating the acceleration required to meet SDG targets.
5. Presentation of national statistics for a subset of countries with survey data on 'basic WASH services' (proportion of the population living in households with basic drinking water, basic sanitation, and basic hygiene services).
6. Presentation of national statistics for a subset of countries with survey data on menstrual health (awareness, use of materials, a private place to wash and change, and participation in activities during menstruation).
7. Increase in the number of countries with inequalities files containing survey data disaggregated by wealth quintile and by sub-national region, from 96 to 105.

Data collection and validation

JMP estimations begin with the compilation of official national data sources that contain information about household drinking water, sanitation and hygiene services. The JMP has also expanded its databases to incorporate harmonized indicators on menstrual health, which are increasingly included in household surveys.

The biennial data collection cycle for JMP household estimates begins in the fourth quarter of an even year, and estimates are published in the second quarter of the following year. The data search involves systematically visiting the websites of national statistical offices, key sector institutions such as ministries of water and sanitation, and regulators of WASH services. Other regional and global databases are also reviewed for new datasets. UNICEF and WHO regional and country offices provide support to identify newly available datasets, in consultation with national authorities.

The JMP maintains Excel country files⁴¹ for each of the 234 countries, areas and territories for which population data are available. These files provide a list of the national data

sources available to the JMP and show how individual data inputs have been used to generate internationally comparable estimates. Before publication, draft estimates are circulated to WHO and UNICEF country offices for a two-month period for technical consultation and feedback from national authorities⁴².

The primary purpose of global monitoring is to produce 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. These sometimes differ from national statistics, which may use different definitions and/or methods⁴³. The purpose of the consultation is not to compare JMP and national statistics on WASH coverage, but to review the completeness or correctness of the datasets in the JMP country file and verify the interpretation of national data in the JMP estimates.

⁴³ The JMP produces modelled estimates based on a regression of all available data points, whereas national statistics are often based on the most recent data point from a single data source. The JMP uses standardized population estimates produced by the UN Population Division which may differ from national figures.



⁴¹ JMP country files can be downloaded from <<https://washdata.org/data/downloads#>>

JMP definitions

While compiling all relevant data from official national sources, the populations using different types of drinking water and sanitation infrastructures are classified as using **improved** and **unimproved** facilities, or having no facilities at all (Table A-1). Improved drinking water sources are those that have the potential to deliver safe water by nature of their design and construction, while improved sanitation facilities are those designed to hygienically separate excreta from human contact.

Data are also collected on the level of service households receive, which are used to subdivide the population using improved facilities into those with safely managed, basic or limited drinking water and sanitation services. In addition, data are collected on the availability of handwashing facilities with soap and water at home, which are used to categorize populations as having basic, limited, or no handwashing services.

Data sources and coverage

The JMP global database includes data inputs from: national data sources such as censuses, household surveys and administrative data; secondary datasets compiled by international or regional initiatives (for example, the European Protocol on Water and Health, the Statistical Office of the European Union, the International Benchmarking Network, and the MDG+ initiative for Arabic countries); studies conducted by research institutes; and technical information received during country consultations.

The 2021 JMP update drew on a total of 6,743 data sources, 4,426 of which were used to produce estimates (Figure A-1). Similar numbers of datasets were used for drinking water services (n=3,283) and sanitation services (n=3,243), but there were

	DRINKING WATER	SANITATION
IMPROVED FACILITIES	Piped supplies <ul style="list-style-type: none"> Tap water in the dwelling, yard or plot, including piped to a neighbour Public taps or standpipes Non-piped supplies Boreholes/tubewells Protected wells and springs Rainwater Packaged water, including bottled water and sachet water Delivered water, including tanker trucks and small carts/tanks/drums Water kiosks 	Networked sanitation <ul style="list-style-type: none"> Flush and pour-flush toilets connected to sewers On-site sanitation Flush and pour-flush toilets or latrines connected to septic tanks or pits Ventilated improved pit (VIP) latrines Pit latrines with slabs (constructed from materials that are durable and easy to clean) Composting toilets, including twin pit latrines with slabs and container-based systems
	Non-piped supplies <ul style="list-style-type: none"> Unprotected wells and springs 	Networked sanitation <ul style="list-style-type: none"> Flush and pour-flush toilets flushed to an open drain or elsewhere⁹
UNIMPROVED FACILITIES		On-site sanitation <ul style="list-style-type: none"> Pit latrines without slabs Open pits Hanging toilets/latrines Bucket latrines, including pans, trays or other unsealed containers
NO FACILITY	Surface water <ul style="list-style-type: none"> Open water sources located above ground, including rivers, lakes, ponds, streams, canals, reservoirs or irrigation channels 	Open defecation <ul style="list-style-type: none"> Defecation in the bush, fields or ditches Defecation into surface water, including beaches, rivers, streams, the sea, or drainage channels

TABLE A1 JMP classification of improved and unimproved facility types

⁹ A survey response of '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.

National data sources used for the JMP 2021 progress report

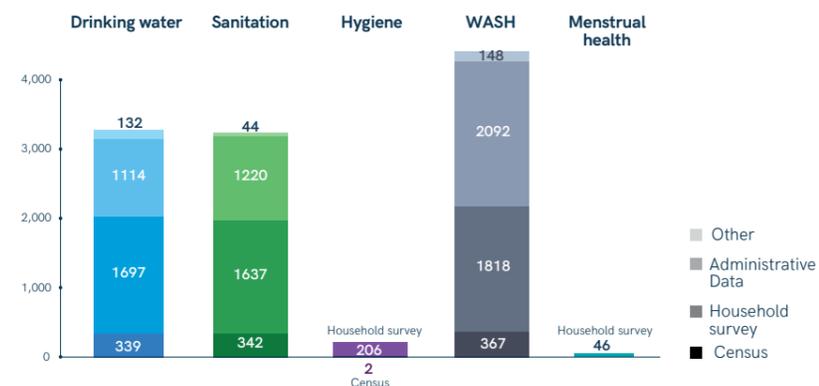


FIGURE A1 Number of data sources used in JMP 2021 report

comparatively few datasets with information on hygiene (n=208) and menstrual health (n=46).

The population data used in this report, including the proportion of the population living in urban and rural areas, are published by the United Nations Population Division. National

populations were taken from the 2019 Revision of World Population Prospects (standard projections for estimates up to 2020 and probabilistic projections for 2030 figures), while the proportion of the population living in urban and rural areas was taken from the 2018 Revision of World Urbanization Prospects.

Data disaggregation

JMP estimates are routinely disaggregated by service level (no service, unimproved, limited, basic, and safely managed services) based on the SDG service ladders presented in the main report. Where possible, estimates are also disaggregated by other relevant geographic, socio-economic and individual stratifiers of inequality. The JMP global database now includes **inequalities files** for 105 countries, which contain harmonized facility types and service level estimates disaggregated by sub-national region and wealth quintile, based on recent surveys.

Sub-national regions refer to administrative regions below the national level (known as admin-2), such as divisions, provinces, states and regions. Due to the limited number of surveys with disaggregated data available for the same sub-national regions, trends were not estimated for this update. **Wealth quintiles** (richest, rich, middle, poor, poorest) can be calculated based on household income and expenditure surveys or domestic assets as recorded in household surveys. For monitoring inequalities in WASH, the JMP creates customized wealth quintiles based on domestic assets but excluding WASH infrastructure. These calculations are shown in the JMP inequalities files, along with trends estimated using JMP regression rules.

Data on access to WASH services are typically collected at the household level rather than the individual level, which means it is not possible to routinely analyse intra-household inequalities. However, menstrual health indicators can be disaggregated by the individual characteristics of women and girls age 15 to 49 (for example, age, functional difficulties, ethnicity, education level).

The JMP seeks to highlight datasets that allow other types of disaggregation. For example,

this report presents data from REACH-supported Multi-Sector Needs Assessments⁴⁴ of vulnerable populations in emergency settings which can be further disaggregated into displaced and non-displaced populations, as well as from UNHCR data on WASH services in refugee camps⁴⁵.

Data analysis and country estimates

For each country, the JMP develops estimates for WASH indicators by fitting regression lines to the collected data inputs, using data from 2000 onwards. If a country has only one data point or two data points less than five years apart, the JMP creates estimates using a simple average, which is extended for four years beyond the most recent data point. If there are two or more data points, covering a span of at least five years, the JMP applies linear regression with extrapolation for up to two years forwards and backwards from the last data point, and extends estimates for up to four more years⁴⁶.

Ordinary least squares regression is used to estimate the proportion of the population using improved drinking water sources, as well as the population collecting drinking water directly from surface water sources. The population using unimproved drinking water sources is calculated by difference. Similarly, linear regressions estimate the proportion of the population using improved sanitation facilities (including shared facilities), and the proportion of the population practising open defecation, with the population using unimproved sanitation facilities calculated by difference. Separate linear regressions are made for specific types of improved

⁴⁴ REACH Resource Centre, 'Multi-sector assessments', REACH, <www.reachresourcecentre.info/theme/multi-sector-assessments>

⁴⁵ 'WASH indicators dashboard', UNHCR, <<https://wash.unhcr.org/wash-dashboard-for-refugee-settings/>>

⁴⁶ JMP methodology: 2017 update and SDG baselines, WHO and UNICEF <<https://washdata.org/report/jmp-methodology-2017-update>>

facilities: piped drinking water, sewer connections, and septic tanks. The remaining population using improved facilities is classed as using non-piped improved water sources, or latrines and other improved sanitation facilities.

Additional regressions are made to distinguish between basic and limited drinking water and sanitation services. The population that shares an improved sanitation facility is subtracted from the trend estimates of the population using improved sanitation facilities to produce the estimate of the population using **at least basic sanitation** services. Likewise, trends are estimated for the proportion of the population using improved drinking water sources requiring more than 30 minutes for collection. These are subtracted from the trend estimates of improved drinking water sources to generate estimates of the population using **at least basic drinking water services**⁴⁷. Linear regression is used to estimate **basic handwashing** services, drawing on data on the population observed to have handwashing facilities with soap and water at home.

Separate regressions are used for urban and rural areas, and the resulting population estimates are combined to generate national estimates for basic services.

While the data required to estimate basic drinking water, sanitation and hygiene services are readily available for most countries, the JMP has not been able to find sufficient data to estimate safely managed drinking water and sanitation services in all countries, and sometimes data are not representative of entire national populations. The JMP only makes country-level estimates if data are available for at least 50% of the relevant population.

⁴⁷ Since safely managed drinking water and sanitation services meet the criteria for basic services, the statistics on the population with basic services often include the population with safely managed services. The JMP uses the term 'at least basic services' to be clear that the statistic refers to populations with either basic or safely managed services.

To calculate **safely managed drinking water** services, the JMP uses linear regression to separately estimate the proportion of improved drinking water sources used that are:

- accessible on premises, and
- available when needed, and
- free from contamination

These values are multiplied by the proportion of the population using improved drinking water sources to estimate the populations using improved water sources that are accessible on premises, available when needed, and free from contamination. The JMP then uses the minimum of these three values to estimate safely managed drinking water services. Many countries lack data on one or more criteria for safely managed drinking water. The JMP only produces estimates for safely managed drinking water services when data are available on drinking water quality and at least one of the other criteria (accessibility and availability).

To calculate **safely managed sanitation services**, the JMP uses

linear regression to estimate the proportion of improved sanitation facilities from which:

- excreta are treated and disposed of in situ, or
- excreta are emptied and treated off-site, or
- wastewater is treated off-site

These values are multiplied by the proportion of the population using sewer connections or improved on-site sanitation facilities that are not shared, and added together to produce estimates of the total population using safely managed sanitation services. Many countries lack information on either the treatment of wastewater or the treatment of excreta from on-site sanitation facilities. The JMP only produces national estimates when data are available for the dominant type of sanitation system (sewered or on-site sanitation). If data are available for the dominant but not the non-dominant type of sanitation system, the JMP assumes 50% of the non-dominant type of sanitation is safely managed.

Regional and global estimates

Regional and global estimates for basic water, sanitation and hygiene services are only made when data are available for at least 50% of the regional or global population. The JMP calculates population-weighted averages for rural and urban areas of each region⁴⁸ and assigns these to any countries without a national estimate for the reference year. The JMP does not use these 'imputed' statistics to produce country-level estimates.

Populations using basic, limited, unimproved and no services are then summed for each regional grouping (see Annex 2 for the regional groupings used in this report), and population-weighted rural and urban estimates are combined to calculate the regional and global populations with each level of service. An equivalent approach is taken for facility types (sewer, septic tank, latrine; piped, non-piped improved) with estimates weighted by the population using improved drinking water and sanitation facilities, rather than the total population.

Regional and global estimates for individual elements of safely managed services are calculated by summing up country-level estimates (including 'imputed' estimates for countries lacking data), if actual data are available for at least 30% of the relevant population.

The three criteria for **safely managed drinking water** services are calculated as weighted averages among the urban, rural and national populations, provided that data are available for at least 30% of the regional population using improved drinking water. These ratios are then multiplied by the proportion of the population using improved drinking water in each region. Following

⁴⁸ Using the M49 sub-regions. See <<https://unstats.un.org/unsd/methodology/m49/overview/>>

the approach taken for countries, the proportion of the population using safely managed drinking water services is then calculated at regional and global levels by taking a minimum of the three criteria for urban and rural areas. Where possible, a weighted average of the rural and urban populations is used to produce regional and global total estimates.

For **safely managed sanitation** services, regional estimates are calculated based on the populations using sewer connections or improved on-site sanitation systems (septic tanks, latrines and other improved facilities). Estimates are only calculated where data are available for at least 30% of the population using the dominant form

of sanitation (sewer connections or on-site sanitation). The population using sewer connections is used to weight estimates of the proportion of wastewater treated, while the population using on-site facilities is used to weight estimates of excreta disposed of in situ. Data are currently insufficient to allow regional or global estimates to be made for the proportion of people using on-site sanitation facilities with excreta emptied and treated off-site.

Regional and global estimates of the population using safely managed sanitation services are calculated by adding together the populations with wastewater treated and excreta disposed of in situ for rural and urban areas. Where data coverage is below 30% for the non-dominant

form of sanitation, estimates are based only on the dominant form of sanitation. Regional and global totals are calculated by weighted averages from rural and urban areas where data permit.

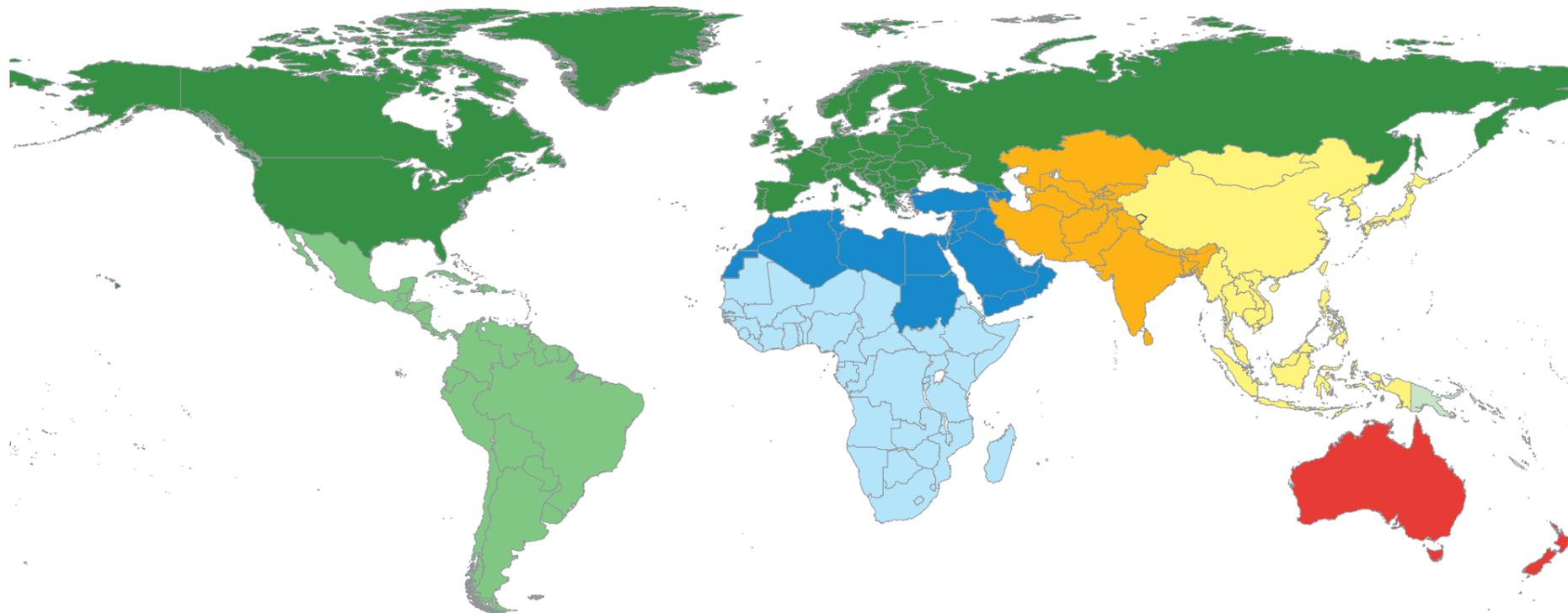
The regional and global estimates for individual elements of safely managed services are calculated where (non-imputed) data are available for at least 30% of the relevant population. To produce estimates for regional or global levels, imputed estimates are produced for countries lacking data. Imputed country estimates are not published and only used for aggregation. For details on the regional groupings used in this report see Annex 2.



CROSS-CUTTING	<p>JMP website: https://washdata.org/ JMP reports: https://washdata.org/reports JMP data: https://washdata.org/data JMP country files and inequalities files: https://washdata.org/data/downloads# JMP methodological note: https://washdata.org/report/jmp-methodology-2017-update</p> <p>Core questions on drinking water, sanitation and hygiene for household surveys: 2018 update. https://washdata.org/report/jmp-2018-core-questions-household-surveys</p> <p>The measurement and monitoring of water supply, sanitation and hygiene (WASH) affordability: a missing element of monitoring of Sustainable Development Goal (SDG) Targets 6.1 and 6.2. https://washdata.org/report/unicef-who-2021-affordability-wash-services-full</p> <p>Bain, R. et al. "Establishing Sustainable Development Goal Baselines for Household Drinking Water, Sanitation and Hygiene Services". <i>Water</i>, 10(1711), 2018. https://doi.org/10.3390/w10121711</p>
DRINKING WATER	<p>Integrating water quality testing into household surveys. https://washdata.org/report/jmp-2020-water-quality-testing-household-surveys</p> <p>WHO Guidelines for Drinking Water Quality, 4th edition, incorporating the 1st addendum. https://www.who.int/teams/environment-climate-change-and-health/water-sanitation-and-health/water-safety-and-quality/drinking-water-quality-guidelines</p>
SANITATION	<p>WHO Guidelines on sanitation and health. Geneva: World Health Organization; 2018. https://www.who.int/teams/environment-climate-change-and-health/water-sanitation-and-health/sanitation-safety/guidelines-on-sanitation-and-health</p> <p>Ending the neglect to attain the sustainable development goals. A Global Strategy on Water, Sanitation and Hygiene to Combat Neglected Tropical Diseases 2021–2030. https://www.who.int/teams/environment-climate-change-and-health/water-sanitation-and-health/burden-of-disease/wash-and-neglected-tropical-diseases</p>
HYGIENE	<p>Ram, P. et al 2013 Practical Guidance on Measuring Hand Hygiene Behaviour <https://www.wsp.org/sites/wsp.org/files/publications/WSP-Practical-Guidance-Measuring-Handwashing-Behavior-2013-Update.pdf></p> <p>COVID-19 Hygiene Hub <https://hygienehub.info/en/covid-19></p>
MENSTRUAL HEALTH	<p>UNICEF, Guidance for Monitoring Menstrual Health and Hygiene, 2020 https://washdata.org/sites/default/files/2020-11/UNICEF-2020-guidance-monitoring-MHH-v1.pdf</p> <p>The Global Menstrual Collective: http://www.globalmenstrualcollective.org</p> <p>Hennegan, J, et al., "Menstrual health: a definition for policy, practice, and research", <i>Sexual and Reproductive Health Matters</i>, 29(1), 2021. https://doi.org/10.1080/26410397.2021.1911618</p>

TABLE A2 Additional resources for detailed information on JMP definitions and methods

Annex 2: REGIONAL GROUPINGS⁴⁹



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.

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, Bonaire, Sint Eustatius and Saba (Caribbean Netherlands), British Virgin Islands, Cabo Verde, 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

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, 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 (Bolivarian Republic of), Yemen, Zambia, Zimbabwe.

⁴⁹ 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 from OECD <<https://www.oecd.org/dac/states-of-fragility-fa5a6770-en.htm>>. This report additionally uses income categories from World Bank <<http://databank.worldbank.org/data/download/site-content/CLASS.xls>>, as of June 2020.

Annex 3:

NATIONAL DRINKING WATER ESTIMATES

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)		% urban		NATIONAL				RURAL				URBAN						
						At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic
Afghanistan	2015	34 414	25	61	4	22	13	2.35	53	4	27	17	2.25	87	2	9	2	2.39		
Afghanistan	2020	38 928	26	75	1	15	9		66	2	20	12		>99	<1	<1	<1			
Albania	2015	2 891	57	93	4	3	<1	0.42	91	5	4	<1	0.68	95	2	2	<1	0.00		
Albania	2020	2 878	62	95	2	3	<1		94	2	4	<1		96	2	3	<1			
Algeria	2015	39 728	71	93	5	1	<1	0.23	88	9	3	<1	0.33	95	4	<1	<1	0.09		
Algeria	2020	43 851	74	94	5	<1	<1		90	9	<1	<1		96	4	<1	<1			
American Samoa	2015	56	87	>99	<1	<1	<1	0.07	-	-	-	-	-	-	-	-	-	-		
American Samoa	2020	55	87	>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-		
Andorra	2015	78	88	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00		
Andorra	2020	77	88	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1			
Angola	2015	27 884	63	54	11	17	17	0.80	27	10	22	42	0.33	70	12	15	3	0.53		
Angola	2020	32 866	67	57	9	19	14		28	9	23	41		72	10	18	<1			
Anguilla	2015	14	100	97	<1	3	<1	-	-	-	-	-	-	97	<1	3	<1	-		
Anguilla	2017	15	100	97	<1	3	<1	-	-	-	-	-	-	97	<1	3	<1	-		
Antigua and Barbuda	2015	94	25	97	<1	3	<1	-	-	-	-	-	-	-	-	-	-	-		
Antigua and Barbuda	2017	95	25	97	<1	3	<1	-	-	-	-	-	-	-	-	-	-	-		
Argentina	2015	43 075	92	99	<1	<1	<1	-	93	<1	3	4	-	>99	<1	<1	<1	0.05		
Argentina	2020	45 196	92	-	-	-	-	-	-	-	-	-	-	>99	<1	<1	<1			
Armenia	2015	2 926	63	>99	<1	<1	<1	0.24	>99	<1	<1	<1	0.56	>99	<1	<1	<1	0.06		
Armenia	2020	2 963	63	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1			
Aruba	2015	104	43	98	<1	2	<1	-	-	-	-	-	-	-	-	-	-	-		
Aruba	2016	105	43	98	<1	2	<1	-	-	-	-	-	-	-	-	-	-	-		
Australia	2015	23 932	86	>99	<1	<1	<1	0.01	>99	<1	<1	<1	0.05	>99	<1	<1	<1	0.01		
Australia	2020	25 500	86	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1			
Austria	2015	8 679	58	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00		
Austria	2020	9 006	59	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1			
Azerbaijan	2015	9 623	55	92	1	4	2	1.12	84	2	9	5	1.82	>99	<1	<1	<1	0.42		
Azerbaijan	2020	10 139	56	96	1	3	<1		91	2	7	<1		>99	<1	<1	<1			
Bahamas	2015	374	83	99	<1	1	<1	-	-	-	-	-	-	-	-	-	-	-		
Bahamas	2019	389	83	99	<1	1	<1	-	-	-	-	-	-	-	-	-	-	-		
Bahrain	2015	1 372	89	>99	<1	<1	<1	0.00	-	-	-	-	-	-	-	-	-	-		
Bahrain	2020	1 702	90	>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-		
Bangladesh	2015	156 256	34	97	1	<1	1	0.15	97	1	<1	1	0.21	98	1	<1	<1	-0.05		
Bangladesh	2020	164 689	38	98	1	<1	<1		98	<1	<1	<1		97	2	<1	<1			
Barbados	2015	285	31	98	<1	1	<1	0.01	-	-	-	-	-	-	-	-	-	-		
Barbados	2020	287	31	99	<1	1	<1		-	-	-	-	-	-	-	-	-	-		
Belarus	2015	9 439	77	96	3	<1	<1	-0.14	98	<1	<1	<1	-0.01	96	4	<1	<1	-0.17		
Belarus	2020	9 449	79	97	3	<1	<1		99	<1	<1	<1		96	4	<1	<1			
Belgium	2015	11 288	98	>99	<1	<1	<1	-0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00		
Belgium	2020	11 590	98	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1			

'-' = no estimate. For JMP estimate methods see Annex 1. For unrounded estimates see www.washtdata.org

COUNTRY, AREA OR TERRITORY	Year	NATIONAL					RURAL					URBAN							
		Proportion of population using improved water supplies					Proportion of population using improved water supplies					Proportion of population using improved water supplies							
		Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped
Afghanistan	2015	23	37	-	23	17	48	20	25	-	20	11	46	32	73	-	32	35	54
Afghanistan	2020	28	48	-	28	22	54	24	35	-	24	16	53	36	87	-	36	42	58
Albania	2015	71	81	71	96	81	16	-	78	68	-	73	23	-	83	72	-	87	11
Albania	2020	71	82	71	96	81	16	-	88	68	-	76	21	-	79	72	-	84	14
Algeria	2015	76	77	76	84	75	24	66	66	67	73	62	35	79	82	79	88	80	19
Algeria	2020	72	79	72	85	72	28	69	71	69	75	60	39	74	81	74	89	76	24
American Samoa	2015	96	96	-	98	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
American Samoa	2020	98	99	-	98	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Andorra	2015	91	>99	>99	91	>99	<1	-	>99	>99	-	>99	<1	-	>99	>99	-	>99	<1
Andorra	2020	91	>99	>99	91	>99	<1	-	>99	>99	-	>99	<1	-	>99	>99	-	>99	<1
Angola	2015	-	33	31	-	38	28	-	7	24	-	9	28	-	48	35	-	55	27
Angola	2020	-	39	31	-	42	24	-	7	23	-	8	28	-	55	35	-	59	22
Anguilla	2015	-	88	88	-	-	-	-	-	-	-	-	-	-	88	88	-	-	-
Anguilla	2017	-	88	88	-	-	-	-	-	-	-	-	-	-	88	88	-	-	-
Antigua and Barbuda	2015	-	75	90	-	94	2	-	-	-	-	-	-	-	-	-	-	-	-
Antigua and Barbuda	2017	-	75	90	-	94	2	-	-	-	-	-	-	-	-	-	-	-	-
Argentina	2015	-	97	-	-	96	3	-	86	-	-	82	11	-	98	-	-	98	2
Argentina	2020	-	-	-	-	-	-	-	-	-	-	-	-	-	>99	-	-	99	<1
Armenia	2015	84	98	91	84	97	2	-	97	91	-	94	5	-	99	91	-	>99	<1
Armenia	2020	87	>99	92	87	>99	<1	-	>99	92	-	>99	<1	-	>99	91	-	>99	<1
Aruba	2015	-	96	-	-	94	4	-	-	-	-	-	-	-	-	-	-	-	-
Aruba	2016	-	96	-	-	94	4	-	-	-	-	-	-	-	-	-	-	-	-
Australia	2015	-	97	96	-	91	9	-	88	-	-	84	16	99	99	-	>99	92	8
Australia	2020	-	97	96	-	-	-	-	88	-	-	-	-	99	99	-	>99	-	-
Austria	2015	99	>99	99	>99	-	-	-	>99	>99	-	-	-	-	>99	99	-	-	-
Austria	2020	99	>99	99	>99	-	-	-	>99	>99	-	-	-	-	>99	99	-	-	-
Azerbaijan	2015	85	87	-	89	81	12	72	72	-	81	64	22	96	>99	-	96	96	4
Azerbaijan	2020	88	90	-	92	91	6	78	78	-	87	79	14	96	>99	-	96	>99	<1
Bahamas	2015	-	98	-	-	97	2	-	-	-	-	-	-	-	-	-	-	-	-
Bahamas	2019	-	98	-	-	97	2	-	-	-	-	-	-	-	-	-	-	-	-
Bahrain	2015	99	99	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bahrain	2020	99	99	>99	>99	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bangladesh	2015	56	77	95	56	13	85	61	74	95	61	2	96	47	82	96	47	35	64
Bangladesh	2020	59	82	96	59	15	83	62	81	96	62	3	96	53	84	96	53	36	63
Barbados	2015	-	98	89	-	99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Barbados	2020	-	98	89	-	99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Belarus	2015	94	94	-	99	92	8	-	94	-	-	74	26	-	95	-	-	97	3
Belarus	2020	95	95	-	>99	96	4	-	94	-	-	85	14	-	95	-	-	>99	<1
Belgium	2015	>99	>99	-	>99	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1
Belgium	2020	>99	>99	-	>99	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)		% urban		NATIONAL				RURAL				URBAN						
						At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic
Belize	2015	361	45	97	1	2	<1	0.55	96	1	3	<1	0.69	>99	<1	<1	<1	0.38		
Belize	2020	398	46	98	1	<1	<1	0.55	98	1	<1	<1	0.69	99	1	<1	<1	0.38		
Benin	2015	10 576	46	65	9	21	5	0.16	57	12	24	8	0.27	74	5	18	2	-0.21		
Benin	2020	12 123	48	65	9	22	3	0.16	58	13	24	5	0.27	73	6	20	1	-0.21		
Bermuda	2015	64	100	>99	<1	<1	<1	-0.00	-	-	-	-	-	>99	<1	<1	<1	-0.00		
Bermuda	2020	62	100	>99	<1	<1	<1	-0.00	-	-	-	-	-	>99	<1	<1	<1	-0.00		
Bhutan	2015	728	39	96	2	<1	<1	0.70	95	3	<1	1	0.88	98	1	<1	<1	0.12		
Bhutan	2020	772	42	97	2	<1	<1	0.70	97	3	<1	<1	0.88	98	1	<1	<1	0.12		
Bolivia (Plurinational State of)	2015	10 870	68	90	<1	3	7	0.67	74	<1	6	20	1.24	98	<1	1	<1	0.19		
Bolivia (Plurinational State of)	2020	11 673	70	93	<1	2	5	0.67	80	<1	4	16	1.24	>99	<1	<1	<1	0.19		
Bosnia and Herzegovina	2015	3 429	47	96	4	<1	<1	-0.06	97	3	<1	<1	0.05	95	5	<1	<1	-0.19		
Bosnia and Herzegovina	2020	3 281	49	96	4	<1	<1	-0.06	97	3	<1	<1	0.05	95	5	<1	<1	-0.19		
Botswana	2015	2 121	67	88	8	2	2	0.85	72	22	2	4	1.27	97	2	1	<1	0.17		
Botswana	2020	2 352	71	92	5	2	1	0.85	79	15	2	4	1.27	98	<1	2	<1	0.17		
Brazil	2015	204 472	86	98	<1	<1	1	0.29	89	3	<1	8	1.13	>99	<1	<1	<1	0.08		
Brazil	2020	212 559	87	>99	<1	<1	-	0.29	96	<1	3	-	1.13	>99	<1	<1	<1	0.08		
British Virgin Islands	2015	29	47	>99	<1	<1	<1	0.23	-	-	-	-	-	-	-	-	-	-		
British Virgin Islands	2020	30	49	>99	<1	<1	<1	0.23	-	-	-	-	-	-	-	-	-	-		
Brunei Darussalam	2015	415	77	>99	<1	<1	<1	0.00	>99	<1	<1	<1	-	>99	<1	<1	<1	0.00		
Brunei Darussalam	2020	437	78	>99	<1	<1	<1	0.00	-	-	-	-	-	>99	<1	<1	<1	0.00		
Bulgaria	2015	7 200	74	>99	<1	<1	<1	-0.04	98	<1	2	<1	-0.12	>99	<1	<1	<1	-0.02		
Bulgaria	2020	6 948	76	>99	<1	<1	<1	-0.04	97	<1	3	<1	-0.12	>99	<1	<1	<1	-0.02		
Burkina Faso	2015	18 111	28	50	26	22	2	-0.54	39	30	29	2	-1.04	80	14	6	<1	0.05		
Burkina Faso	2020	20 903	31	47	31	21	<1	-0.54	33	39	28	<1	-1.04	80	15	5	<1	0.05		
Burundi	2015	10 160	12	60	20	15	6	0.58	56	21	17	7	0.49	89	8	2	1	0.43		
Burundi	2020	11 891	14	62	19	15	4	0.58	58	21	17	4	0.49	91	8	1	<1	0.43		
Cabo Verde	2015	525	64	85	10	4	<1	0.48	73	16	10	<1	0.50	92	7	<1	<1	0.31		
Cabo Verde	2020	556	67	89	8	3	<1	0.48	80	10	10	<1	0.50	93	7	<1	<1	0.31		
Cambodia	2015	15 521	22	68	9	10	13	0.93	63	9	12	16	0.91	89	6	2	4	0.62		
Cambodia	2020	16 719	24	71	14	6	9	0.93	65	16	7	12	0.91	90	9	<1	<1	0.62		
Cameroon	2015	23 298	55	64	11	18	7	0.41	42	11	32	15	0.34	82	11	5	<1	-0.02		
Cameroon	2020	26 546	58	66	13	15	6	0.41	44	13	30	14	0.34	82	13	4	1	-0.02		
Canada	2015	36 027	81	>99	<1	<1	<1	-0.00	99	<1	1	<1	0.05	>99	<1	<1	<1	-0.01		
Canada	2020	37 742	82	>99	<1	<1	<1	-0.00	>99	<1	<1	<1	0.05	>99	<1	<1	<1	-0.01		
Cayman Islands	2015	62	100	96	<1	4	<1	-	-	-	-	-	-	96	<1	4	<1	-		
Cayman Islands	2016	63	100	96	<1	4	<1	-	-	-	-	-	-	96	<1	4	<1	-		
Central African Republic	2015	4 493	40	42	21	32	4	-1.09	32	17	44	7	-0.82	58	27	15	<1	-1.68		
Central African Republic	2020	4 830	42	37	26	34	4	-1.09	28	19	46	6	-0.82	50	34	16	<1	-1.68		
Chad	2015	14 111	23	44	14	35	7	0.33	36	14	41	9	0.39	75	12	12	<1	-0.04		
Chad	2020	16 426	24	46	15	32	8	0.33	38	14	39	10	0.39	74	16	9	<1	-0.04		
Channel Islands	2015	165	31	94	<1	6	<1	-	-	-	-	-	-	-	-	-	-	-		
Channel Islands	2017	169	31	94	<1	6	<1	-	-	-	-	-	-	-	-	-	-	-		
Chile	2015	17 969	87	>99	<1	<1	<1	0.21	97	<1	3	<1	1.25	>99	<1	<1	<1	0.04		
Chile	2020	19 116	88	>99	<1	<1	<1	0.21	>99	<1	<1	<1	1.25	>99	<1	<1	<1	0.04		
China	2015	1 430 405	56	92	<1	7	<1	0.69	84	2	13	1	0.98	98	<1	2	<1	-0.07		
China	2020	1 463 141	62	94	<1	5	<1	0.69	90	2	9	<1	0.98	97	<1	2	<1	-0.07		
China, Hong Kong SAR	2015	7 186	100	>99	<1	<1	<1	0.06	-	-	-	-	-	>99	<1	<1	<1	0.06		
China, Hong Kong SAR	2020	7 497	100	>99	<1	<1	<1	0.06	-	-	-	-	-	>99	<1	<1	<1	0.06		

COUNTRY, AREA OR TERRITORY	Year	NATIONAL					RURAL					URBAN							
		Proportion of population using improved water supplies					Proportion of population using improved water supplies					Proportion of population using improved water supplies							
		Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped
Belize	2015	-	95	-	-	83	15	-	93	-	-	75	22	-	98	-	-	93	7
Belize	2020	-	97	-	-	87	13	-	96	-	-	79	20	-	98	-	-	96	4
Benin	2015	-	29	57	-	38	35	-	14	53	-	26	43	-	46	61	-	53	26
Benin	2020	-	25	58	-	37	38	-	10	55	-	26	45	-	40	61	-	49	30
Bermuda	2015	-	>99	-	-	>99	<1	-	-	-	-	-	-	-	>99	-	-	>99	<1
Bermuda	2020	-	>99	-	-	>99	<1	-	-	-	-	-	-	-	>99	-	-	>99	<1
Bhutan	2015	36	86	86	36	98	1	27	82	87	27	97	2	49	92	85	49	>99	<1
Bhutan	2020	37	88	87	37	>99	<1	28	83	89	28	>99	<1	49	96	85	49	>99	<1
Bolivia (Plurinational State of)	2015	-	83	-	-	70	20	-	57	-	-	32	42	-	95	81	-	88	10
Bolivia (Plurinational State of)	2020	-	86	-	-	69	25	-	62	-	-	26	54	-	96	80	-	87	13
Bosnia and Herzegovina	2015	89	91	89	92	95	5	-	92	88	-	93	7	-	90	90	-	98	2
Bosnia and Herzegovina	2020	89	91	89	90	-	-	-	92	88	-	-	-	-	90	90	-	-	-
Botswana	2015	-	76	-	-	90	6	-	45	-	-	77	17	83	92	-	83	97	1
Botswana	2020	-	82	-	-	91	6	-	50	-	-	76	18	83	95	-	83	96	2
Brazil	2015	82	97	90	82	96	2	63	82	77	63	79	13	85	99	92	85	99	<1
Brazil	2020	86	>99	91	86	98	1	72	96	81	72	88	9	88	>99	92	88	>99	<1
British Virgin Islands	2015	-	98	-	-	96	4	-	-	-	-	-	-	-	-	-	-	-	-
British Virgin Islands	2020	-	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunei Darussalam	2015	-	>99	-	-	>99	<1	-	99	-	-	99	<1	-	>99	-	-	>99	<1
Brunei Darussalam	2020	-	-	-	-	>99	<1	-	-	-	-	-	-	-	>99	-	-	>99	<1
Bulgaria	2015	97	99	97	97	>99	<1	-	96	-	-	98	<1	-	>99	-	-	>99	<1
Bulgaria	2020	98	98	98	99	>99	<1	-	96	-	-	97	<1	-	>99	-	-	>99	<1
Burkina Faso	2015	-	15	54	-	27	49	-	2	53	-	8	61	-	49	58	-	76	18
Burkina Faso	2020	-	20	56	-	28	50	-	3	54	-	8	63	-	58	58	-	74	21
Burundi	2015	-	9	-	-	33	46	-	3	-	-	25	51	-	55	50	-	88	9
Burundi	2020	-	11	-	-	38	43	-	3	-	-	30	49	-	58	51	-	91	8
Cabo Verde	2015	-	82	-	-	85	11	-	73	-	-	73	17	-	87	-	-	92	7
Cabo Verde	2020	-	88	-	-	90	7	-	80	-	-	76	14	-	92	-	-	97	3
Cambodia	2015	25	48	-	25	25	52	16	41	-	16	12	60	54	71	-	54	69	26
Cambodia	2020	28	48	-	28	32	53	18	42	-	18	17	64	57	68	-	57	80	20
Cameroon	2015	-	27	47	-	37	38	-	6	-	-	11	42	-	44	48	-	60	34
Cameroon	2020	-	35	49	-	36	43	-	8	-	-	10	46	-	55	49	-	55	40
Canada	2015	99	99	-	>99	>99	<1	-	98	-	-	99	<1	-	>99	-	-	>99	<1
Canada	2020	>99	>99	-	>99	>99	<1	-	99	-	-	>99	&						

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)		% urban		NATIONAL					RURAL					URBAN				
						At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic
Eswatini	2015	1 104	23	67	9	11	14	0.87	58	11	13	17	0.96	95	<1	2	2	0.47		
Eswatini	2020	1 160	24	71	10	10	10		62	12	12	13		97	<1	2	<1			
Ethiopia	2015	100 835	19	42	22	24	12	1.58	32	24	30	14	1.59	82	14	2	2	0.45		
Ethiopia	2020	114 964	22	50	27	19	5		40	30	23	6		84	14	1	<1			
Faeroe Islands	2015	48	42	>99	<1	<1	<1	0.00	-	-	-	-	-	-	-	-	-	-		
Faeroe Islands	2020	49	42	>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-		
Falkland Islands (Malvinas)	2015	3	76	95	<1	5	<1	-	78	<1	22	<1	-	>99	<1	<1	<1	0.00		
Falkland Islands (Malvinas)	2020	3	79	95	<1	5	<1		78	<1	22	<1		>99	<1	<1	<1			
Fiji	2015	869	55	94	<1	3	2	-0.00	89	<1	6	5	-0.06	98	<1	1	<1	-0.02		
Fiji	2020	896	57	94	<1	3	2		89	<1	6	5		98	<1	1	<1			
Finland	2015	5 481	85	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00		
Finland	2020	5 541	86	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1			
France	2015	64 453	80	>99	<1	<1	<1	0.01	>99	<1	<1	<1	0.02	>99	<1	<1	<1	0.00		
France	2020	65 274	81	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1			
French Guiana	2015	261	84	94	<1	6	<1	-	-	-	-	-	-	-	-	-	-	-		
French Guiana	2020	299	86	94	<1	6	<1		-	-	-	-	-	-	-	-	-	-		
French Polynesia	2015	273	62	>99	<1	<1	<1	0.00	-	-	-	-	-	-	-	-	-	-		
French Polynesia	2020	281	62	>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-		
Gabon	2015	1 948	88	84	8	5	3	0.22	43	10	22	25	0.09	89	7	3	<1	-0.06		
Gabon	2020	2 226	90	85	8	7	-		45	11	45	-		90	7	3	-			
Gambia	2015	2 086	59	79	9	12	<1	0.36	68	15	16	<1	0.20	87	5	8	<1	0.24		
Gambia	2020	2 417	63	81	9	10	<1		69	16	14	<1		88	4	8	<1			
Georgia	2015	4 024	57	96	<1	3	<1	0.18	91	2	7	<1	0.30	>99	<1	<1	<1	0.04		
Georgia	2020	3 989	59	97	<1	3	<1		94	<1	6	<1		>99	<1	<1	<1			
Germany	2015	81 787	77	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00		
Germany	2020	83 784	77	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1			
Ghana	2015	27 849	54	80	8	4	8	1.10	67	11	6	15	0.94	91	5	3	<1	0.93		
Ghana	2020	31 073	57	86	7	3	5		72	12	5	11		96	3	1	<1			
Gibraltar	2015	34	100	>99	<1	<1	<1	0.00	-	-	-	-	-	>99	<1	<1	<1	0.00		
Gibraltar	2020	34	100	>99	<1	<1	<1		-	-	-	-	-	>99	<1	<1	<1			
Greece	2015	10 660	78	>99	<1	<1	<1	0.02	>99	<1	<1	<1	0.05	>99	<1	<1	<1	0.00		
Greece	2020	10 423	80	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1			
Greenland	2015	56	86	>99	<1	<1	<1	-0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00		
Greenland	2020	57	87	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1			
Grenada	2015	110	36	96	1	<1	3	-	-	-	-	-	-	-	-	-	-	-		
Grenada	2017	111	36	96	1	<1	3		-	-	-	-	-	-	-	-	-	-		
Guadeloupe	2015	400	98	>99	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-		
Guadeloupe	2020	400	98	>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-		
Guam	2015	162	95	>99	<1	<1	<1	0.01	-	-	-	-	-	-	-	-	-	-		
Guam	2020	169	95	>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-		
Guatemala	2015	16 252	50	92	<1	5	2	0.38	87	2	7	4	0.55	97	<1	2	<1	0.12		
Guatemala	2020	17 916	52	94	1	3	2		90	2	5	3		98	<1	2	<1			
Guinea	2015	11 432	35	64	16	10	11	0.54	52	19	13	16	0.43	85	11	3	<1	0.44		
Guinea	2020	13 133	37	64	21	6	8		51	26	10	13		87	13	<1	<1			
Guinea-Bissau	2015	1 737	42	59	11	30	<1	0.15	48	8	43	1	0.32	73	15	12	<1	-0.38		
Guinea-Bissau	2020	1 968	44	59	14	27	<1		50	9	40	<1		71	20	9	<1			
Guyana	2015	767	26	95	1	1	2	0.38	93	2	2	3	0.40	>99	<1	<1	<1	0.35		
Guyana	2020	787	27	96	1	1	2		94	2	2	3		>99	<1	<1	<1			

COUNTRY, AREA OR TERRITORY	Year	NATIONAL						RURAL					URBAN						
		Proportion of population using improved water supplies						Proportion of population using improved water supplies					Proportion of population using improved water supplies						
		Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped
Eswatini	2015	-	47	-	-	57	18	-	34	-	-	47	22	87	90	96	87	91	5
Eswatini	2020	-	51	-	-	61	20	-	37	-	-	50	25	89	93	97	89	93	4
Ethiopia	2015	10	15	52	13	35	29	3	3	51	7	22	34	38	64	57	38	87	9
Ethiopia	2020	13	20	64	15	41	35	5	5	63	9	28	42	39	75	67	39	88	11
Faeroe Islands	2015	-	>99	-	-	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Faeroe Islands	2020	-	>99	-	-	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Falkland Islands (Malvinas)	2015	-	92	-	-	90	5	-	67	-	-	56	22	-	>99	-	-	>99	<1
Falkland Islands (Malvinas)	2020	-	93	-	-	91	5	-	67	-	-	56	22	-	>99	-	-	>99	<1
Fiji	2015	-	71	94	-	84	10	-	43	-	-	68	21	-	95	-	-	97	1
Fiji	2020	-	71	94	-	83	11	-	39	-	-	65	24	-	94	-	-	97	<1
Finland	2015	>99	>99	-	>99	>99	<1	-	98	-	-	>99	<1	-	>99	-	-	>99	<1
Finland	2020	>99	>99	-	>99	>99	<1	-	98	-	-	>99	<1	-	>99	-	-	>99	<1
France	2015	99	>99	-	99	>99	<1	-	>99	-	-	>99	<1	>99	>99	-	>99	>99	<1
France	2020	>99	>99	-	>99	>99	<1	-	>99	-	-	>99	<1	>99	>99	-	>99	>99	<1
French Guiana	2015	90	90	-	93	87	6	-	-	-	-	-	-	-	-	-	-	-	-
French Guiana	2020	91	91	-	93	88	6	-	-	-	-	-	-	-	-	-	-	-	-
French Polynesia	2015	88	97	-	88	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
French Polynesia	2020	84	98	-	84	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Gabon	2015	-	69	-	-	82	10	-	18	-	-	17	36	-	76	-	-	90	6
Gabon	2020	-	71	-	-	82	11	-	19	-	-	15	40	-	76	-	-	89	8
Gambia	2015	39	39	76	53	72	16	7	7	68	33	55	28	62	62	82	67	84	7
Gambia	2020	45	45	78	54	77	13	8	8	70	33	65	21	67	68	82	67	84	8
Georgia	2015	65	96	78	68	79	18	40	91	69	40	58	35	84	>99	84	89	94	5
Georgia	2020	66	97	78	69	82	15	40	94	70	40	62	32	84	>99	84	89	96	3
Germany	2015	>99	>99	>99	>99	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1
Germany	2020	>99	>99	>99	>99	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1
Ghana	2015	33	33	77	53	37	51	11	11	70	43	23	55	52	52	83	62	50	47
Ghana	2020	41	41	85	55	35	58	16	16	76	45	26	58	60	60	91	62	41	58
Gibraltar	2015	>99	>99	-	>99	>99	<1	-	-	-	-	-	-	>99	>99	-	>99	>99	<1
Gibraltar	2020	>99	>99	-	>99	>99	<1	-	-	-	-	-	-	>99	>99	-	>99	>99	<1
Greece	2015	>99	>99	-	>99	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1
Greece	2020	>99	>99	-	>99	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1
Greenland	2015	97	97	-	>99	>99	<1	-	98	-	-	>99	<1	-	97	-	-	>99	<1
Greenland	2020	97	97	-	>99	>99	<1	-	98	-	-	>99	<1	-	97	-	-	>99	<1
Grenada	2015	87	90	92	87	92	4	-	-	-	-	-	-	-	-	-	-	-	-
Grenada	2017	87	90	92	87	92	4	-	-	-	-	-</							

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					RURAL					URBAN				
				At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic
				Haiti	2015	10 696	52	65	9	25	<1	0.52	42	12	44	2	0.12	85
	2020	11 403	57	67	10	23	<1	0.52	43	13	44	<1	0.12	85	7	8	<1	-0.01
Honduras	2015	9 113	55	93	<1	6	<1	0.53	86	<1	12	<1	0.66	99	<1	1	<1	0.22
	2020	9 905	58	96	<1	4	<1	0.53	90	<1	9	<1	0.66	>99	<1	<1	<1	0.22
Hungary	2015	9 778	71	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.01	>99	<1	<1	<1	0.00
	2020	9 660	72	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.01	>99	<1	<1	<1	0.00
Iceland	2015	330	94	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00
	2020	341	94	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00
India	2015	1 310 152	33	88	5	6	<1	0.50	86	6	8	1	0.65	93	3	3	<1	0.06
	2020	1 380 004	35	90	5	4	<1	0.50	89	6	5	<1	0.65	94	3	3	<1	0.06
Indonesia	2015	258 383	53	89	<1	9	2	0.85	81	<1	15	3	1.02	95	<1	4	<1	0.43
	2020	273 524	57	92	<1	6	1	0.85	86	1	11	3	1.02	98	<1	2	<1	0.43
Iran (Islamic Republic of)	2015	78 492	73	97	2	1	<1	0.17	92	4	3	<1	0.33	98	1	<1	<1	0.03
	2020	83 993	76	97	2	<1	<1	0.17	94	4	2	<1	0.33	99	1	<1	<1	0.03
Iraq	2015	35 572	70	94	1	2	3	0.88	85	3	3	10	2.04	98	<1	1	<1	0.33
	2020	40 223	71	98	<1	<1	<1	0.88	95	3	<1	3	2.04	>99	<1	<1	<1	0.33
Ireland	2015	4 652	63	97	<1	3	<1	0.01	98	<1	2	<1	0.04	97	<1	3	<1	-0.00
	2020	4 938	64	97	<1	3	<1	0.01	98	<1	2	<1	0.04	97	<1	3	<1	-0.00
Isle of Man	2015	83	52	>99	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-
	2020	85	53	>99	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-
Israel	2015	7 978	92	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00
	2020	8 656	93	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00
Italy	2015	60 578	70	>99	<1	<1	<1	0.02	-	-	-	-	-	-	-	-	-	-
	2020	60 462	71	>99	<1	<1	<1	0.02	-	-	-	-	-	-	-	-	-	-
Jamaica	2015	2 891	55	90	5	2	2	-0.11	85	8	3	4	-0.14	95	3	1	<1	-0.12
	2020	2 961	56	91	5	2	2	-0.11	85	8	3	4	-0.14	95	3	1	<1	-0.12
Japan	2015	127 985	91	99	<1	1	<1	0.03	-	-	-	-	-	-	-	-	-	-
	2020	126 476	92	>99	<1	<1	<1	0.03	-	-	-	-	-	-	-	-	-	-
Jordan	2015	9 267	90	>99	<1	<1	<1	-0.00	97	<1	2	<1	-0.01	>99	<1	<1	<1	-0.02
	2020	10 203	91	99	<1	<1	<1	-0.00	97	<1	2	<1	-0.01	>99	<1	<1	<1	-0.02
Kazakhstan	2015	17 572	57	95	2	3	<1	0.26	91	2	7	<1	0.50	98	2	<1	<1	0.07
	2020	18 777	58	95	2	3	<1	0.26	92	2	6	<1	0.50	98	2	<1	<1	0.07
Kenya	2015	47 878	26	58	9	12	21	0.72	48	10	14	27	0.72	87	4	4	5	0.00
	2020	53 771	28	62	10	10	19	0.72	52	12	13	24	0.72	87	4	3	6	0.00
Kiribati	2015	111	52	74	2	24	<1	0.91	58	2	40	<1	0.65	89	3	8	<1	0.80
	2020	119	56	78	4	18	<1	0.91	61	2	37	<1	0.65	92	6	3	<1	0.80
Kuwait	2015	3 836	100	>99	<1	<1	<1	0.00	-	-	-	-	-	-	-	-	-	-
	2020	4 271	100	>99	<1	<1	<1	0.00	-	-	-	-	-	-	-	-	-	-
Kyrgyzstan	2015	5 959	36	88	2	2	8	0.59	83	2	3	11	0.77	98	<1	<1	1	0.24
	2020	6 524	37	92	2	2	5	0.59	87	3	3	7	0.77	>99	<1	<1	<1	0.24
Lao People's Democratic Republic	2015	6 741	33	77	3	14	5	1.95	70	4	18	7	2.05	92	<1	6	<1	1.02
	2020	7 276	36	85	4	11	<1	1.95	78	6	15	<1	2.05	97	<1	3	<1	1.02
Latvia	2015	1 998	68	99	<1	<1	<1	0.05	98	<1	2	<1	0.14	99	<1	<1	<1	0.01
	2020	1 886	68	99	<1	<1	<1	0.05	99	<1	1	<1	0.14	99	<1	<1	<1	0.01
Lebanon	2015	6 533	88	91	7	1	<1	0.34	-	-	-	-	-	-	-	-	-	-
	2020	6 825	89	93	7	<1	<1	0.34	-	-	-	-	-	-	-	-	-	-
Lesotho	2015	2 059	27	71	11	15	4	0.30	63	13	18	5	0.05	90	5	5	<1	0.61
	2020	2 142	29	72	10	12	5	0.30	64	14	16	7	0.05	93	3	4	<1	0.61

COUNTRY, AREA OR TERRITORY	Year	NATIONAL					RURAL					URBAN							
		Proportion of population using improved water supplies					Proportion of population using improved water supplies					Proportion of population using improved water supplies							
		Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped
Haiti	2015	-	11	61	-	26	48	-	8	44	-	25	29	-	14	78	-	26	65
	2020	-	8	64	-	19	57	-	7	45	-	24	32	-	8	78	-	15	77
Honduras	2015	-	87	60	-	89	5	18	76	66	18	80	8	-	96	54	-	96	3
	2020	-	89	60	-	92	5	19	77	69	19	84	6	-	97	55	-	97	3
Hungary	2015	92	>99	>99	92	>99	<1	89	>99	>99	89	99	<1	94	>99	>99	94	>99	<1
	2020	93	>99	>99	93	>99	<1	89	>99	>99	89	>99	<1	94	>99	>99	94	>99	<1
Iceland	2015	99	>99	-	99	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1
	2020	>99	>99	-	>99	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1
India	2015	-	59	67	-	44	49	51	51	61	66	32	59	-	76	78	-	68	28
	2020	-	66	62	-	44	52	56	59	56	79	32	63	-	78	73	-	66	31
Indonesia	2015	-	65	81	-	29	60	-	56	73	-	17	65	-	72	88	-	41	55
	2020	-	66	85	-	35	59	-	60	78	-	21	65	-	72	90	-	45	54
Iran (Islamic Republic of)	2015	93	93	-	97	98	1	86	86	-	92	93	3	96	96	-	98	>99	<1
	2020	94	94	-	97	99	<1	87	87	-	94	96	2	96	96	-	98	>99	<1
Iraq	2015	57	88	67	57	82	14	43	75	53	43	64	23	64	94	73	64	89	10
	2020	60	94	74	60	83	16	48	93	62	48	72	25	65	95	78	65	88	12
Ireland	2015	97	97	-	97	97	<1	-	98	-	-	98	<1	-	97	-	-	97	<1
	2020	97	97	-	97	97	<1	-	98	-	-	98	<1	-	97	-	-	97	<1
Isle of Man	2015	97	97	-	>99	98	<1	-	-	-	-	-	-	-	-	-	-	-	-
	2020	97	97	-	>99	98	<1	-	-	-	-	-	-	-	-	-	-	-	-
Israel	2015	>99	>99	-	>99	>99	<1	>99	>99	-	>99	>99	<1	>99	>99	-	>99	>99	<1
	2020	>99	>99	-	>99	>99	<1	>99	>99	-	>99	>99	<1	>99	>99	-	>99	>99	<1
Italy	2015	96	98	-	96</														

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)		NATIONAL					RURAL					URBAN				
				At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic
Myanmar	2015	52 681	30	74	7	8	11	1.84	67	8	10	15	1.98	88	4	4	4	1.32
	2020	54 410	31	84	2	5	10		78	2	7	13		95	<1	2	3	
Namibia	2015	2 315	47	83	7	4	6	0.40	70	12	8	11	0.26	97	2	<1	<1	-0.09
	2020	2 541	52	84	7	4	5		71	12	7	10		96	3	<1	<1	
Nauru	2015	10 100		>99	<1	<1	<1	0.23	-	-	-	-	-	>99	<1	<1	<1	0.23
	2020	11 100		>99	<1	<1	<1		-	-	-	-	-	>99	<1	<1	<1	
Nepal	2015	27 015	19	88	3	7	2	0.51	87	3	8	2	0.61	90	3	6	1	-0.14
	2020	29 137	21	90	4	5	1		90	4	4	1		90	3	6	<1	
Netherlands	2015	16 938	90	>99	<1	<1	<1	-0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00
	2020	17 135	92	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1	
New Caledonia	2015	271 69		98	<1	2	<1	0.21	-	-	-	-	-	-	-	-	-	-
	2020	285 72		>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-
New Zealand	2015	4 615	86	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00
	2020	4 822	87	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1	
Nicaragua	2015	6 223	58	81	1	14	3	0.05	60	3	30	8	-0.21	97	<1	2	<1	0.14
	2020	6 625	59	82	2	14	3		59	4	30	8		97	<1	2	<1	
Niger	2015	20 002	16	45	16	35	4	0.50	37	18	41	4	0.65	88	8	3	1	-0.34
	2020	24 207	17	47	22	27	4		39	24	32	5		86	10	2	2	
Nigeria	2015	181 137	48	69	7	15	10	1.72	53	7	23	16	1.56	85	6	6	3	1.27
	2020	206 140	52	78	5	12	6		62	7	21	10		92	3	3	1	
Niue	2015	2 43		98	<1	2	<1	-0.11	-	-	-	-	-	-	-	-	-	-
	2020	2 46		97	<1	3	<1		-	-	-	-	-	-	-	-	-	-
North Macedonia	2015	2 079	57	97	2	<1	<1	0.04	98	1	1	<1	-0.03	97	2	<1	<1	0.09
	2020	2 083	58	98	2	<1	<1		97	2	<1	<1		98	2	<1	<1	
Northern Mariana Islands	2015	56 91		>99	<1	<1	<1	0.16	-	-	-	-	-	-	-	-	-	-
	2020	58 92		>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-
Norway	2015	5 200	81	>99	<1	<1	<1	-0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00
	2020	5 421	83	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1	
occupied Palestinian territory*	2015	4 529	75	96	<1	3	-	0.36	95	<1	4	-	0.58	97	<1	3	-	0.28
	2020	5 101	77	98	1	1	-		99	<1	<1	-		98	1	1	-	
Oman	2015	4 267	81	90	8	1	<1	0.33	74	21	4	<1	0.30	94	5	<1	<1	0.15
	2020	5 107	86	92	8	<1	<1		76	22	2	<1		95	5	<1	<1	
Pakistan	2015	199 427	36	89	4	4	2	0.15	87	4	5	4	0.29	94	3	3	<1	-0.16
	2020	220 892	37	90	4	4	2		89	4	5	2		93	4	3	<1	
Palau	2015	18 78		>99	<1	<1	<1	0.02	>99	<1	<1	<1	0.06	>99	<1	<1	<1	-0.00
	2020	18 81		>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1	
Panama	2015	3 968	67	93	2	3	2	0.24	84	2	8	6	0.45	98	2	<1	<1	0.05
	2020	4 315	68	94	2	2	1		86	2	7	5		98	2	<1	<1	
Papua New Guinea	2015	8 108	13	41	2	21	35	0.61	35	2	23	40	0.68	85	2	8	5	0.12
	2020	8 947	13	45	2	22	30		39	2	24	34		86	<1	7	6	
Paraguay	2015	6 689	61	97	<1	3	<1	1.20	93	<1	6	<1	2.29	>99	<1	<1	<1	0.31
	2020	7 133	62	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1	
Peru	2015	30 471	77	90	<1	6	3	0.63	73	2	13	12	1.50	95	<1	4	<1	0.26
	2020	32 972	78	93	<1	4	2		81	2	10	8		97	<1	3	<1	
Philippines	2015	102 113	46	92	3	5	<1	0.41	88	4	7	<1	0.57	96	2	2	<1	0.21
	2020	109 581	47	94	3	3	<1		91	4	5	<1		97	2	<1	<1	
Poland	2015	38 034	60	>99	<1	<1	<1	-	99	<1	1	<1	-	>99	<1	<1	<1	-
	2020	37 847	60	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1	

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

COUNTRY, AREA OR TERRITORY	Year	NATIONAL						RURAL					URBAN						
		Proportion of population using improved water supplies						Proportion of population using improved water supplies					Proportion of population using improved water supplies						
		Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped
Myanmar	2015	51	53	70	55	27	53	43	43	64	49	15	61	71	78	86	71	56	37
	2020	59	64	75	59	33	52	52	53	68	52	18	63	74	88	89	74	66	29
Namibia	2015	-	59	-	-	79	11	-	44	-	-	63	19	-	76	-	-	97	2
	2020	-	62	-	-	81	10	-	48	-	-	64	19	-	75	-	-	97	2
Nauru	2015	-	>99	-	-	53	47	-	-	-	-	-	-	-	>99	-	-	53	47
	2020	-	>99	-	-	-	-	-	-	-	-	-	-	-	>99	-	-	-	-
Nepal	2015	25	62	77	25	49	42	24	59	77	24	47	43	33	74	78	33	56	37
	2020	18	69	78	18	50	44	16	67	78	16	49	45	25	74	78	25	53	40
Netherlands	2015	>99	>99	-	>99	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1
	2020	>99	>99	-	>99	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1
New Caledonia	2015	96	96	-	96	96	2	-	-	-	-	-	-	-	-	-	-	-	-
	2020	97	>99	-	97	99	<1	-	-	-	-	-	-	-	-	-	-	-	-
New Zealand	2015	96	>99	-	96	>99	<1	-	>99	-	-	>99	<1	-	>99	>99	-	>99	<1
	2020	>99	>99	-	>99	>99	<1	-	>99	-	-	>99	<1	-	>99	>99	-	>99	<1
Nicaragua	2015	55	78	55	73	69	14	39	51	39	42	33	30	67	97	67	95	95	2
	2020	56	79	56	78	70	13	39	54	39	52	33	30	67	97	67	96	95	2
Niger	2015	-	15	29	-	34	27	-	6	26	-	24	31	-	59	48	-	90	6
	2020	-	17	33	-	40	29	-	8	30	-	29	34	-	66	48	-	94	2
Nigeria	2015	20	25	61	22	13	63	16	16	46	20	8	53	24	35	78	24	18	74
	2020	22	29	67	24	10	72	18	18	52	23	8	61	25	40	81	25	12	83
Niue	2015	95	95	98	97	95	3	-	-	-	-	-	-	-	-	-	-	-	-
	2020	94	94	97	96	97	<1	-	-	-	-	-	-	-	-	-	-	-	-
North Macedonia	2015	80	95	80	88	92	7	75	94	75	75	83	16	85	97	85	99	99	<1
	2020	77	96	80	85	92	7	66	93	75	66	82	17	85	98	85	98	>99	<1
Northern Mariana Islands	2015	89	95	89	97	91	9	-	-	-	-	-	-	-	-	-	-	-	-
	2020	91	94	91	91	90	10	-	-	-	-	-	-	-	-	-	-	-	-
Norway	2015	>99	>99	-	>99	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1
	2020	99	>99	-	99	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1
occupied Palestinian territory*	2015	78	89	87	78	62	34	74	92	88	74	83	13	80	88	87	80	56	41
	2020	80	92	88	80	54	45	76	98	86	76	87	12	81	90	88	81	44	55
Oman	2015	89	89	-	96	90	9	-	72	-	-	78	18	-	92	>99	-	93	7
	2020	91	91	-	>99	96	4	-	73	-	-	84	13	-	93	>99	-	97	3
Pakistan	2015	36	76	79	36	29	64	33	74	77	33	16	75	42	79	82	42	51	46
	2020	36	71	79	36	26	68	33	72	78	33	15	78	40	71	82	40	45	52
Palau	2015	88	88	>99	97	78	21	68	68	-	88	45	55	93	93	>99	>99	88	12

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					RURAL					URBAN				
				At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic
Portugal	2015	10 368	64	>99	<1	<1	<1	0.07	>99	<1	<1	<1	0.06	>99	<1	<1	<1	0.07
Portugal	2020	10 197	66	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1	
Puerto Rico	2015	3 382	94	>99	<1	<1	<1	0.14	-	-	-	-	-	-	-	-	-	-
Puerto Rico	2020	2 861	94	>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-
Qatar	2015	2 566	99	>99	<1	<1	<1	-0.02	-	-	-	-	-	-	-	-	-	-
Qatar	2020	2 881	99	>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-
Republic of Korea	2015	50 823	82	>99	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-
Republic of Korea	2020	51 269	81	>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-
Republic of Moldova	2015	4 071	42	89	1	10	<1	0.37	83	1	16	<1	0.60	97	2	2	<1	0.11
Republic of Moldova	2020	4 034	43	91	2	8	<1		85	2	13	<1		97	2	1	<1	
Réunion	2015	863	99	>99	<1	<1	<1	0.02	-	-	-	-	-	-	-	-	-	-
Réunion	2020	895	100	>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-
Romania	2015	19 925	54	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00
Romania	2020	19 238	54	>99	<1	<1	<1		>99	<1	<1	<1		>99	<1	<1	<1	
Russian Federation	2015	144 985	74	97	<1	3	-	0.09	90	2	8	-	0.27	99	<1	<1	<1	0.01
Russian Federation	2020	145 934	75	97	<1	2	-		92	2	7	-		99	<1	<1	<1	
Rwanda	2015	11 369	17	57	22	13	7	0.76	52	25	15	8	0.75	80	10	6	3	0.60
Rwanda	2020	12 952	17	60	22	13	4		56	25	15	4		83	9	5	2	
Saint Barthelemy	2015	10 100	100	>99	<1	<1	<1	0.03	-	-	-	-	-	>99	<1	<1	<1	0.03
Saint Barthelemy	2020	10 100	100	>99	<1	<1	<1		-	-	-	-	-	>99	<1	<1	<1	
Saint Helena	2015	6 40	40	99	<1	1	<1	-	-	-	-	-	-	-	-	-	-	-
Saint Helena	2020	6 40	40	>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-
Saint Kitts and Nevis	2015	51 31	31	99	<1	1	<1	-	-	-	-	-	-	-	-	-	-	-
Saint Kitts and Nevis	2017	52 31	31	99	<1	1	<1		-	-	-	-	-	-	-	-	-	-
Saint Lucia	2015	179 19	19	96	2	3	<1	0.33	95	2	3	<1	0.40	97	2	1	<1	0.14
Saint Lucia	2020	184 19	19	97	2	1	<1		97	2	1	<1		97	2	<1	<1	
Saint Martin (French part)	2015	36 100	100	>99	<1	<1	<1	-0.00	-	-	-	-	-	>99	<1	<1	<1	-0.00
Saint Martin (French part)	2020	39 100	100	>99	<1	<1	<1		-	-	-	-	-	>99	<1	<1	<1	
Saint Pierre and Miquelon	2015	6 90	90	91	<1	9	<1	-	-	-	-	-	-	-	-	-	-	-
Saint Pierre and Miquelon	2020	6 90	90	91	<1	9	<1		-	-	-	-	-	-	-	-	-	-
Saint Vincent and the Grenadines	2015	109 51	51	95	<1	4	<1	-	-	-	-	-	-	-	-	-	-	-
Saint Vincent and the Grenadines	2018	110 52	52	95	<1	5	-		-	-	-	-	-	-	-	-	-	-
Samoa	2015	194 19	19	91	6	2	<1	0.15	91	6	2	<1	0.09	91	8	<1	<1	0.38
Samoa	2020	198 18	18	92	7	1	<1		92	6	2	<1		92	8	<1	<1	
San Marino	2015	33 97	97	>99	<1	<1	<1	0.00	-	-	-	-	-	-	-	-	-	-
San Marino	2020	34 97	97	>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-
Sao Tome and Principe	2015	199 70	70	77	18	2	3	0.51	71	17	4	8	0.66	80	19	<1	<1	0.27
Sao Tome and Principe	2020	219 74	74	78	20	<1	1		74	20	2	4		80	20	<1	<1	
Saudi Arabia	2015	31 718	83	>99	<1	<1	<1	0.13	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	2020	34 814	84	>99	<1	<1	<1		-	-	-	-	-	-	-	-	-	-
Senegal	2015	14 578	46	79	3	18	<1	1.26	66	5	28	<1	1.75	94	1	5	<1	0.35
Senegal	2020	16 744	48	85	2	13	<1		75	4	21	<1		95	<1	4	<1	
Serbia	2015	8 877	56	93	6	<1	<1	0.30	95	5	<1	<1	0.18	92	7	<1	<1	0.41
Serbia	2020	8 737	56	95	4	<1	<1		96	4	<1	<1		95	5	<1	<1	
Seychelles	2015	95 55	55	96	<1	<1	4	-	-	-	-	-	-	-	-	-	-	-
Seychelles	2019	98 57	57	97	<1	3	-		-	-	-	-	-	-	-	-	-	-
Sierra Leone	2015	7 172	41	58	8	16	18	1.16	46	5	22	28	1.35	76	13	7	4	0.55
Sierra Leone	2020	7 977	43	64	9	16	12		53	5	23	19		78	14	5	2	

COUNTRY, AREA OR TERRITORY	Year	NATIONAL					RURAL					URBAN							
		Proportion of population using improved water supplies					Proportion of population using improved water supplies					Proportion of population using improved water supplies							
		Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped
Portugal	2015	95	>99	95	98	>99	<1	92	99	92	97	>99	<1	98	>99	98	99	>99	<1
Portugal	2020	95	>99	95	98	>99	<1	93	99	93	97	>99	<1	97	>99	97	99	>99	<1
Puerto Rico	2015	96	99	96	>99	99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	2020	>99	>99	>99	>99	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Qatar	2015	96	96	>99	97	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Qatar	2020	96	96	>99	96	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Republic of Korea	2015	99	99	>99	99	98	2	-	-	-	-	-	-	-	-	-	-	-	-
Republic of Korea	2020	>99	>99	>99	>99	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Republic of Moldova	2015	72	72	87	76	63	27	-	61	82	-	42	42	-	88	93	-	90	8
Republic of Moldova	2020	74	74	89	76	72	20	-	63	85	-	57	30	-	89	94	-	93	6
Réunion	2015	97	>99	-	97	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Réunion	2020	94	>99	-	94	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Romania	2015	82	82	-	97	64	36	67	67	-	96	35	65	95	95	-	99	90	10
Romania	2020	82	82	-	97	-	-	67	67	-	96	-	-	95	95	-	99	-	-
Russian Federation	2015	76	76	-	94	90	7	-	55	-	-	75	16	-	83	-	-	96	3
Russian Federation	2020	76	76	-	93	94	4	-	56	-	-	85	8	-	83	-	-	97	2
Rwanda	2015	10	10	68	41	38	41	4	4	64	32	31	46	41	41	91	86	74	16
Rwanda	2020	12	12	71	43	38	44	5	5	67	33	30	50	46	46	92	87	76	17
Saint Barthelemy	2015	>99	>99	-	>99	>99	<1	-	-	-	-	-	-	>99	>99	-	>99	>99	<1
Saint Barthelemy	2020	>99	>99	-	>99	>99	<1	-	-	-	-	-	-	>99	>99	-	>99	>99	<1
Saint Helena	2015	89	98	-	89	98	1	-	-	-	-	-	-	-	-	-	-	-	-
Saint Helena	2020	89	99	-	89	98	<1	-	-	-	-	-	-	-	-	-	-	-	-
Saint Kitts and Nevis	2015	-	98	87	-	98	<1	-	-	-	-	-	-	-	-	-	-	-	-
Saint Kitts and Nevis	2017	-	98	87	-	98	<1	-	-	-	-	-	-	-	-	-	-	-	-
Saint Lucia	2015	-	93	72	-	95	2	-	93	70	-	95	2	-	93	79	-	98	<1
Saint Lucia	2020	-	94	73	-	97	2	-	94	71	-	96	2	-	94	79	-	98	<1
Saint Martin (French part)	2015	97	>99	-	97	>99	<1	-	-	-	-	-	-	97	>99	-	97	>99	<1
Saint Martin (French part)	2020	97	>99	-	97	>99	<1	-	-	-	-	-	-	97	>99	-	97	>99	<1
Saint Pierre and Miquelon	2015	83	83	91	91	91	<1	-	-	-	-	-	-	-	-	-	-	-	-
Saint Pierre and Miquelon	2020	83	83	91	91	91	<1	-	-	-	-	-	-	-	-	-	-	-	-
Saint Vincent and the Grenadines	2015	-	94	70	-	93	2	-	-	-	-	-	-	-	-	-	-	-	-
Saint Vincent and the Grenadines	2018	-	94	70	-	93	2	-	-	-	-	-	-	-	-	-	-	-	-
Samoa	2015	46	90	75	46	85	13	-	90	-	-	84	14	-	90	-	-	88	11
Samoa	2020	46	91	75	46	84	14	-	91	-	-	83	15	-	91	-	-	87	13
San Marino	2015	>99	>99	>99	>99	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
San Marino	2020	>99	>99	>99	>99	>99	<1	-	-	-	-	-	-	-	-	-	-	-	-
Sao Tome and Principe	2015	34	34	67	77	92	3	23	23	65	55	82	6	39	39	67	86	96	2
Sao Tome and Principe	2020	36	36	68	80	97	1												

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL					RURAL					URBAN														
				At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change in basic										
Singapore	2015	5 592	100	>99	<1	<1	<1	0.00	-	-	-	-	-	>99	<1	<1	<1	0.00	-	-	-	-	-	>99	<1	<1	<1	0.00
Singapore	2020	5 850	100	>99	<1	<1	<1	0.00	-	-	-	-	-	>99	<1	<1	<1	0.00	-	-	-	-	-	>99	<1	<1	<1	0.00
Sint Maarten (Dutch part)	2015	40	100	95	<1	5	<1	-	-	-	-	-	-	95	<1	5	<1	-	-	-	-	-	-	95	<1	5	<1	-
Sint Maarten (Dutch part)	2017	41	100	95	<1	5	<1	-	-	-	-	-	-	95	<1	5	<1	-	-	-	-	-	-	95	<1	5	<1	-
Slovakia	2015	5 436	54	>99	<1	<1	<1	0.09	>99	<1	<1	<1	0.16	>99	<1	<1	<1	0.04	>99	<1	<1	<1	0.04	>99	<1	<1	<1	0.04
Slovakia	2020	5 460	54	>99	<1	<1	<1	0.09	>99	<1	<1	<1	0.16	>99	<1	<1	<1	0.04	>99	<1	<1	<1	0.04	>99	<1	<1	<1	0.04
Slovenia	2015	2 071	54	>99	<1	<1	<1	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	2020	2 079	55	>99	<1	<1	<1	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solomon Islands	2015	603	22	69	6	19	6	-0.57	63	6	23	7	-0.85	91	4	4	1	0.05	91	4	4	1	0.05	91	4	4	1	0.05
Solomon Islands	2020	687	25	67	6	21	6	-0.57	59	7	27	7	-0.85	91	4	4	1	0.05	91	4	4	1	0.05	91	4	4	1	0.05
Somalia	2015	13 797	43	49	23	20	8	1.64	29	29	29	13	1.57	74	16	9	<1	0.97	74	16	9	<1	0.97	74	16	9	<1	0.97
Somalia	2020	15 893	46	56	28	13	2	1.64	37	37	22	4	1.57	79	17	4	<1	0.97	79	17	4	<1	0.97	79	17	4	<1	0.97
South Africa	2015	55 386	65	92	3	2	3	0.47	79	7	5	9	0.86	99	<1	<1	<1	0.03	99	<1	<1	<1	0.03	99	<1	<1	<1	0.03
South Africa	2020	59 309	67	94	3	1	2	0.47	83	7	4	6	0.86	>99	<1	<1	<1	0.03	>99	<1	<1	<1	0.03	>99	<1	<1	<1	0.03
South Sudan	2015	10 716	19	41	31	14	15	-	37	33	14	16	-	61	22	10	7	-	61	22	10	7	-	61	22	10	7	-
South Sudan	2020	11 194	20	41	37	14	8	-	34	42	14	10	-	70	19	11	<1	-	70	19	11	<1	-	70	19	11	<1	-
Spain	2015	46 672	80	>99	<1	<1	<1	-0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	-0.00	>99	<1	<1	<1	-0.00	>99	<1	<1	<1	-0.00
Spain	2020	46 755	81	>99	<1	<1	<1	-0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	-0.00	>99	<1	<1	<1	-0.00	>99	<1	<1	<1	-0.00
Sri Lanka	2015	20 908	18	90	<1	7	2	0.61	88	1	8	3	0.67	98	<1	1	<1	0.34	98	<1	1	<1	0.34	98	<1	1	<1	0.34
Sri Lanka	2020	21 413	19	92	<1	5	2	0.61	91	<1	7	2	0.67	>99	<1	<1	<1	0.34	>99	<1	<1	<1	0.34	>99	<1	<1	<1	0.34
Sudan	2015	38 903	34	59	26	6	9	0.85	52	27	8	13	0.89	73	25	<1	1	0.67	73	25	<1	1	0.67	73	25	<1	1	0.67
Sudan	2020	43 849	35	60	27	4	9	0.85	53	27	6	14	0.89	74	25	<1	1	0.67	74	25	<1	1	0.67	74	25	<1	1	0.67
Suriname	2015	559	66	96	<1	1	2	0.45	91	1	1	7	1.21	98	<1	<1	<1	0.06	98	<1	<1	<1	0.06	98	<1	<1	<1	0.06
Suriname	2020	587	66	98	1	<1	<1	0.45	97	2	<1	2	1.21	99	<1	<1	<1	0.06	99	<1	<1	<1	0.06	99	<1	<1	<1	0.06
Sweden	2015	9 765	87	>99	<1	<1	<1	0.02	>99	<1	<1	<1	0.07	>99	<1	<1	<1	0.01	>99	<1	<1	<1	0.01	>99	<1	<1	<1	0.01
Sweden	2020	10 099	88	>99	<1	<1	<1	0.02	>99	<1	<1	<1	0.07	>99	<1	<1	<1	0.01	>99	<1	<1	<1	0.01	>99	<1	<1	<1	0.01
Switzerland	2015	8 297	74	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00
Switzerland	2020	8 655	74	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00	>99	<1	<1	<1	0.00
Syrian Arab Republic	2015	17 997	52	94	6	<1	<1	0.12	91	8	<1	<1	0.25	95	4	<1	<1	-0.01	95	4	<1	<1	-0.01	95	4	<1	<1	-0.01
Syrian Arab Republic	2020	17 501	55	94	6	<1	<1	0.12	92	8	<1	<1	0.25	95	4	<1	<1	-0.01	95	4	<1	<1	-0.01	95	4	<1	<1	-0.01
Tajikistan	2015	8 454	27	76	3	4	17	1.27	70	4	5	22	1.62	95	1	1	3	0.24	95	1	1	3	0.24	95	1	1	3	0.24
Tajikistan	2020	9 538	28	82	3	3	12	1.27	77	3	4	16	1.62	96	<1	2	2	0.24	96	<1	2	2	0.24	96	<1	2	2	0.24
Thailand	2015	68 715	48	>99	<1	<1	<1	0.31	99	<1	<1	<1	0.40	>99	<1	<1	<1	0.10	>99	<1	<1	<1	0.10	>99	<1	<1	<1	0.10
Thailand	2020	69 800	51	>99	<1	<1	<1	0.31	>99	<1	<1	<1	0.40	>99	<1	<1	<1	0.10	>99	<1	<1	<1	0.10	>99	<1	<1	<1	0.10
Timor-Leste	2015	1 196	29	75	3	16	5	-	69	4	20	7	-	90	2	8	<1	-	90	2	8	<1	-	90	2	8	<1	-
Timor-Leste	2020	1 318	31	85	2	8	4	-	80	2	11	6	-	96	2	2	<1	-	96	2	2	<1	-	96	2	2	<1	-
Togo	2015	7 323	40	64	6	17	14	1.16	47	7	23	22	1.16	88	3	8	<1	0.58	88	3	8	<1	0.58	88	3	8	<1	0.58
Togo	2020	8 279	43	69	6	14	11	1.16	52	8	21	19	1.16	91	3	5	<1	0.58	91	3	5	<1	0.58	91	3	5	<1	0.58
Tokelau	2015	1	0	>99	<1	<1	<1	0.06	>99	<1	<1	<1	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tokelau	2020	1	0	>99	<1	<1	<1	0.06	>99	<1	<1	<1	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tonga	2015	101	23	99	<1	<1	<1	0.03	98	1	<1	<1	0.01	>99	<1	<1	<1	0.09	>99	<1	<1	<1	0.09	>99	<1	<1	<1	0.09
Tonga	2020	106	23	99	<1	<1	<1	0.03	98	1	<1	<1	0.01	>99	<1	<1	<1	0.09	>99	<1	<1	<1	0.09	>99	<1	<1	<1	0.09
Trinidad and Tobago	2015	1 370	53	98	1	<1	<1	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trinidad and Tobago	2020	1 399	53	99	1	<1	<1	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tunisia	2015	11 180	68	95	3	2	<1	0.45	86	8	7	<1	1.11	>99	<1	<1	<1	0.04	>99	<1	<1	<1	0.04	>99	<1	<1	<1	0.04
Tunisia	2020	11 819	70	98	2	<1	<1	0.45	94	3	3	<1	1.11	>99	<1	<1	<1	0.04	>99	<1	<1	<1	0.04	>99	<1	<1	<1	0.04
Turkey	2015	78 529	74	96	2	2	<1	0.17	94	3	3	<1	0.35	97	2	1	<1	0.07	97	2	1	<1	0.07	97	2	1	<1	0.07
Turkey	2020	84 339	76	97	2	<1	<1	0.17	96	3	<1	<1	0.35	97	2	<1	<1	0.07	97	2	<1	<1	0.07	97	2	<1	<1	0.07

COUNTRY, AREA OR TERRITORY	Year	NATIONAL					RURAL					URBAN																			
		Proportion of population using improved water supplies					Proportion of population using improved water supplies					Proportion of population using improved water supplies																			
		Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped												
Singapore	2015	>99	>99	-	>99	>99	<1	-	-	-	-	-	>99	>99	-	>99	>99	<1	>99	>99	-	>99	>99	<1	>99	>99	-	>99	>99	<1	
Singapore	2020	>99	>99	-	>99	>99	<1	-	-	-	-	-	>99	>99	-	>99	>99	<1	>99	>99	-	>99	>99	<1	>99	>99	-	>99	>99	<1	
Sint Maarten (Dutch part)	2015	-	93	-	-	91	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sint Maarten (Dutch part)	2017	-	93	-	-	91	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Slovakia	2015	99	>99	-	99	98	2	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1	-	>99	-	-	>99	<1

Annex 4:

NATIONAL SANITATION ESTIMATES

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)		% urban		NATIONAL						RURAL						URBAN					
						At least basic	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic	Annual rate of change in open defecation	At least basic	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic	Annual rate of change in open defecation	At least basic	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic	Annual rate of change in open defecation
Afghanistan	2015	34 414	25	43	10	33	14	1.43	-0.75	38	6	37	19	1.27	-0.83	56	21	22	<1	1.79	-0.33		
Afghanistan	2020	38 928	26	50	11	28	11			45	7	33	15			67	21	12	<1				
Albania	2015	2 891	57	98	1	1	<1	0.49	-0.04	96	1	2	<1	0.76	-0.06	99	<1	<1	<1	0.12	-0.02		
Albania	2020	2 878	62	>99	<1	<1	<1			>99	<1	<1	<1			>99	<1	<1	<1				
Algeria	2015	39 728	71	87	9	3	1	0.07	-0.31	78	11	7	4	0.29	-0.72	90	8	1	<1	-0.17	-0.04		
Algeria	2020	43 851	74	86	11	4	<1			79	12	9	<1			88	10	2	<1				
American Samoa	2015	56	87	57	42	<1	<1	-0.52	-	-	-	-	-	-	-	-	-	-	-	-	-		
American Samoa	2020	55	87	54	45	<1	<1			-	-	-	-			-	-	-	-				
Andorra	2015	78	88	>99	<1	<1	<1	0.00	0.00	>99	<1	<1	<1	0.00	0.00	>99	<1	<1	<1	0.00	0.00		
Andorra	2020	77	88	>99	<1	<1	<1			>99	<1	<1	<1			>99	<1	<1	<1				
Angola	2015	27 884	63	47	19	11	23	1.21	-1.24	21	5	17	56	0.83	-0.63	62	27	7	3	0.89	-0.96		
Angola	2020	32 866	67	52	21	9	18			24	6	15	54			65	28	6	<1				
Anguilla	2015	14	100	97	2	<1	<1	-	-	-	-	-	-	-	-	97	2	<1	<1	-	-		
Anguilla	2017	15	100	97	2	<1	<1			-	-	-	-			97	2	<1	<1				
Antigua and Barbuda	2015	94	25	88	4	8	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Antigua and Barbuda	2017	95	25	88	4	8	<1			-	-	-	-			-	-	-	-	-	-		
Argentina	2015	43 075	92	95	2	3	-	-	-	77	4	20	-	-	-	97	2	<1	<1	0.46	-0.07		
Argentina	2020	45 196	92	-	-	-	-			-	-	-	-			99	1	<1	<1				
Armenia	2015	2 926	63	93	<1	6	<1	0.35	-0.00	82	2	16	<1	0.31	-0.00	>99	<1	<1	<1	0.38	-0.00		
Armenia	2020	2 963	63	94	<1	6	<1			83	1	15	<1			>99	<1	<1	<1				
Aruba	2015	104	43	98	<1	<1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Aruba	2016	105	43	98	<1	<1	1			-	-	-	-			-	-	-	-	-	-		
Australia	2015	23 932	86	>99	<1	<1	<1	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-		
Australia	2020	25 500	86	>99	<1	<1	<1			-	-	-	-			-	-	-	-	-	-		
Austria	2015	8 679	58	>99	<1	<1	<1	-0.00	0.00	>99	<1	<1	<1	0.00	0.00	>99	<1	<1	<1	-0.00	0.00		
Austria	2020	9 006	59	>99	<1	<1	<1			>99	<1	<1	<1			>99	<1	<1	<1				
Azerbaijan	2015	9 623	55	96	3	1	<1	-	-	96	2	2	<1	-	-	96	4	<1	<1	1.18	-0.00		
Azerbaijan	2020	10 139	56	-	-	-	-			-	-	-	-			96	4	<1	<1				
Bahamas	2015	374	83	95	3	2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Bahamas	2019	389	83	95	3	2	<1			-	-	-	-			-	-	-	-	-	-		
Bahrain	2015	1 372	89	>99	<1	<1	<1	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-		
Bahrain	2020	1 702	90	>99	<1	<1	<1			-	-	-	-			-	-	-	-	-	-		
Bangladesh	2015	156 256	34	47	21	29	3	1.52	-0.84	45	17	34	4	1.83	-1.02	50	29	20	<1	0.60	-0.25		
Bangladesh	2020	164 689	38	54	24	22	<1			55	18	27	<1			53	33	15	<1				
Barbados	2015	285	31	96	2	<1	<1	0.46	-	-	-	-	-	-	-	-	-	-	-	-	-		
Barbados	2020	287	31	98	2	<1	-			-	-	-	-			-	-	-	-	-	-		
Belarus	2015	9 439	77	98	2	<1	<1	0.32	0.00	97	2	2	<1	0.05	0.00	98	2	<1	<1	0.42	0.00		
Belarus	2020	9 449	79	98	2	<1	<1			97	2	2	<1			98	2	<1	<1				
Belgium	2015	11 288	98	>99	<1	<1	<1	0.00	0.00	>99	<1	<1	<1	0.00	0.00	>99	<1	<1	<1	0.00	0.00		
Belgium	2020	11 590	98	>99	<1	<1	<1			>99	<1	<1	<1			>99	<1	<1	<1				
Belize	2015	361	45	87	9	3	1	0.29	-0.19	83	11	4	2	0.18	-0.34	92	6	1	<1	0.41	-0.03		
Belize	2020	398	46	88	9	2	<1			84	12	4	<1			94	6	<1	<1				

-/- = no estimate. For JMP estimate methods see Annex 1. For unrounded estimates see www.washdata.org

COUNTRY, AREA OR TERRITORY	Year	NATIONAL						RURAL						URBAN								
		Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)			Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)			Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)					
		Safely managed	Disposed in situ	Emptied and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections	Safely managed	Disposed in situ	Emptied and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections	Safely managed	Disposed in situ	Emptied and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections
Afghanistan	2015	-	-	-	-	42	8	3	-	-	-	-	42	2	<1	-	-	-	-	41	27	9
Afghanistan	2020	-	-	-	-	49	9	3	-	-	-	-	49	2	1	-	-	-	-	51	28	9
Albania	2015	46	9	4	33	15	7	77	50	19	9	22	32	14	51	44	1	<1	42	2	2	96
Albania	2020	48	9	4	35	16	4	79	54	21	9	23	39	8	53	44	2	<1	42	2	2	96
Algeria	2015	19	5	<1	13	4	8	84	23	14	<1	9	9	21	58	17	2	<1	15	1	3	94
Algeria	2020	18	4	<1	14	3	6	88	23	12	<1	10	9	18	64	16	<1	<1	15	<1	1	97
American Samoa	2015	-	-	-	24	11	39	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-
American Samoa	2020	-	-	-	23	11	39	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Andorra	2015	>99	<1	<1	>99	<1	-	>99	>99	<1	<1	>99	<1	-	>99	>99	<1	<1	>99	<1	-	>99
Andorra	2020	>99	<1	<1	>99	<1	-	>99	>99	<1	<1	>99	<1	-	>99	>99	<1	<1	>99	<1	-	>99
Angola	2015	-	-	-	-	7	47	13	-	-	-	-	5	20	1	-	-	-	-	7	63	19
Angola	2020	-	-	-	-	1	58	13	-	-	-	-	4	25	1	-	-	-	-	<1	75	19
Anguilla	2015	-	-	-	-	4	94	1	-	-	-	-	-	-	-	-	-	-	-	4	94	1
Anguilla	2017	-	-	-	-	4	94	1	-	-	-	-	-	-	-	-	-	-	-	4	94	1
Antigua and Barbuda	2015	-	-	-	-	11	79	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antigua and Barbuda	2017	-	-	-	-	11	79	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Argentina	2015	51	14	7	25	16	25	57	-	-	-	2	38	37	5	47	12	7	28	14	24	61
Argentina	2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	11	6	30	12	22	66
Armenia	2015	62	12	7	43	23	2	69	-	-	-	13	58	5	21	62	1	<1	60	2	<1	97
Armenia	2020	69	11	8	51	21	2	71	-	-	-	16	56	6	22	71	<1	<1	71	<1	<1	>99
Aruba	2015	-	-	-	5	2	91	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aruba	2016	-	-	-	5	2	91	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Australia	2015	69	<1	<1	69	<1	11	89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Australia	2020	74	<1	<1	74	<1	11	89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Austria	2015	>99	4	4	92	1	7	92	>99	7	7	84	<1	15	84	>99	<1	<1	98	2	<1	98
Austria	2020	>99	4	4	93	1	6	93	>99	7	7	84	<1	15	84	>99	<1	<1	98	2	<1	98
Azerbaijan	2015	25	21	1	2	43	5	51	-	-	-	<1	78	5	14	12	8	<1	4	15	5	81
Azerbaijan	2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	4	<1	4	7	5	88
Bahamas	2015	-	-	-	-	<1	77	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bahamas	2019	-	-	-	-	<1	77	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bahrain	2015	86	<1	<1	86	<1	14	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bahrain	2020	91	<1	<1	91	<1	9	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bangladesh	2015	34	32	<1	2	44	18	7	34	34	<1	<1	49	12	<1	32	26	<1	6	34	27	18

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL						RURAL					URBAN						
				At least basic	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic	Annual rate of change in open defecation	At least basic	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic	Annual rate of change in open defecation	At least basic	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic	Annual rate of change in open defecation
Benin	2015	10 576 46	15	19	11	55	0.39	-0.80	6	9	10	75	25	30	12	33	0.33	-0.25			
Benin	2020	12 123 48	17	20	12	52			8	10	11	70	27	30	12	31					
Bermuda	2015	64 100	>99	<1	<1	<1	-0.00	0.00	-	-	-	-	>99	<1	<1	<1	-0.00	0.00			
Bermuda	2020	62 100	>99	<1	<1	<1			-	-	-	-	>99	<1	<1	<1					
Bhutan	2015	728 39	70	9	19	2	1.48	-0.49	67	6	25	3	75	15	9	<1	0.23	-0.21			
Bhutan	2020	772 42	77	10	14	<1			76	7	17	<1	77	14	9	<1					
Bolivia (Plurinational State of)	2015	10 870 68	57	19	9	15	1.55	-1.17	35	6	19	40	67	25	5	4	1.36	-0.74			
Bolivia (Plurinational State of)	2020	11 673 70	66	17	7	10			44	4	19	33	75	23	2	<1					
Bosnia and Herzegovina	2015	3 429 47	95	<1	4	<1	-	-	92	<1	7	<1	99	<1	<1	<1	0.02	-0.02			
Bosnia and Herzegovina	2020	3 281 49	-	-	-	-			-	-	-	-	99	<1	<1	<1					
Botswana	2015	2 121 67	75	5	8	12	1.41	-0.60	49	10	8	34	87	3	8	1	1.13	-0.14			
Botswana	2020	2 352 71	80	6	5	10			52	11	5	31	91	4	4	<1					
Brazil	2015	204 472 86	86	<1	12	2	0.85	-0.43	56	<1	33	10	91	<1	8	<1	0.63	-0.15			
Brazil	2020	212 559 87	90	<1	10	<1			63	<1	34	2	94	<1	6	<1					
British Virgin Islands	2015	29 47	97	<1	3	<1	-	-	-	-	-	-	-	-	-	-	-	-			
British Virgin Islands	2016	29 47	97	<1	3	<1			-	-	-	-	-	-	-	-	-	-			
Brunei Darussalam	2015	415 77	96	<1	1	3	-	-	-	-	-	-	-	-	-	-	-	-			
Brunei Darussalam	2020	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-			
Bulgaria	2015	7 200 74	86	14	<1	<1	0.01	0.00	84	16	<1	<1	87	13	<1	<1	0.00	0.00			
Bulgaria	2020	6 948 76	86	14	<1	<1			84	16	<1	<1	87	13	<1	<1					
Burkina Faso	2015	18 111 28	20	26	7	48	0.55	-1.63	11	18	8	63	43	45	5	7	-0.41	-0.15			
Burkina Faso	2020	20 903 31	22	32	6	40			13	24	8	55	40	51	3	6					
Burundi	2015	10 160 12	46	11	41	3	0.03	-0.01	46	7	44	3	42	41	16	<1	0.03	-0.08			
Burundi	2020	11 891 14	46	13	39	3			46	7	43	3	41	46	12	<1					
Cabo Verde	2015	525 64	70	6	<1	23	1.98	-1.85	59	3	<1	38	77	8	<1	15	1.35	-1.28			
Cabo Verde	2020	556 67	79	6	<1	14			72	1	<1	27	83	9	<1	8					
Cambodia	2015	15 521 22	53	7	4	36	2.95	-3.38	45	7	4	44	83	7	2	8	2.01	-1.84			
Cambodia	2020	16 719 24	69	8	4	19			61	8	5	25	93	7	<1	<1					
Cameroon	2015	23 298 55	43	16	35	6	0.35	-0.12	23	6	58	12	59	25	16	<1	0.36	-0.01			
Cameroon	2020	26 546 58	45	15	35	6			23	5	60	12	61	22	16	<1					
Canada	2015	36 027 81	>99	<1	<1	<1	-0.04	0.00	99	<1	1	<1	>99	<1	<1	<1	-0.05	0.00			
Canada	2020	37 742 82	>99	<1	<1	<1			99	<1	1	<1	>99	<1	<1	<1					
Cayman Islands	2015	62 100	84	12	4	<1	-	-	-	-	-	-	84	12	4	<1	-	-			
Cayman Islands	2016	63 100	84	12	4	<1			-	-	-	-	84	12	4	<1					
Central African Republic	2015	4 493 40	16	14	46	25	-0.32	0.12	7	5	50	37	29	26	39	6	-0.69	0.13			
Central African Republic	2020	4 830 42	14	16	45	25			6	6	49	39	25	29	39	7					
Chad	2015	14 111 23	11	5	18	66	0.11	-0.36	4	1	14	80	34	19	30	17	0.86	-0.08			
Chad	2020	16 426 24	12	5	19	64			4	1	16	79	40	18	26	17					
Channel Islands	2015	165 31	99	<1	2	<1	-	-	-	-	-	-	-	-	-	-	-	-			
Channel Islands	2017	169 31	99	<1	2	<1			-	-	-	-	-	-	-	-	-	-			
Chile	2015	17 969 87	>99	<1	<1	<1	0.39	-0.11	97	<1	1	1	>99	<1	<1	<1	0.19	-0.11			
Chile	2020	19 116 88	>99	<1	<1	<1			>99	<1	<1	<1	>99	<1	<1	<1					
China	2015	1 430 405 56	84	3	12	<1	1.77	-0.11	76	3	20	1	91	3	6	<1	0.86	0.01			
China	2020	1 463 141 62	92	3	5	<1			88	3	9	<1	95	2	2	<1					
China, Hong Kong SAR	2015	7 186 100	97	<1	3	<1	-0.01	0.00	-	-	-	-	97	<1	3	<1	-0.01	0.00			
China, Hong Kong SAR	2020	7 497 100	97	<1	3	<1			-	-	-	-	97	<1	3	<1					
China, Macao SAR	2015	602 100	>99	<1	<1	<1	0.00	0.00	-	-	-	-	>99	<1	<1	<1	0.00	0.00			
China, Macao SAR	2020	649 100	>99	<1	<1	<1			-	-	-	-	>99	<1	<1	<1					

COUNTRY, AREA OR TERRITORY	Year	NATIONAL						RURAL						URBAN								
		Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)			Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)			Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)					
		Safely managed	Disposed in situ	Emptied and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections	Safely managed	Disposed in situ	Emptied and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections	Safely managed	Disposed in situ	Emptied and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections
Benin	2015	-	-	-	-	29	4	<1	-	-	-	-	15	<1	<1	-	-	-	-	45	8	2
Benin	2020	-	-	-	-	31	4	<1	-	-	-	-	17	<1	<1	-	-	-	-	46	8	2
Bermuda	2015	-	-	-	2	95	-	5	-	-	-	-	-	-	-	-	-	2	95	-	5	
Bermuda	2020	-	-	-	2	95	-	5	-	-	-	-	-	-	-	-	-	2	95	-	5	
Bhutan	2015	63	52	2	9	14	55	10	64	61	<1	3	21	48	3	60	38	4	19	2	65	22
Bhutan	2020	65	49	1	15	8	61	18	67	62	<1	5	13	65	5	63	31	3	29	<1	56	35
Bolivia (Plurinational State of)	2015	46	9	8	28	18	12	46	-	-	-	4	29	7	5	53	7	6	40	13	14	64
Bolivia (Plurinational State of)	2020	53	10	9	33	20	13	50	-	-	-	5	34	8	6	60	8	7	45	13	15	69
Bosnia and Herzegovina	2015	35	25	<1	10	<1	41	55	-	-	-	5	<1	64	29	19	4	<1	15	<1	16	84
Bosnia and Herzegovina	2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	4	1	25	<1	16	84
Botswana	2015	-	-	-	-	74	5	1	-	-	-	-	56	3	<1	-	-	-	-	83	6	2
Botswana	2020	-	-	-	-	79	5	1	-	-	-	-	60	3	<1	-	-	-	-	87	6	2
Brazil	2015	44	8	4	32	9	15	62	-	-	-	4	24	26	7	46	7	3	36	7	13	72
Brazil	2020	49	7	4	38	8	13	69	-	-	-	5	26	29	9	51	5	3	43	5	11	78
British Virgin Islands	2015	-	-	-	-	2	73	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-
British Virgin Islands	2016	-	-	-	-	2	73	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunei Darussalam	2015	-	-	-	-	1	-	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunei Darussalam	2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	2015	63	3	3	56	<1	16	84	52	10	8	35	<1	47	53	66	1	<1	64	<1	6	94
Bulgaria	2020	72	3	3	67	<1	14	86	60	9	8	43	<1	42	58	76	<1	<1	74	<1	5	95
Burkina Faso	2015	-	-	-	-	43	2	<1	-	-	-	-	29	<1	<1	-	-	-	-	80	6	2
Burkina Faso	2020	-	-	-	-	51	2	<1	-	-	-	-	38	<1	<1	-	-	-	-	83	6	2
Burundi	2015	-	-	-	-	53	3	<1	-	-	-	-	53	<1	<1	-	-	-	-	53	24	5
Burundi	2020	-	-	-	-	54	4	<1	-	-	-	-	54	<1	<1	-	-	-	-	57	28	2
Cabo Verde	2015	-	-	-	-	<1	53	22	-	-	-	-	1	59	1	-	-	-	-	<1	51	34
Cabo Verde	2020	-	-	-	-	2	56	28	-	-	-	-	<1	71	2	-	-	-	-	2	48	41
Cambodia	2015	-	-	-	-	<1	47	14	-	-	-	-	<1	47	5	-	-	-	-	<1	45	45
Cambodia	2020	-	-	-	-	<1	60	17	-	-	-	-	<1	63	6	-	-	-	-	<1	52	48
Cameroon	2015	-	-	-	-	47	11	<1	-	-	-	-	29	<1	<1	-	-	-	-	62	20	2
Cameroon	2020	-	-	-	-	46	13	1	-	-	-	-	27	1	<1	-	-	-	-	60	22	2
Canada	2015	83	<1	13	69	5	11	82	83	2	28	52	2	35	63	83	<1	10	73	6	6	87
Canada	2020	84	<1	14	70	6	11	81	84	2	29											

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL						RURAL					URBAN									
				At least basic	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic		Annual rate of change in open defecation	At least basic	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic		Annual rate of change in open defecation	At least basic	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic		Annual rate of change in open defecation
								in open defecation	in open defecation						in open defecation	in open defecation						in open defecation	in open defecation	
Colombia	2015	47 521 80	89	6	1	4	0.94	-0.30	84	4	3	15	1.30	-0.81	92	6	<1	<1	0.76	-0.07				
Colombia	2020	50 883 81	94	3	<1	3			84	3	<1	11			96	3	<1	<1						
Comoros	2015	777 28	36	13	50	<1			32	12	56	<1			45	17	37	<1						
Comoros	2019	851 29	36	13	51	-			32	12	56	-			45	17	38	-						
Congo	2015	4 856 66	19	33	40	9	0.43	0.01	6	9	63	22	0.02	0.35	26	45	28	2	0.55	-0.06				
Congo	2020	5 518 68	20	34	37	8			6	9	62	23			27	46	25	2						
Cook Islands	2015	18 74	98	<1	2	-	0.34		-	-	-	-			-	-	-	-						
Cook Islands	2020	18 75	>99	<1	<1	-			-	-	-	-			-	-	-	-						
Costa Rica	2015	4 848 77	97	1	2	<1	0.21	-0.03	94	1	4	<1	0.38	-0.05	98	<1	1	<1	0.07	-0.02				
Costa Rica	2020	5 094 81	98	<1	1	<1			97	<1	3	<1			98	<1	<1	<1						
Côte d'Ivoire	2015	23 226 49	31	22	20	28	0.68	-0.53	16	15	23	46	0.66	-0.90	45	30	16	9	0.44	0.27				
Côte d'Ivoire	2020	26 378 52	35	23	18	25			21	14	24	41			48	30	12	10						
Croatia	2015	4 233 56	96	2	1	<1	0.02	0.00	95	4	2	<1	0.01	0.00	98	2	<1	<1	0.02	0.00				
Croatia	2020	4 105 58	97	2	<1	<1			95	4	2	<1			98	2	<1	<1						
Cuba	2015	11 325 77	90	3	6	<1	0.16	-0.07	84	4	11	2	0.37	-0.19	92	3	4	<1	0.08	-0.03				
Cuba	2020	11 327 77	91	2	7	<1			86	<1	12	<1			93	2	5	<1						
Curaçao	2015	160 89	99	<1	<1	<1			-	-	-	-			-	-	-	-						
Curaçao	2017	162 89	99	<1	<1	<1			-	-	-	-			-	-	-	-						
Cyprus	2015	1 161 67	>99	<1	<1	<1	-0.02	0.00	99	<1	1	<1	-0.05	0.00	>99	<1	<1	<1	0.00	0.00				
Cyprus	2020	1 207 67	>99	<1	<1	<1			99	<1	1	<1			>99	<1	<1	<1						
Czech Republic	2015	10 601 73	>99	<1	<1	<1	-0.00	0.00	>99	<1	<1	<1	-0.00	0.00	>99	<1	<1	<1	0.00	0.00				
Czech Republic	2020	10 709 74	>99	<1	<1	<1			>99	<1	<1	<1			>99	<1	<1	<1						
Democratic People's Republic of Korea	2015	25 184 61	82	2	16	<1			71	<1	28	<1			88	3	9	<1						
Democratic People's Republic of Korea	2020	25 779 62	85	<1	15	<1			73	<1	27	<1			92	1	7	<1						
Democratic Republic of the Congo	2015	76 245 43	17	21	50	12	-0.43	0.08	14	11	57	18	-0.63	0.21	22	33	42	4	-0.21	0.07				
Democratic Republic of the Congo	2020	89 561 46	15	20	52	12			11	9	61	19			20	33	43	4						
Denmark	2015	5 689 88	>99	<1	<1	<1	-0.00	0.00	>99	<1	<1	<1	0.00	0.00	>99	<1	<1	<1	0.00	0.00				
Denmark	2020	5 792 88	>99	<1	<1	<1			>99	<1	<1	<1			>99	<1	<1	<1						
Djibouti	2015	914 77	61	6	15	17	0.98	-0.16	19	2	14	65	0.52	-0.19	74	7	16	3	1.07	-0.08				
Djibouti	2020	988 78	67	7	10	16			22	2	12	64			79	8	10	3						
Dominica	2015	71 70	80	3	11	6			-	-	-	-			-	-	-	-						
Dominica	2017	71 70	80	3	11	6			-	-	-	-			-	-	-	-						
Dominican Republic	2015	10 282 79	85	10	2	3	0.48	-0.14	75	14	4	7	0.35	-0.18	87	9	1	2	0.36	-0.05				
Dominican Republic	2020	10 848 83	87	9	1	2			77	14	3	6			89	8	1	1						
Ecuador	2015	16 212 63	86	9	2	3	1.10	-0.65	80	7	3	9	1.79	-1.29	90	9	<1	<1	0.65	-0.22				
Ecuador	2020	17 643 64	92	7	<1	<1			89	8	<1	3			93	7	<1	<1						
Egypt	2015	92 443 43	96	3	1	<1	0.30	-0.09	94	4	2	<1	0.34	-0.12	99	1	<1	<1	0.25	-0.04				
Egypt	2020	102 334 43	97	2	1	<1			96	3	2	<1			>99	<1	<1	<1						
El Salvador	2015	6 325 70	83	14	<1	2	-0.05	-0.48	72	20	2	6	-0.20	-0.93	88	11	<1	<1	-0.15	-0.14				
El Salvador	2020	6 486 73	82	17	<1	<1			70	27	2	1			87	13	<1	<1						
Equatorial Guinea	2015	1 169 71	66	10	21	3			57	6	33	4			70	11	16	3						
Equatorial Guinea	2017	1 262 72	66	10	21	3			57	6	33	4			70	11	16	3						
Eritrea	2015	3 343 38	12	10	11	67			6	2	4	89			22	22	23	33						
Eritrea	2016	3 377 39	12	10	11	67			6	2	4	89			22	22	23	33						
Estonia	2015	1 315 68	>99	<1	<1	<1	-0.03	0.00	>99	<1	<1	<1	0.00	0.00	>99	<1	<1	<1	-0.04	0.00				
Estonia	2020	1 327 69	>99	<1	<1	<1			>99	<1	<1	<1			>99	<1	<1	<1						
Eswatini	2015	1 104 23	61	22	9	8	0.79	-0.98	62	17	10	10	1.26	-1.24	55	38	7	<1	-0.73	-0.08				
Eswatini	2020	1 160 24	64	22	10	4			68	16	11	5			52	41	7	<1						

COUNTRY, AREA OR TERRITORY	Year	NATIONAL						RURAL						URBAN								
		Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)			Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)			Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)					
		Safely managed	Disposed in situ	Emptied and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections	Safely managed	Disposed in situ	Emptied and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections	Safely managed	Disposed in situ	Emptied and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections
Colombia	2015	18	5	<1	12	3	16	76	-	-	-	2	11	57	14	16	2	<1	14	1	5	92
Colombia	2020	18	5	<1	12	3	16	78	-	-	-	2	11	64	13	17	2	<1	15	1	5	93
Comoros	2015	-	-	-	-	38	5	5	-	-	-	-	36	4	4	-	-	-	-	44	10	8
Comoros	2019	-	-	-	-	38	5	5	-	-	-	-	36	4	4	-	-	-	-	44	10	8
Congo	2015	-	-	-	-	37	13	1	-	-	-	-	14	<1	<1	-	-	-	-	50	19	2
Congo	2020	-	-	-	-	38	15	1	-	-	-	-	14	<1	<1	-	-	-	-	50	22	2
Cook Islands	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cook Islands	2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Costa Rica	2015	32	20	<1	12	<1	74	24	37	34	<1	3	1	89	5	31	16	<1	14	<1	69	30
Costa Rica	2020	30	21	<1	9	<1	77	21	37	34	<1	2	<1	92	5	29	18	<1	11	<1	74	25
Côte d'Ivoire	2015	-	-	-	-	31	15	7	-	-	-	-	24	6	1	-	-	-	-	39	24	13
Côte d'Ivoire	2020	-	-	-	-	33	17	7	-	-	-	-	27	7	1	-	-	-	-	39	27	12
Croatia	2015	74	11	11	52	5	36	57	-	-	-	26	8	61	29	84	6	5	73	3	17	79
Croatia	2020	68	11	9	47	5	36	58	-	-	-	23	8	61	29	76	6	5	65	3	17	79
Cuba	2015	37	23	1	13	19	21	54	53	48	<1	5	43	23	21	33	15	1	16	12	20	64
Cuba	2020	37	19	<1	16	16	16	61	51	44	<1	7	37	22	27	32	12	1	19	10	14	71
Curaçao	2015	-	-	-	3	<1	81	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Curaçao	2017	-	-	-	3	<1	81	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyprus	2015	77	11	11	54	<1	45	54	-	-	-	16	<1	83	16	86	7	7	73	<1	27	73
Cyprus	2020	77	11	11	55	<1	45	55	-	-	-	18	<1	81	18	86	7	7	73	<1	27	73
Czech Republic	2015	81	<1	<1	81	<1	17	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	2020	85	<1	<1	85	<1	14	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Democratic People's Republic of Korea	2015	-	<1	-	-	27	8	48	9	<1	<1	9	42	12	17	-	1	-	-	18	6	68
Democratic People's Republic of Korea	2020	-	<1	-	-	32	11	42	1	<1	<1	<1	55	17	2	-	1	-	-	19	7	67
Democratic Republic of the Congo	2015	15	15	<1	<1	31	7	<1	14	14	<1	<1	25	<1	<1	16	16	<1	<1	38	15	1
Democratic Republic of the Congo	2020	13	13	<1	<1	26	9	<1	11	11	<1	<1										

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL						RURAL					URBAN																						
				At least basic	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic	Annual rate of change in open defecation	At least basic	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic	Annual rate of change in open defecation	At least basic	Limited (shared)	Unimproved	Open defecation	Annual rate of change in basic	Annual rate of change in open defecation																
																						<1		<1		<1		<1		<1		<1		<1		<1	
Slovakia	2015	5 436	54	98	2	<1	<1	-0.11	0.00	96	4	<1	<1	-0.18	0.00	99	1	<1	<1	-0.06	0.00																
Slovakia	2020	5 460	54	98	2	<1	<1			96	4	<1	<1			99	1	<1	<1																		
Slovenia	2015	2 071	54	98	<1	1	<1	0.01	0.00	-	-	-	-	-	-	-	-	-	-	-	-																
Slovenia	2020	2 079	55	98	<1	1	<1			-	-	-	-	-	-	-	-	-	-	-	-																
Solomon Islands	2015	603	22	32	5	15	48	0.72	-0.82	19	2	19	60	0.40	-0.65	77	17	<1	5	0.81	-0.21																
Solomon Islands	2020	687	25	35	6	15	45			21	2	19	58			78	18	<1	4																		
Somalia	2015	13 797	43	34	17	18	31	0.96	-1.78	19	10	19	52	0.88	-1.98	54	26	16	4	0.50	-0.56																
Somalia	2020	15 893	46	39	17	21	23			25	9	24	42			56	26	17	<1																		
South Africa	2015	55 386	65	74	15	9	3	0.99	-0.60	71	7	17	6	1.95	-1.25	76	19	4	<1	0.30	-0.12																
South Africa	2020	59 309	67	78	15	7	<1			81	5	14	<1			77	19	3	<1																		
South Sudan	2015	10 716	19	11	8	16	66	-	-	7	5	12	76	-	-	29	17	29	24	-	-																
South Sudan	2020	11 194	20	16	9	15	60			9	6	11	73			42	19	31	8																		
Spain	2015	46 672	80	>99	<1	<1	<1	0.00	0.00	>99	<1	<1	<1	0.00	0.00	>99	<1	<1	<1	0.00	0.00																
Spain	2020	46 755	81	>99	<1	<1	<1			>99	<1	<1	<1			>99	<1	<1	<1																		
Sri Lanka	2015	20 908	18	91	5	3	<1	0.85	-0.27	91	5	3	<1	0.84	-0.29	90	7	4	<1	0.88	-0.17																
Sri Lanka	2020	21 413	19	94	4	2	<1			94	4	2	<1			93	4	3	<1																		
Sudan	2015	38 903	34	35	8	30	27	0.82	-1.35	23	6	32	38	0.66	-1.39	58	12	26	4	0.98	-1.11																
Sudan	2020	43 849	35	37	8	31	24			24	6	33	36			60	12	26	2																		
Suriname	2015	559	66	86	8	3	3	0.60	-0.37	76	10	5	9	1.21	-1.11	92	6	1	<1	0.29	0.00																
Suriname	2020	587	66	90	6	3	1			82	9	6	3			94	5	1	<1																		
Sweden	2015	9 765	87	>99	<1	<1	<1	0.02	0.00	>99	<1	<1	<1	0.06	0.00	>99	<1	<1	<1	0.01	0.00																
Sweden	2020	10 099	88	>99	<1	<1	<1			>99	<1	<1	<1			>99	<1	<1	<1																		
Switzerland	2015	8 297	74	>99	<1	<1	<1	0.00	0.00	>99	<1	<1	<1	0.00	0.00	>99	<1	<1	<1	0.00	0.00																
Switzerland	2020	8 655	74	>99	<1	<1	<1			>99	<1	<1	<1			>99	<1	<1	<1																		
Syrian Arab Republic	2015	17 997	52	90	9	<1	<1	-0.04	-	89	9	<1	1	0.22	-	91	8	<1	<1	-0.27	0.00																
Syrian Arab Republic	2020	17 501	55	90	10	<1	-			90	10	<1	-			90	10	<1	<1																		
Tajikistan	2015	8 454	27	95	3	1	<1	0.34	-0.06	96	2	1	<1	0.45	-0.07	94	5	1	<1	0.06	-0.04																
Tajikistan	2020	9 538	28	97	3	<1	<1			98	2	<1	<1			94	5	1	<1																		
Thailand	2015	68 715	48	97	3	<1	<1	0.31	-0.06	97	2	<1	<1	0.23	-0.09	97	3	<1	<1	0.46	-0.01																
Thailand	2020	69 800	51	99	1	<1	<1			98	2	<1	<1			>99	<1	<1	<1																		
Timor-Leste	2015	1 196	29	51	9	18	22	-	-	43	7	19	31	-	-	71	13	14	2	-	-																
Timor-Leste	2020	1 318	31	57	10	15	18			49	7	17	27			74	15	11	<1																		
Togo	2015	7 323	40	16	25	10	49	0.45	-0.70	7	10	12	71	0.27	-0.32	30	48	7	14	0.46	-0.59																
Togo	2020	8 279	43	19	27	9	45			8	10	12	70			33	49	6	12																		
Tokelau	2015	1 0	0	94	4	2	<1	1.00	-	94	4	2	<1	1.00	-	-	-	-	-	-	-																
Tokelau	2020	1 0	0	97	3	<1	<1			97	3	<1	<1			-	-	-	-	-	-																
Tonga	2015	101	23	93	3	4	<1	0.19	-0.01	92	3	5	<1	0.30	-0.01	97	2	<1	<1	-0.15	-0.00																
Tonga	2020	106	23	93	6	1	<1			92	7	1	<1			95	4	<1	<1																		
Trinidad and Tobago	2015	1 370	53	94	6	<1	<1	0.19	-0.02	-	-	-	-	-	-	-	-	-	-	-	-																
Trinidad and Tobago	2020	1 399	53	94	6	<1	<1			-	-	-	-	-	-	-	-	-	-	-	-																
Tunisia	2015	11 180	68	92	4	3	1	1.05	-0.51	83	8	6	4	2.47	-1.35	96	2	2	<1	0.22	-0.03																
Tunisia	2020	11 819	70	97	2	1	<1			97	2	<1	<1			98	1	1	<1																		
Turkey	2015	78 529	74	96	<1	3	<1	0.63	-0.02	90	2	8	<1	1.40	-0.04	99	<1	<1	<1	0.20	-0.01																
Turkey	2020	84 339	76	>99	<1	<1	<1			97	1	<1	<1			>99	<1	<1	<1																		
Turkmenistan	2015	5 565	50	97	2	<1	<1	0.32	-0.03	99	<1	<1	<1	0.20	-0.04	96	4	<1	<1	0.48	-0.01																
Turkmenistan	2020	6 031	53	>99	<1	<1	<1			>99	<1	<1	<1			>99	<1	<1	<1																		
Turks and Caicos Islands	2015	36	92	88	<1	10	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-																
Turks and Caicos Islands	2018	38	93	88	<1	10	2			-	-	-	-			-	-	-	-																		

COUNTRY, AREA OR TERRITORY	Year	NATIONAL						RURAL						URBAN								
		Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)			Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)			Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)					
		Safely managed	Disposed in situ	Emptied and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections	Safely managed	Disposed in situ	Emptied and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections	Safely managed	Disposed in situ	Emptied and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections
Slovakia	2015	82	8	8	66	4	27	69	75	12	12	51	6	39	55	88	5	5	78	3	16	82
Slovakia	2020	82	8	8	65	4	27	69	75	12	12	51	6	39	55	88	5	5	78	3	16	82
Slovenia	2015	61	<1	<1	61	<1	33	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	2020	72	<1	<1	72	<1	27	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solomon Islands	2015	-	-	-	-	17	13	7	-	-	-	-	14	4	2	-	-	-	-	28	43	23
Solomon Islands	2020	-	-	-	-	20	13	7	-	-	-	-	16	4	2	-	-	-	-	33	40	23
Somalia	2015	27	25	<1	2	41	3	7	16	16	<1	<1	26	1	2	41	36	<1	5	61	5	14
Somalia	2020	32	29	<1	2	46	4	6	21	20	<1	1	29	2	3	44	41	<1	3	66	7	10
South Africa	2015	-	-	-	-	29	3	57	-	-	-	-	68	4	5	-	-	-	-	8	2	85
South Africa	2020	-	-	-	-	30	3	61	-	-	-	-	77	6	4	-	-	-	-	7	1	88
South Sudan	2015	-	-	-	-	18	<1	<1	-	-	-	-	12	<1	<1	-	-	-	-	44	1	1
South Sudan	2020	-	-	-	-	23	<1	<1	-	-	-	-	15	<1	<1	-	-	-	-	57	2	2
Spain	2015	95	2	2	92	3	1	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	2020	96	2	2	92	4	1	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sri Lanka	2015	-	-	-	-	90	3	3	-	-	-	-	93	2	1	-	-	-	-	79	6	11
Sri Lanka	2020	-	-	-	-	94	2	2	-	-	-	-	97	1	<1	-	-	-	-	84	4	9
Sudan	2015	-	-	-	-	37	6	<1	-	-	-	-	28	<1	<1	-	-	-	-	53	15	3
Sudan	2020	-	-	-	-	38	6	1	-	-	-	-	30	<1	<1	-	-	-	-	53	16	3
Suriname	2015	27	26	<1	<1	9	84	2	36	36	<1	<1	18	66	1	22	21	<1	<1	4	93	2
Suriname	2020	25	24	<1	1	3	91	2	34	33	<1	<1	8	81	2	21	19	<1	1	<1	96	3
Sweden	2015	95	4	4	87	<1	12	88	90	8	8	74	<1	25	74	95	3	3	89	<1	10	90
Sweden	2020	95	4	4	87	<1	11	88	91	8	8	74	<1	25	75	96	3	3	89	<1	10	90
Switzerland	2015	>99	<1	<1	98	1	-	99	99	2	2	95	3	2	95	>99	<1	<1	>99	<1	-	>99
Switzerland	2020	>99																				

Annex 5: NATIONAL HYGIENE ESTIMATES

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL				RURAL				URBAN			
				Basic	Limited (without water or soap)	No service	Annual rate of change in basic	Basic	Limited (without water or soap)	No service	Annual rate of change in basic	Basic	Limited (without water or soap)	No service	Annual rate of change in basic
Afghanistan	2015	34 414	25	38	34	28	0.08	29	38	33	0.00	64	23	13	0.00
	2020	38 928	26	38	34	28		29	38	33		64	23	13	
Algeria	2015	39 728	71	84	9	7		74	14	12		88	6	5	
	2020	43 851	74	85	11	5	0.13	75	16	9	0.25	88	9	3	-0.03
Angola	2015	27 884	63	26	15	59	0.14	13	14	73	0.00	34	16	50	0.00
	2020	32 866	67	27	15	58		13	14	73		34	16	50	
Armenia	2015	2 926	63	93	2	5	0.40	87	4	10	0.85	96	2	2	0.13
	2020	2 963	63	95	<1	5		91	<1	10		97	1	2	
Azerbaijan	2015	9 623	55	89	9	2	-	87	11	2	-	91	8	1	-
	2017	9 845	55	89	9	2	-	87	11	2	-	91	8	1	-
Bangladesh	2015	156 256	34	42	48	10	3.33	35	54	12	3.85	55	38	6	2.07
	2020	164 689	38	58	36	6		54	39	7		66	30	4	
Barbados	2015	285	31	88	2	9	-	-	-	-	-	-	-	-	-
	2016	286	31	88	2	9	-	-	-	-	-	-	-	-	-
Belize	2015	361	45	88	7	5	0.51	88	7	5	0.19	88	7	5	0.89
	2020	398	46	90	10	<1		89	11	<1		92	8	<1	
Benin	2015	10 576	46	9	47	44	0.56	6	50	44	0.43	13	43	43	0.61
	2020	12 123	48	12	44	44		8	48	44		17	40	43	
Bhutan	2015	728	39	86	13	1	1.19	84	14	2	1.83	88	11	<1	0.26
	2020	772	42	92	8	<1		93	6	<1		89	10	<1	
Bolivia (Plurinational State of)	2015	10 870	68	27	13	60	0.02	22	26	52	0.00	29	8	63	0.00
	2020	11 673	70	27	13	60		22	26	52		29	8	63	
Bosnia and Herzegovina	2015	3 429	47	97	2	1	-	96	2	2	-	99	<1	<1	-
	2016	3 386	48	97	2	1	-	96	2	2	-	99	<1	<1	-
Burkina Faso	2015	18 111	28	9	46	46	0.04	5	47	48	0.12	19	42	38	-0.43
	2020	20 903	31	9	27	64		5	27	68		17	29	54	
Burundi	2015	10 160	12	6	91	3	0.01	4	93	3	0.01	21	77	2	-0.37
	2020	11 891	14	6	94	<1		4	96	<1		19	81	<1	
Cambodia	2015	15 521	22	67	13	20	1.32	62	15	24	1.86	87	6	7	-0.82
	2020	16 719	24	74	13	14		71	14	15		83	8	9	
Cameroon	2015	23 298	55	36	60	4	0.15	22	74	4	0.00	47	49	4	0.00
	2020	26 546	58	36	60	4		22	74	4		47	49	4	
Central African Republic	2015	4 493	40	19	10	71	0.51	13	10	78	-0.08	28	11	61	1.19
	2020	4 830	42	22	15	63		12	15	72		34	16	50	
Chad	2015	14 111	23	21	26	53	0.88	16	27	56	1.24	37	23	40	-0.46
	2020	16 426	24	25	30	44		22	31	47		35	29	37	
Colombia	2015	47 521	80	67	4	29	0.15	32	5	63	0.00	76	4	20	0.00
	2020	50 883	81	68	4	28		32	5	63		76	4	20	
Comoros	2015	777	28	16	35	49	-	15	33	52	-	18	42	40	-
	2016	796	29	16	35	49	-	15	33	52	-	18	42	40	-
Congo	2015	4 856	66	48	34	18	-	32	43	25	-	56	29	14	-
	2019	5 381	67	48	34	18	-	32	43	25	-	56	29	14	-
Costa Rica	2015	4 848	77	85	10	5	0.24	83	12	5	0.04	85	9	6	0.26
	2020	5 094	81	86	9	5		83	12	5		87	9	5	
Côte d'Ivoire	2015	23 226	49	18	37	45	0.67	9	41	50	0.42	28	32	40	0.73
	2020	26 378	52	22	37	41		11	50	39		31	25	44	
Cuba	2015	11 325	77	86	10	4	1.17	78	12	10	1.71	89	9	2	1.00
	2020	11 327	77	92	7	<1		86	14	<1		94	5	<1	
Democratic People's Republic of Korea	2015	25 184	61	-	-	<1	-	-	-	<1	-	-	-	<1	-
	2020	25 779	62	-	-	<1	-	-	-	<1	-	-	-	<1	-

- = no estimate. For JMP estimate methods see Annex 1. For unrounded estimates see www.washdata.org

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL				RURAL				URBAN			
				Basic	Limited (without water or soap)	No service	Annual rate of change in basic	Basic	Limited (without water or soap)	No service	Annual rate of change in basic	Basic	Limited (without water or soap)	No service	Annual rate of change in basic
Democratic Republic of the Congo	2015	76 245	43	19	38	43	0.09	12	39	49	0.00	27	38	35	0.00
	2020	89 561	46	19	38	42		12	39	49		27	38	35	
Dominican Republic	2015	10 282	79	46	14	40	0.13	33	13	54	0.00	50	14	36	0.00
	2020	10 848	83	47	14	39		33	13	54		50	14	36	
Ecuador	2015	16 212	63	87	10	3	0.02	79	16	5	0.00	92	6	2	0.00
	2020	17 643	64	87	9	3		79	16	5		92	6	2	
Egypt	2015	92 443	43	88	11	<1	0.30	85	14	<1	0.46	92	6	2	0.08
	2020	102 334	43	90	9	<1		88	12	<1		93	6	2	
El Salvador	2015	6 325	70	91	7	3	-	86	10	4	-	92	5	2	-
	2018	6 421	72	91	7	3	-	86	10	4	-	92	5	2	-
Equatorial Guinea	2015	1 169	71	24	22	53	-	20	25	56	-	26	21	53	-
	2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eswatini	2015	1 104	23	24	31	45	0.05	17	33	50	0.00	48	26	26	0.00
	2020	1 160	24	24	31	44		17	33	50		48	26	26	
Ethiopia	2015	100 835	19	8	54	39	0.07	5	52	43	0.00	20	60	20	0.00
	2020	114 964	22	8	54	38		5	52	43		20	60	20	
Gambia	2015	2 086	59	18	74	8	-0.00	18	76	6	0.00	18	73	9	0.00
	2020	2 417	63	18	74	8		18	76	6		18	73	9	
Georgia	2015	4 024	57	92	7	1	0.03	87	11	2	0.00	95	4	1	0.00
	2020	3 989	59	92	7	1		87	11	2		95	4	1	
Ghana	2015	27 849	54	41	37	22	0.08	35	40	25	0.00	47	34	19	0.00
	2020	31 073	57	42	37	22		35	40	25		47	34	19	
Guatemala	2015	16 252	50	77	21	3	-	70	27	3	-	83	14	2	-
	2019	17 581	51	77	21	3	-	70	27	3	-	83	14	2	-
Guinea	2015	11 432	35	20	51	28	0.07	13	57	30	0.00	33	42	25	0.00
	2020	13 133	37	20	51	28		13	57	30		33	42	25	
Guinea-Bissau	2015	1 737	42	10	8	82	1.53	8	7	85	1.30	14	9	77	1.75
	2020	1 968	44	18	13	69		14	12	74		23	14	63	
Guyana	2015	767	26	77	11	12	-	78	12	10	-	75	9	16	-
	2018	779	27	77	11	12	-	78	12	10	-	75	9	16	-
Haiti	2015	10 696	52	23	54	23	-0.21	17	56	27	-0.21	30	51	19	-0.42
	2020	11 403	57	22	69	9		15	71	14		28	68	5	
Honduras	2015	9 113	55	84	10	6	-	80	15	5	-	87	6	7	-
	2016	9 271	56	84	10	6	-	80	15	5	-	87	6	7	-
India	2015	1 310 152	33	67	30	3	0.10	60	37	3	0.00	82	16	2	0.00
	2020	1 380 004	35	68	29	3		60	37	3		82	16	2	
Indonesia	2015	258 383	53	84	6	10	2.03	77	9	15	2.94	90	4	6	1.17
	2020	273 524	57	94	6	<1		91	9	<1		96	4	<1	
Iraq	2015	35 572	70	94	3	3	0.70	88	6	6	1.76	96	2	1	0.24
	2020	40 223	71	97	2	<1		97	3	<1		98	2	<1	
Jamaica	2015	2 891	55	67	16	17	-	63	18	18	-	69	14	16	-
	2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kazakhstan	2015	17 572	57	>99	<1	<1	-	99	<1	<1	-	>99	<1	<1	-
	2020	18 777	58	-	-	<1	-	-	-	<1	-	-	-	<1	-
Kenya	2015	47 878	26	27	33	40	0.04	24	32	44	0.00	33	37	29	0.00
	2020	53 771	28	27	33	40		24	32	44		33	37	29	
Kiribati	2015	111	52	55	31	14	0.06	51	32	17	0.00	59	30	12	0.00
	2020	119	56	56	31	14		51	32	17		59	30	12	
Kyrgyzstan	2015	5 959	36	92	7	1	1.61	90	9	1	1.99	95	4	<1	0.93
	2020	6 524	37	>99	<1	<1		>99	<1	<1		>99	<1	<1	

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL				RURAL				URBAN			
				Basic	Limited (without water or soap)	No service	Annual rate of change in basic	Basic	Limited (without water or soap)	No service	Annual rate of change in basic	Basic	Limited (without water or soap)	No service	Annual rate of change in basic
Lao People's Democratic Republic	2015	6 741	33	55	35	10	0.18	46	43	11	0.00	73	19	8	0.00
	2020	7 276	36	56	34	10		46	43	11	0.00	73	19	8	0.00
Lesotho	2015	2 059	27	5	43	51	0.03	4	44	53	0.00	10	42	48	0.00
	2020	2 142	29	6	43	51		4	44	53		10	42	48	
Liberia	2015	4 472	50	1	1	97	-	<1	1	98	-	2	1	97	-
	2017	4 702	51	1	1	97		<1	1	98		2	1	97	
Madagascar	2015	24 234	35	26	44	30	0.20	18	45	36	0.26	39	41	20	-0.27
	2020	27 691	39	27	43	30		20	44	36		38	42	20	
Malawi	2015	16 745	16	10	75	15	-0.28	8	75	17	-0.22	18	76	7	-0.71
	2020	19 130	17	8	76	16		7	75	18		14	78	8	
Maldives	2015	455	39	96	2	2	0.01	95	1	4	0.00	97	2	<1	0.00
	2020	541	41	96	2	2		95	1	4		97	2	<1	
Mali	2015	17 439	40	16	54	30	0.14	9	61	29	0.00	27	42	31	0.00
	2020	20 251	44	17	53	30		9	61	29		27	42	31	
Marshall Islands	2015	57	76	85	13	2	0.02	80	15	4	0.00	86	12	2	0.00
	2020	59	78	85	13	2		80	15	4		86	12	2	
Mauritania	2015	4 046	51	52	28	20	-	36	31	33	-	66	26	8	-
	2019	4 526	55	53	28	19		36	31	33		66	26	8	
Mexico	2015	121 858	79	90	7	3	-	84	11	5	-	91	6	2	-
	2019	127 576	80	90	7	3		84	11	5		91	6	2	
Mongolia	2015	2 998	68	76	12	12	2.01	60	17	22	4.14	84	9	7	1.01
	2020	3 278	69	86	14	<1		81	19	<1		89	11	<1	
Montenegro	2015	627	66	>99	<1	<1	-0.00	>99	<1	<1	0.00	>99	<1	<1	0.00
	2020	628	67	>99	<1	<1		>99	<1	<1		>99	<1	<1	
Mozambique	2015	27 042	34	12	32	55	-	8	37	55	-	21	24	55	-
	2020	-	-	-	-	-		-	-	-		-	-	-	
Myanmar	2015	52 681	30	74	20	5	0.03	71	23	6	0.00	83	14	3	0.00
	2020	54 410	31	75	20	5		71	23	6		83	14	3	
Namibia	2015	2 315	47	44	44	12	-	27	58	15	-	62	28	9	-
	2017	2 403	49	45	43	12		27	58	15		62	28	9	
Nepal	2015	27 015	19	55	44	1	1.37	51	48	1	1.59	75	24	<1	0.03
	2020	29 137	21	62	36	1		59	40	2		75	24	1	
Niger	2015	20 002	16	18	59	23	1.10	15	59	26	1.18	35	59	6	0.61
	2020	24 207	17	23	53	24		20	51	28		39	60	2	
Nigeria	2015	181 137	48	33	37	31	0.13	25	41	34	0.00	41	32	27	0.00
	2020	206 140	52	33	36	30		25	41	34		41	32	27	
Niue	2015	2 43	-	-	-	19	-	-	-	-	-	-	-	-	-
	2020	2 46	-	-	-	21	-	-	-	-	-	-	-	-	-
North Macedonia	2015	2 079	57	>99	<1	<1	-0.00	>99	<1	<1	0.00	>99	<1	<1	0.00
	2020	2 083	58	>99	<1	<1		>99	<1	<1		>99	<1	<1	
occupied Palestinian territory*	2016	4 636	76	92	7	1	-	92	6	2	-	92	7	<1	-
	2020	5 101	77	92	7	1		92	6	2		92	7	<1	
Oman	2015	4 267	81	97	-	-	0.00	-	-	-	-	-	-	-	-
	2020	5 107	86	97	-	-		-	-	-		-	-	-	
Pakistan	2015	199 427	36	64	29	7	3.15	53	39	8	4.25	85	11	4	1.09
	2020	220 892	37	80	18	2		74	24	2		90	8	2	
Papua New Guinea	2015	8 108	13	30	29	41	0.03	25	30	45	0.00	62	26	11	0.00
	2020	8 947	13	30	29	41		25	30	45		62	26	11	
Paraguay	2015	6 689	61	80	18	2	0.04	72	25	3	0.00	85	13	2	0.00
	2020	7 133	62	80	18	2		72	25	3		85	13	2	
Peru	2015	30 471	77	-	-	-	-	55	42	3	0.00	-	-	-	-
	2020	32 972	78	-	-	-		55	42	3		-	-	-	
Philippines	2015	102 113	46	82	12	7	0.02	79	13	9	0.00	85	10	4	0.00
	2020	109 581	47	82	12	7		79	13	9		85	10	4	
Republic of Moldova	2015	4 071	42	87	7	6	-	82	10	8	-	93	2	4	-
	2016	4 066	43	87	7	6		82	10	8		93	2	4	

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

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL				RURAL				URBAN			
				Basic	Limited (without water or soap)	No service	Annual rate of change in basic	Basic	Limited (without water or soap)	No service	Annual rate of change in basic	Basic	Limited (without water or soap)	No service	Annual rate of change in basic
Rwanda	2015	11 369	17	4	9	87	0.08	2	9	88	0.06	13	7	80	0.14
	2020	12 952	17	5	10	86		3	10	87		13	8	79	
Saint Lucia	2015	179	19	87	7	5	-	87	7	5	-	88	7	5	-
	2016	180	19	87	7	5		87	7	5		88	7	5	
Samoa	2016	195	19	79	-	-	-	-	-	-	-	-	-	-	-
	2020	198	18	79	-	-		-	-	-		-	-	-	
Sao Tome and Principe	2015	199	70	44	14	42	2.30	47	17	36	-0.66	43	13	44	3.38
	2020	219	74	55	17	28		44	20	36		59	15	25	
Senegal	2015	14 578	46	21	21	57	0.11	10	20	69	0.00	35	22	43	0.00
	2020	16 744	48	22	21	57		10	20	69		35	22	43	
Sierra Leone	2015	7 172	41	16	28	56	1.08	12	29	60	1.46	21	27	52	0.49
	2020	7 977	43	21	15	64		19	14	67		24	16	60	
Solomon Islands	2015	603	22	38	34	28	-	28	40	31	0.00	71	12	17	-
	2020	687	25	-	-	-		28	-	-		-	-	-	
Somalia	2015	13 797	43	25	54	21	0.07	19	55	26	0.00	32	54	15	0.00
	2020	15 893	46	25	54	21		19	55	26		32	54	15	
South Africa	2015	55 386	65	44	44	12	0.13	27	55	18	0.00	53	38	10	0.00
	2020	59 309	67	44	43	12		27	55	18		53	38	10	
Sudan	2015	38 903	34	21	21	58	-1.75	-	-	-	-	-	-	-	-
	2020	43 849	35	13	-	-		-	-	-		-	-	-	
Suriname	2015	559	66	72	17	11	0.00	67	25	8	0.00	75	13	12	0.00
	2020	587	66	72	17	11		67	25	8		75	13	12	
Syrian Arab Republic	2015	17 997	52	83	9	9	0.03	80	9	11	0.00	85	8	7	0.00
	2020	17 501	55	83	9	9		80	9	11		85	8	7	
Tajikistan	2015	8 454	27	73	22	6	0.05	67	26	7	0.10	88	11	2	-0.17
	2020	9 538	28	73	24	4		68	28	4		87	12	2	
Thailand	2015	68 715	48	85	9	6	0.03	83	11	6	0.00	87	7	6	0.00
	2020	69 800	51	85	9	6		83	11	6		87	7	6	
Timor-Leste	2015	1 196	29	28	65	7	0.08	22	69	9	0.00	43	54	4	0.00
	2020	1 318	31	28	64	7		22	69	9		43	54	4	
Togo	2015	7 323	40	14	11	75	0.70	7	10	83	0.58	24	13	63	0.67
	2020	8 279	43	17	9	74		10	7	83		27	11	62	
Tonga	2015	101	23	70	29	2	-0.00	66	32	1	0.00	80	16	4	0.00
	2020	106	23	70	29	2		66	32	1		80	16	4	
Trinidad and Tobago	2015	1 370	53	90	4	6	-	-	-	-	-	-	-	-	-
	2020	-	-	-	-	-		-	-	-		-	-	-	
Tunisia	2015	11 180	68	86	6	8	-0.29	67	14	18	0.03	94	3	3	-0.55
	2020	11 819	70	84	5	11		67	9	24		91	3	5	
Turkmenistan	2015	5 565	50	98	<1	2	0.47	97	<1	3	0.67	99	<1	<1	0.28
	2020	6 031	53	>99	<1	<1		>99	<1	<1		>99	<1	<1	
Uganda	2015	38 225	22	19	30	51	0.73	15	31	53	0.56	31	27	41	0.90
	2020	45 741	25	23	32	45		18	34	48		36	27	37	
United Republic of Tanzania	2015	51 483	32	48	35	17	0.16	40	40	19	0.00	63	25	12	0.00
	2020	59 734	35	48	35	17		40	40	19		63	25	12	
Vanuatu	2015	271	25	25	43	32	-	17	46	36	-	48	33	19	-
	2017	285	25	25	43	32		17	46	36		48	33	19	
Viet Nam	2015	92 677	34	86	13	2	0.07	82	16	2	0.00	93	7	<1	0.00
	2020	97 339	37	86	12	2									

Annex 6:

NATIONAL MENSTRUAL HEALTH DATA

COUNTRY, AREA OR TERRITORY	Year	Survey name	Population of women and girls age 15-49 (thousands)	% urban (of total population)	NATIONAL						RURAL						URBAN					
					Proportion of women and girls age 15-49 who have menstruated in the previous year*						Proportion of women and girls age 15-49 who have menstruated in the previous year*						Proportion of women and girls age 15-49 who have menstruated in the previous year*					
					Awareness of menstruation before menarche	Private place to wash and change	Participation in activities during menstruation	Use of menstrual materials	Use of reusable materials	Use of single-use materials	Awareness of menstruation before menarche	Private place to wash and change	Participation in activities during menstruation	Use of menstrual materials	Use of reusable materials	Use of single-use materials	Awareness of menstruation before menarche	Private place to wash and change	Participation in activities during menstruation	Use of menstrual materials	Use of reusable materials	Use of single-use materials
Algeria	2019	MICS	10 921	73	-	90	75	95	5	90	-	88	77	94	7	87	-	91	74	95	3	91
Bangladesh	2018	NHS	45 211	37	32	83	45	-	-	-	33	84	44	-	-	-	31	82	59	-	-	-
Bangladesh	2019	MICS	45 733	37	-	97	98	66	30	-	97	98	71	25	-	97	98	51	47	-	-	-
Burkina Faso	2017	PMA	4 446	29	-	70	81	90	49	41	-	66	78	87	59	29	-	82	78	97	18	79
Burkina Faso	2019	PMA	4 736	30	-	74	84	87	50	37	-	72	82	85	63	22	-	79	82	92	16	76
Central African Republic	2019	MICS	1 112	42	-	92	68	95	62	33	-	92	66	96	77	19	-	92	72	94	39	55
Chad	2019	MICS	3 603	23	93	67	95	80	15	-	94	66	95	87	8	-	92	69	93	55	38	-
Costa Rica	2018	MICS	1 309	79	-	99	93	99	2	96	-	99	92	99	2	96	-	99	94	99	2	96
Côte d'Ivoire	2018	PMA	6 039	51	-	80	78	99	50	49	-	80	68	100	72	28	-	80	81	99	38	61
Cuba	2019	MICS	2 574	77	-	95	72	98	3	95	-	97	67	98	4	94	-	94	74	97	2	95
Democratic People's Republic of Korea	2017	MICS	6 654	62	-	99	98	99	55	43	-	99	99	99	74	25	-	99	98	99	43	55
Democratic Republic of the Congo	2018	MICS	18 690	44	-	90	86	95	56	39	-	89	85	93	78	15	-	92	86	96	35	61
Egypt	2009	SYP	21 074	43	-	-	-	99	-	-	-	-	-	98	-	-	-	-	-	100	-	-
Egypt	2014	SYP	23 043	43	66	-	-	99	-	-	63	-	-	98	-	-	72	-	-	99	-	-
Ethiopia	2017	PMA	25 832	20	-	80	83	46	37	-	80	-	78	55	23	-	80	96	25	71	-	-
Gambia	2018	MICS	548	61	-	96	80	98	58	40	-	98	83	99	79	21	-	95	79	98	50	47
Ghana	2016	PMA	7 099	55	-	83	98	13	86	-	80	98	21	77	-	86	99	5	93	-	-	-
Ghana	2018	MICS	7 409	56	-	94	81	98	13	85	-	93	80	98	18	80	-	95	82	98	7	91
Guinea-Bissau	2019	MICS	479	44	-	-	92	-	-	-	-	-	93	-	-	-	-	-	90	-	-	-
India	2016	NFHS	340 849	33	-	-	-	99	-	-	-	-	-	99	-	-	-	-	99	-	-	-
Indonesia	2016	PMA	70 109	54	-	93	-	98	13	85	-	90	-	97	17	79	-	96	-	99	9	91
Iraq	2018	MICS	9 668	70	-	89	89	96	11	85	-	87	88	96	17	79	-	89	90	96	8	87
Kenya	2016	PMA	12 485	26	-	89	-	99	13	86	-	89	-	99	16	83	-	89	-	99	6	94

*'-' = no estimate. For JMP estimate methods see Annex 1. For unrounded estimates see www.washdata.org

COUNTRY, AREA OR TERRITORY	Year	Survey name	Population of women and girls age 15-49 (thousands)	% urban (of total population)	NATIONAL						RURAL						URBAN					
					Proportion of women and girls age 15-49 who have menstruated in the previous year*						Proportion of women and girls age 15-49 who have menstruated in the previous year*						Proportion of women and girls age 15-49 who have menstruated in the previous year*					
					Awareness of menstruation before menarche	Private place to wash and change	Participation in activities during menstruation	Use of menstrual materials	Use of reusable materials	Use of single-use materials	Awareness of menstruation before menarche	Private place to wash and change	Participation in activities during menstruation	Use of menstrual materials	Use of reusable materials	Use of single-use materials	Awareness of menstruation before menarche	Private place to wash and change	Participation in activities during menstruation	Use of menstrual materials	Use of reusable materials	Use of single-use materials
Kiribati	2019	MICS	30 55	-	93	84	98	16	82	-	91	85	98	24	74	-	94	83	98	11	87	
Kyrgyzstan	2018	MICS	1 604	36	-	93	93	97	18	79	-	93	94	97	25	72	-	94	91	97	8	89
Lao People's Democratic Republic	2017	LSIS	1 862	34	-	81	88	82	3	79	-	74	88	75	3	72	-	93	88	94	2	92
Lesotho	2018	MICS	551	28	-	95	87	98	8	90	-	94	86	98	12	85	-	95	88	98	3	96
Madagascar	2018	MICS	6 451	37	-	91	92	94	73	21	-	91	92	93	79	14	-	90	90	97	58	39
Mongolia	2018	MICS	849	68	-	89	97	91	3	89	-	90	96	91	5	86	-	89	97	92	2	90
Montenegro	2019	MICS	146	67	-	97	93	97	4	93	-	98	94	97	4	93	-	97	93	97	4	93
Nepal	2014	MICS	7 765	18	-	-	31	-	-	-	-	-	30	-	-	-	-	-	36	-	-	-
Nepal	2019	MICS	8 840	20	-	87	0	94	59	35	-	82	0	93	71	21	-	89	0	94	54	41
Niger	2016	PMA	4 339	16	-	52	-	85	63	22	-	47	-	83	73	10	-	61	-	94	35	58
Nigeria	2018	PMA	44 911	50	-	81	77	95	23	72	-	67	79	95	43	51	-	90	74	96	11	85
North Macedonia	2019	MICS	507	58	-	98	93	99	1	98	-	97	92	98	1	97	-	98	94	99	1	98
occupied Palestinian territory*	2020	MICS	1 277	77	-	80	-	-	2	94	-	83	-	-	2	92	-	80	-	-	2	94
Samoa	2020	pMICS	44	18	-	81	-	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sao Tome and Principe	2019	MICS	50	74	-	94	89	100	97	3	-	93	87	100	96	4	-	95	90	99	97	2
Serbia	2019	MICS	2 006	56	-	99	91	98	1	98	-	99	89	98	0	98	-	99	92	98	1	98
Sierra Leone	2017	MICS	1 816	42	-	93	80	97	68	29	-	90	80	97	88	9	-	96	80	97	48	50
Suriname	2018	MICS	147	66	-	96	83	93	4	89	-	96	82	87	6	81	-	96	83	95	3	92
Togo	2017	MICS	1 875	41	-	92	88	96	57	39	-	90	87	96	76	20	-	93	88	97	39	58
Tonga	2019	pMICS	26	23	-	94	84	-	1	93	-	94	84	-	1	94	-	94	87	-	1	90
Turkmenistan	2019	MICS	1 565	52	-	99	99	99	1	98	-	99	99	99	1	99	-	99	99	99	1	98
Uganda	2017	PMA	9 670	23	-	87	-	98	41	57	-	85	-	98	46	52	-	92	-	98	24	74
Zimbabwe	2019	MICS	3 795	32	-	97	84	98	22	76	-	96	83	97	29	68	-	97	84	99	11	88

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

Annex 7: INEQUALITIES IN BASIC SERVICES

COUNTRIES, AREAS AND TERRITORIES	Year	Survey Name	INEQUALITIES BY WEALTH QUINTILE														
			Basic drinking water			Basic sanitation			Open defecation			Basic hygiene			Basic WASH*		
			Poorest	Richest	Ratio: richest to poorest	Poorest	Richest	Ratio: richest to poorest	Poorest	Richest	Ratio: poorest to richest	Poorest	Richest	Ratio: richest to poorest	Poorest	Richest	Ratio: richest to poorest
Afghanistan	2015	DHS	45	92	2.0	10	57	5.8	27	2	16.1	8	61	8.0	-	-	-
Albania	2018	DHS	93	98	1.1	94	99	1.1	<1	<1	-	-	-	-	-	-	
Algeria	2019	MICS	89	96	1.1	72	95	1.3	3	<1	-	62	96	1.5	41	86	2.1
Angola	2016	DHS	21	89	4.3	15	87	5.9	72	<1	1291.6	9	57	6.2	-	-	-
Armenia	2016	DHS	>99	>99	1.0	86	96	1.1	<1	<1	-	85	>99	1.2	-	-	-
Azerbaijan	2006	DHS	69	98	1.4	68	92	1.4	<1	<1	-	-	-	-	-	-	-
Bangladesh	2019	MICS	94	>99	1.1	48	82	1.7	5	<1	-	31	86	2.8	16	77	4.9
Barbados	2012	MICS	99	>99	1.0	93	98	1.1	2	<1	-	79	91	1.2	-	-	-
Belarus	2012	MICS	99	>99	1.0	91	>99	1.1	<1	<1	-	-	-	-	-	-	-
Belize	2016	MICS	95	97	1.0	66	98	1.5	5	<1	-	83	94	1.1	-	-	-
Benin	2018	DHS	44	83	1.9	<1	43	50.9	85	14	6.1	4	22	5.6	<1	14	∞
Bhutan	2010	MICS	91	>99	1.1	38	92	2.4	7	<1	56.2	72	90	1.2	-	-	-
Bolivia (Plurinational State of)	2016	EDS	77	>99	1.3	23	88	3.8	51	<1	119.0	7	41	5.7	-	-	-
Bosnia and Herzegovina	2012	MICS	98	>99	1.0	83	99	1.2	<1	<1	-	90	>99	1.1	-	-	-
Burkina Faso	2018	MIS	40	78	1.9	7	51	6.8	62	7	8.5	-	-	-	-	-	-
Burundi	2017	DHS	54	80	1.5	26	61	2.3	7	<1	171.3	2	17	9.8	-	-	-
Cambodia	2014	DHS	61	95	1.6	14	91	6.6	80	2	32.2	49	90	1.9	-	-	-
Cameroon	2019	DHS	38	92	2.4	12	80	6.5	22	<1	778.3	8	65	8.3	<1	51	171.0
Central African Republic	2019	MICS	27	52	2.0	2	28	12.4	55	2	26.4	8	42	5.4	<1	9	74.1
Chad	2019	MICS	43	77	1.8	2	39	17.1	86	20	4.3	23	48	2.1	<1	20	44.5
Colombia	2015	DHS	74	>99	1.3	62	99	1.6	26	<1	-	-	-	-	-	-	-
Comoros	2012	DHS	70	93	1.3	24	53	2.2	<1	<1	12.4	13	26	2.1	-	-	-
Congo	2015	MICS	34	92	2.7	3	61	22.8	32	<1	57.1	36	73	2.0	<1	32	176.9
Costa Rica	2018	MICS	99	>99	1.0	91	98	1.1	<1	<1	5.5	73	97	1.3	60	76	1.3
Côte d'Ivoire	2016	MICS	51	98	1.9	8	77	10.0	49	<1	73.5	11	51	4.8	-	-	-
Cuba	2019	MICS	96	98	1.0	83	92	1.1	<1	<1	1.9	86	95	1.1	71	87	1.2
Democratic Republic of the Congo	2018	MICS	18	93	5.1	7	29	4.2	24	2	12.9	7	37	5.0	<1	12	93.7
Dominican Republic	2014	MICS	92	>99	1.1	58	98	1.7	9	<1	67.3	24	83	3.5	-	-	-
Egypt	2015	DHS	>99	>99	1.0	89	97	1.1	<1	<1	-	-	-	-	-	-	-
El Salvador	2014	MICS	86	>99	1.2	65	98	1.5	9	<1	698.4	82	94	1.1	-	-	-
Eswatini	2014	MICS	41	98	2.4	40	55	1.4	34	<1	59.4	3	48	17.5	-	-	-

*Basic WASH refers to the proportion of population that have basic drinking water, basic sanitation, and basic hygiene services.
∞ The infinity symbol is used where the poorest quintile has 0% basic WASH.

COUNTRIES, AREAS AND TERRITORIES	Year	Survey Name	INEQUALITIES BY SUBNATIONAL REGION														
			Basic drinking water			Basic sanitation			Open defecation			Basic hygiene			Basic WASH*		
			Lowest	Highest	Ratio: highest to lowest	Lowest	Highest	Ratio: highest to lowest	Lowest	Highest	Ratio: highest to lowest	Lowest	Highest	Ratio: highest to lowest	Lowest	Highest	Ratio: highest to lowest
Afghanistan	2015	DHS	12	97	8.0	2	70	32.7	<1	80	∞	<1	66	229.0	-	-	-
Albania	2018	DHS	87	>99	1.1	93	>99	1.1	<1	<1	-	-	-	-	-	-	
Algeria	2019	MICS	91	99	1.1	83	91	1.1	<1	3	76.2	71	91	1.3	58	73	1.3
Angola	2016	DHS	28	87	3.1	12	71	5.8	2	85	36.0	4	56	15.6	-	-	-
Armenia	2016	DHS	99	>99	1.0	63	>99	1.6	<1	<1	-	85	>99	1.2	-	-	-
Azerbaijan	2006	DHS	64	>99	1.5	53	95	1.8	<1	2	∞	-	-	-	-	-	-
Bangladesh	2019	MICS	94	>99	1.1	57	72	1.3	<1	7	92.0	34	68	2.0	24	48	2.0
Barbados	2012	MICS	>99	>99	1.0	94	98	1.0	<1	<1	17.4	85	91	1.1	-	-	-
Belarus	2012	MICS	>99	>99	1.0	93	99	1.1	<1	<1	-	-	-	-	-	-	-
Belize	2016	MICS	95	>99	1.1	72	96	1.3	<1	8	64.9	82	94	1.1	-	-	-
Benin	2018	DHS	33	98	3.0	4	34	9.2	6	88	14.0	1	29	20.3	<1	15	60.2
Bhutan	2010	MICS	68	>99	1.5	31	80	2.6	<1	6	29.9	49	94	1.9	-	-	-
Bolivia (Plurinational State of)	2016	EDS	78	99	1.3	36	61	1.7	3	47	14.3	13	39	3.0	-	-	-
Bosnia and Herzegovina	2012	MICS	88	>99	1.1	89	>99	1.1	<1	<1	-	90	98	1.1	-	-	-
Burkina Faso	2018	MIS	14	81	5.8	7	57	8.2	8	70	9.0	-	-	-	-	-	-
Burundi	2017	DHS	37	93	2.5	16	83	5.1	<1	10	36.5	1	23	18.0	-	-	-
Cambodia	2014	DHS	53	96	1.8	25	87	3.5	4	69	16.3	30	98	3.3	-	-	-
Cameroon	2019	DHS	40	97	2.4	27	68	2.5	<1	16	∞	11	77	6.9	6	40	6.2
Central African Republic	2019	MICS	16	61	3.8	4	25	6.7	3	49	18.0	4	41	9.4	<1	9	21.4
Chad	2019	MICS	5	94	19.2	3	51	15.8	4	87	24.0	18	50	2.8	<1	25	40.0
Colombia	2015	DHS	88	>99	1.1	80	93	1.2	<1	13	∞	-	-	-	-	-	-
Comoros	2012	DHS	81	87	1.1	21	39	1.9	<1	3	11.0	6	24	4.4	-	-	-
Congo	2015	MICS	20	90	4.5	2	33	20.1	<1	38	47.8	18	66	3.6	<1	14	33.1
Costa Rica	2018	MICS	98	>99	1.0	92	98	1.1	<1	<1	-	83	91	1.1	63	78	1.2
Côte d'Ivoire	2016	MICS	50	99	2.0	12	60	5.1	1	50	38.4	6	40	6.3	-	-	-
Cuba	2019	MICS	93	>99	1.1	66	99	1.5	<1	3	43.1	75	>99	1.3	59	98	1.7
Democratic Republic of the Congo	2018	MICS	2	97	49.8	<1	36	817.1	<1	41	91.6	<1	56	116.8	<1	13	∞
Dominican Republic	2014	MICS	93	99	1.1	70	89	1.3	<1	12	21.0	29	65	2.2	-	-	-
Egypt	2015	DHS	>99	>99	1.0	90	>99	1.1	<1	<1	-	-	-	-	-	-	-
El Salvador	2014	MICS	92	>99	1.1	82	92	1.1	<1	5	37.9	87	91	1.0	-	-	-
Eswatini	2014	MICS	52	79	1.5	51	56	1.1	4	25	6.4	10	25	2.5	-	-	-

COUNTRIES, AREAS AND TERRITORIES	Year	Survey Name	INEQUALITIES BY WEALTH QUINTILE														
			Basic drinking water			Basic sanitation			Open defecation			Basic hygiene			Basic WASH		
			Poorest	Richest	Ratio: richest to poorest	Poorest	Richest	Ratio: richest to poorest	Poorest	Richest	Ratio: poorest to richest	Poorest	Richest	Ratio: richest to poorest	Poorest	Richest	Ratio: richest to poorest
Ethiopia	2016	DHS	27	84	3.1	4	18	5.2	55	7	7.5	1	21	14.9	-	-	-
Gabon	2012	DHS	55	96	1.8	15	86	5.9	6	<1	115.1	-	-	-	-	-	-
Gambia	2020	DHS	82	98	1.2	21	87	4.2	3	<1	-	4	20	4.8	1	28	19.2
Georgia	2018	MICS	91	>99	1.1	80	>99	1.3	<1	<1	-	82	98	1.2	56	95	1.7
Ghana	2018	MICS	54	99	1.8	12	47	3.8	46	2	29.9	28	60	2.2	1	34	29.3
Guatemala	2015	DHS	84	>99	1.2	39	92	2.3	18	<1	235.5	51	92	1.8	-	-	-
Guinea	2018	DHS	43	92	2.1	7	57	7.8	32	<1	-	13	42	3.3	<1	24	43.0
Guinea-Bissau	2019	MICS	45	91	2.0	2	48	22.8	28	<1	1063.8	10	22	2.3	<1	12	67.8
Guyana	2020	MICS	86	96	1.1	80	96	1.2	2	<1	-	68	91	1.3	41	76	1.8
Haiti	2017	DHS	28	95	3.4	10	68	7.0	57	1	48.7	13	40	3.2	-	-	-
Honduras	2012	DHS	94	>99	1.1	56	87	1.5	27	<1	68.3	75	90	1.2	-	-	-
India	2016	DHS	87	98	1.1	11	91	8.4	83	2	54.1	25	92	3.7	-	-	-
Indonesia	2017	DHS	74	99	1.3	44	97	2.2	26	<1	36.0	-	-	-	-	-	-
Iraq	2018	MICS	96	>99	1.0	91	99	1.1	<1	<1	-	88	>99	1.1	76	98	1.3
Jamaica	2011	MICS	88	98	1.1	76	99	1.3	<1	<1	-	53	82	1.6	-	-	-
Jordan	2018	DHS	>99	>99	1.0	96	>99	1.0	<1	<1	-	-	-	-	-	-	-
Kazakhstan	2015	MICS	98	>99	1.0	96	99	1.0	<1	<1	-	98	>99	1.0	-	-	-
Kenya	2015	MIS	38	94	2.5	10	58	5.5	40	<1	206.0	-	-	-	-	-	-
Kiribati	2019	MICS	56	99	1.7	25	78	3.1	64	1	50.9	44	71	1.6	6	59	10.2
Kyrgyzstan	2018	MICS	88	>99	1.1	98	99	1.0	-	-	-	91	>99	1.1	78	93	1.2
Lao People's Democratic Republic	2017	MICS	61	>99	1.6	30	98	3.3	65	<1	824.9	21	85	4.0	8	81	10.4
Lesotho	2018	MICS	61	96	1.6	35	66	1.9	57	<1	103.5	3	24	7.4	<1	16	25.9
Liberia	2020	DHS	55	88	1.6	2	59	24.6	70	4	15.6	<1	10	17.6	<1	7	194.0
Madagascar	2018	MICS	17	84	4.9	<1	24	80.4	67	5	13.5	5	43	9.2	<1	14	600.9
Malawi	2016	DHS	55	82	1.5	16	40	2.4	13	<1	26.0	3	22	6.5	-	-	-
Maldives	2017	DHS	99	>99	1.0	97	99	1.0	<1	<1	-	86	97	1.1	-	-	-
Mali	2018	DHS	42	96	2.3	17	56	3.3	28	<1	78523.6	5	31	6.2	1	18	16.5
Mauritania	2015	MICS	34	95	2.8	4	87	19.6	85	<1	531.0	30	78	2.6	-	-	-
Mexico	2015	MICS	94	>99	1.1	81	>99	1.2	4	<1	-	80	97	1.2	-	-	-
Mongolia	2018	MICS	42	99	2.4	33	97	2.9	38	<1	-	63	98	1.5	13	93	7.4
Montenegro	2018	MICS	99	99	1.0	87	>99	1.1	<1	<1	-	>99	>99	1.0	85	98	1.2
Mozambique	2018	MIS	35	95	2.7	15	79	5.2	49	<1	51.7	-	-	-	-	-	-
Myanmar	2016	DHS	67	95	1.4	22	83	3.7	30	<1	324.1	57	95	1.7	11	76	6.9
Namibia	2013	DHS	51	>99	1.9	4	87	24.6	92	<1	422.7	17	79	4.5	-	-	-
Nepal	2019	MICS	88	97	1.1	80	77	1.0	9	<1	270.0	49	98	2.0	34	70	2.0
Nicaragua	2011	ENDESA	51	98	1.9	43	91	2.1	33	<1	90.3	-	-	-	-	-	-
Niger	2006	DHS	31	70	2.2	2	37	24.1	93	25	3.7	4	27	7.0	-	-	-

COUNTRIES, AREAS AND TERRITORIES	Year	Survey Name	INEQUALITIES BY SUBNATIONAL REGION														
			Basic drinking water			Basic sanitation			Open defecation			Basic hygiene			Basic WASH		
			Lowest	Highest	Ratio: highest to lowest	Lowest	Highest	Ratio: highest to lowest	Lowest	Highest	Ratio: highest to lowest	Lowest	Highest	Ratio: highest to lowest	Lowest	Highest	Ratio: highest to lowest
Ethiopia	2016	DHS	34	98	2.9	2	30	16.1	1	71	61.2	2	38	15.5	-	-	-
Gabon	2012	DHS	53	95	1.8	26	44	1.6	<1	12	403.7	-	-	-	-	-	-
Gambia	2020	DHS	79	>99	1.3	18	63	3.5	<1	10	∞	4	16	4.5	2	15	7.1
Georgia	2018	MICS	85	>99	1.2	76	97	1.3	<1	<1	-	84	97	1.2	62	89	1.4
Ghana	2018	MICS	50	98	1.9	8	25	3.0	7	67	9.9	19	55	2.8	2	19	9.2
Guatemala	2015	DHS	81	>99	1.2	51	78	1.5	<1	15	20.0	59	88	1.5	-	-	-
Guinea	2018	DHS	50	95	1.9	17	44	2.5	<1	40	∞	4	44	11.7	1	18	14.3
Guinea-Bissau	2019	MICS	38	97	2.6	5	40	7.7	<1	32	∞	<1	29	380.2	<1	11	∞
Guyana	2020	MICS	64	>99	1.5	69	95	1.4	<1	9	∞	58	86	1.5	38	70	1.8
Haiti	2017	DHS	42	92	2.2	21	49	2.4	7	48	6.6	14	32	2.3	-	-	-
Honduras	2012	DHS	<1	99	∞	21	83	3.9	2	42	26.0	47	90	1.9	-	-	-
India	2016	DHS	63	>99	1.6	25	>99	4.0	<1	70	∞	29	96	3.3	-	-	-
Indonesia	2017	DHS	70	>99	1.4	56	91	1.6	2	26	15.2	-	-	-	-	-	-
Iraq	2018	MICS	92	>99	1.1	87	>99	1.1	<1	<1	-	88	>99	1.1	75	98	1.3
Jamaica	2011	MICS	91	>99	1.1	84	88	1.0	<1	<1	2.8	63	74	1.2	-	-	-
Jordan	2018	DHS	98	>99	1.0	95	>99	1.1	<1	<1	-	-	-	-	-	-	-
Kazakhstan	2015	MICS	95	>99	1.1	88	>99	1.1	<1	<1	-	96	>99	1.0	-	-	-
Kenya	2015	MIS	42	98	2.3	20	56	2.7	<1	26	∞	-	-	-	-	-	-
Kiribati	2019	MICS	55	96	1.7	32	51	1.6	22	55	2.5	51	59	1.2	14	31	2.2
Kyrgyzstan	2018	MICS	72	>99	1.4	95	>99	1.0	-	-	-	84	>99	1.2	65	97	1.5
Lao People's Democratic Republic	2017	MICS	63	>99	1.6	33	96	2.9	<1	65	94.7	17	87	5.1	9	84	9.4
Lesotho	2018	MICS	65	84	1.3	44	54	1.2	7	44	6.2	3	12	3.7	1	6	4.6
Liberia	2020	DHS	70	79	1.1	9	35	3.8	21	62	2.9	<1	6	11.3	<1	2	11.7
Madagascar	2018	MICS	11	74	6.9	<1	18	30.1	5	85	16.6	3	36	12.3	<1	11	41.5
Malawi	2016	DHS	61	66	1.1	18	31	1.8	4	6	1.4	8	15	1.7	-	-	-
Maldives	2017	DHS	99	>99	1.0	92	>99	1.1	<1	<1	-	85	97	1.1	-	-	-
Mali	2018	DHS	32	96	3.0	15	47	3.2	<1	61	1810.1	7	27	3.9	3	12	4.7
Mauritania	2015	MICS	42	>99	2.4	12	91	7.4	1	79	57.6	14	91	6.4	-	-	-
Mexico	2015	MICS	96	>99	1.0	91	97	1.1	<1	1	3.1	86	92	1.1	-	-	-
Mongolia	2018	MICS	61	95	1.5	48	78	1.6	<1	23	1471.6	72	85	1.2	35	63	1.8
Montenegro	2018	MICS	98	>99	1.0	89	98	1.1	<1	<1	2.7	>99	>99	1.0	89	97	1.1
Mozambique	2018	MIS	34	>99	3.0	11	86	8.0	<1	52	235.6	-	-	-	-	-	-
Myanmar	2016	DHS	64	94	1.5	29	87	3.1	2	54	27.2	58	98	1.7	16	65	4.1
Namibia	2013	DHS	53	98	1.9	14	64	4.6	12	83	6.8	18	72	4.0	-	-	-
Nepal	2019	MICS	89	97	1.1	70	85	1.2	<1	16	20.3	50	85	1.7	40	65	1.6
Nicaragua	2011	ENDESA	57	93	1.6	-	-	-	-	-	-	-	-	-	-	-	-
Niger	2006	DHS	26	91	3.5	1	32	25.2	11	93	8.3	4	31	8.1	-	-	-

COUNTRIES, AREAS AND TERRITORIES	Year	Survey Name	INEQUALITIES BY WEALTH QUINTILE														
			Basic drinking water			Basic sanitation			Open defecation			Basic hygiene			Basic WASH		
			Poorest	Richest	Ratio: richest to poorest	Poorest	Richest	Ratio: richest to poorest	Poorest	Richest	Ratio: poorest to richest	Poorest	Richest	Ratio: richest to poorest	Poorest	Richest	Ratio: richest to poorest
Nigeria	2018	DHS	43	95	2.2	12	65	5.3	42	3	12.3	8	60	7.3	<1	39	96.1
North Macedonia	2019	MICS	98	>99	1.0	85	>99	1.2	<1	<1	-	99	>99	1.0	83	99	1.2
occupied Palestinian territory*	2020	MICS	98	>99	1.0	96	99	1.0	<1	<1	-	84	98	1.2	77	93	1.2
Pakistan	2018	DHS	78	98	1.2	30	97	3.3	45	<1	-	17	94	5.5	-	-	-
Panama	2013	MICS	87	>99	1.2	53	>99	1.9	10	<1	-	-	-	-	-	-	-
Papua New Guinea	2018	DHS	22	89	4.0	10	63	6.4	22	5	4.4	7	69	10.4	<1	42	124.3
Paraguay	2016	MICS	81	>99	1.2	47	98	2.1	3	<1	-	56	94	1.7	-	-	-
Peru	2016	ENDES	77	>99	1.3	49	98	2.0	23	<1	178.2	-	-	-	-	-	-
Philippines	2017	DHS	83	>99	1.2	54	97	1.8	17	<1	-	70	94	1.4	35	90	2.6
Republic of Moldova	2012	MICS	71	96	1.3	53	90	1.7	<1	<1	-	73	96	1.3	-	-	-
Rwanda	2015	DHS	41	80	2.0	40	64	1.6	9	<1	44.4	<1	15	18.4	-	-	-
Saint Lucia	2012	MICS	97	>99	1.0	72	99	1.4	7	<1	-	70	96	1.4	-	-	-
Sao Tome and Principe	2019	MICS	84	94	1.1	15	81	5.6	74	11	6.6	43	77	1.8	5	58	11.1
Senegal	2019	DHS	50	98	2.0	22	90	4.1	41	<1	3001.1	11	44	4.1	2	42	18.5
Serbia	2019	MICS	98	>99	1.0	95	>99	1.0	<1	<1	-	-	-	-	-	-	-
Sierra Leone	2019	DHS	38	74	2.0	4	45	10.3	40	2	21.8	14	27	2.0	<1	13	144.8
Somalia	2017	SHFS	42	96	2.3	4	36	9.0	67	<1	2187.1	-	-	-	-	-	-
South Africa	2016	DHS	68	>99	1.5	59	97	1.7	8	<1	-	4	80	18.4	-	-	-
Sudan	2014	MICS	36	96	2.7	7	78	10.8	54	<1	124.6	16	49	3.0	-	-	-
Suriname	2018	MICS	94	>99	1.1	64	98	1.5	10	<1	-	53	90	1.7	30	66	2.2
Tajikistan	2017	DHS	72	98	1.4	98	95	1.0	<1	<1	-	53	91	1.7	-	-	-
Thailand	2019	MICS	99	>99	1.0	93	98	1.1	<1	<1	-	79	95	1.2	68	84	1.2
Timor-Leste	2016	DHS	61	96	1.6	24	86	3.6	55	<1	251.9	12	54	4.4	3	44	12.9
Togo	2017	MICS	40	95	2.3	3	55	17.6	79	4	18.1	7	36	5.1	<1	21	∞
Tonga	2019	MICS	>99	>99	1.0	82	98	1.2	<1	<1	-	43	90	2.1	36	87	2.4
Trinidad and Tobago	2011	MICS	98	>99	1.0	86	99	1.2	<1	<1	-	77	94	1.2	-	-	-
Tunisia	2018	MICS	88	98	1.1	91	>99	1.1	4	<1	-	79	>99	1.3	56	85	1.5
Turkey	2013	DHS	96	>99	1.0	86	>99	1.2	<1	<1	-	-	-	-	-	-	-
Turkmenistan	2016	MICS	98	>99	1.0	99	98	1.0	<1	<1	-	98	>99	1.0	-	-	-
Uganda	2016	DHS	43	82	1.9	5	46	9.1	21	<1	135.3	10	52	5.1	-	-	-
Ukraine	2012	MICS	98	99	1.0	96	>99	1.0	<1	<1	-	-	-	-	-	-	-
United Republic of Tanzania	2016	DHS	25	87	3.5	2	57	33.5	27	<1	997.4	23	77	3.4	-	-	-
Uruguay	2013	MICS	99	>99	1.0	87	97	1.1	2	<1	-	-	-	-	-	-	-
Viet Nam	2014	MICS	80	>99	1.2	37	98	2.7	23	<1	-	62	98	1.6	-	-	-
Yemen	2013	DHS	32	96	3.0	12	95	7.8	60	2	28.7	20	76	3.9	-	-	-
Zambia	2018	DHS	41	94	2.3	21	64	3.0	22	<1	163.3	11	46	4.1	<1	35	57.4
Zimbabwe	2019	MICS	36	94	2.6	12	54	4.6	55	<1	-	31	70	2.2	2	40	20.2

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

COUNTRIES, AREAS AND TERRITORIES	Year	Survey Name	INEQUALITIES BY SUBNATIONAL REGION														
			Basic drinking water			Basic sanitation			Open defecation			Basic hygiene			Basic WASH		
			Lowest	Highest	Ratio: highest to lowest	Lowest	Highest	Ratio: highest to lowest	Lowest	Highest	Ratio: highest to lowest	Lowest	Highest	Ratio: highest to lowest	Lowest	Highest	Ratio: highest to lowest
Nigeria	2018	DHS	57	87	1.5	24	48	2.0	9	51	5.5	8	53	7.0	3	27	7.8
North Macedonia	2019	MICS	98	>99	1.0	87	99	1.1	<1	<1	-	98	>99	1.0	84	97	1.2
occupied Palestinian territory*	2020	MICS	98	>99	1.0	90	>99	1.1	<1	2	8	89	97	1.1	78	96	1.2
Pakistan	2018	DHS	62	97	1.6	47	95	2.0	<1	21	134.8	31	78	2.5	-	-	-
Panama	2013	MICS	47	>99	2.1	<1	90	164.5	<1	56	∞	-	-	-	-	-	-
Papua New Guinea	2018	DHS	36	62	1.7	22	29	1.3	5	44	8.4	19	41	2.2	6	16	2.5
Paraguay	2016	MICS	81	>99	1.2	61	93	1.5	<1	4	115.4	68	87	1.3	-	-	-
Peru	2016	ENDES	66	99	1.5	54	90	1.7	<1	25	33.7	-	-	-	-	-	-
Philippines	2017	DHS	72	>99	1.4	36	87	2.4	<1	22	103.4	57	94	1.7	22	76	3.5
Republic of Moldova	2012	MICS	77	98	1.3	63	86	1.4	<1	<1	-	83	95	1.1	-	-	-
Rwanda	2015	DHS	42	80	1.9	46	65	1.4	1	5	4.8	2	15	9.9	-	-	-
Saint Lucia	2012	MICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sao Tome and Principe	2019	MICS	76	95	1.2	34	56	1.6	30	58	2.0	39	62	1.6	12	33	2.6
Senegal	2019	DHS	20	>99	5.1	26	76	2.9	<1	33	443.6	1	58	45.7	1	26	25.1
Serbia	2019	MICS	97	>99	1.0	97	>99	1.0	<1	<1	-	-	-	-	-	-	-
Sierra Leone	2019	DHS	41	72	1.7	12	37	3.2	3	41	14.4	5	31	6.6	<1	6	7.0
Somalia	2017	SHFS	36	98	2.7	3	44	15.6	<1	71	∞	-	-	-	-	-	-
South Africa	2016	DHS	71	>99	1.4	63	85	1.4	<1	5	11.9	11	74	6.6	-	-	-
Sudan	2014	MICS	33	95	2.9	10	79	8.2	2	45	25.9	2	49	32.1	-	-	-
Suriname	2018	MICS	84	>99	1.2	42	97	2.3	<1	31	∞	53	85	1.6	19	66	3.5
Tajikistan	2017	DHS	69	>99	1.4	92	98	1.1	<1	<1	-	51	92	1.8	-	-	-
Thailand	2019	MICS	97	>99	1.0	96	99	1.0	<1	<1	-	84	90	1.1	55	83	1.5
Timor-Leste	2016	DHS	65	95	1.5	31	73	2.4	4	49	13.1	9	39	4.4	6	32	5.3
Togo	2017	MICS	44	96	2.2	10	46	4.8	3	73	22.3	8	29	3.8	<1	16	24.4
Tonga	2019	MICS	97	>99	1.0	81	93	1.1	<1	<1	-	47	74	1.6	43	70	1.6
Trinidad and Tobago	2011	MICS	98	>99	1.0	92	97	1.1	<1	<1	-	77	96	1.2	-	-	-
Tunisia	2018	MICS	88	99	1.1	93	99	1.1	<1	3	∞	85	98	1.2	61	82	1.3
Turkey	2013	DHS	97	99	1.0	91	98	1.1	<1	<1	-	-	-	-	-	-	-
Turkmenistan	2016	MICS	98	>99	1.0	98	>99	1.0	<1	<1	-	98	>99	1.0	-	-	-
Uganda	2016	DHS	37	98	2.6	2	38	19.1	<1	67	498.1	4	60	13.9	-	-	-
Ukraine	2012	MICS	98	>99	1.0	94	99	1.1	<1	<1	-	-	-	-	-	-	-
United Republic of Tanzania	2016	DHS	26	97	3.7	7	75	10.8	<1	45	1847.8	13	92	7.3	-	-	-
Uruguay	2013	MICS	97	>99	1.0	94	95	1.0	<1	<1	26.0	-	-	-	-	-	-
Viet Nam	2014	MICS	84	>99	1.2	54	94	1.7	<1	22	284.1	71	95	1.3	-	-	-
Yemen	2013	DHS	38	>99	2.6	15	98	6.6	<1	47	473.7	13	80	6.1	-	-	-
Zambia	2018	DHS	36	92	2.5	5	47	9.4	<1	50	57.8	5	34	6.3	3	15	6.0
Zimbabwe	2019	MICS	51	98	1.9	24	56	2.4	<1	60	∞	25	70	2.8	7	39	5.2

Annex 8:

REGIONAL DRINKING WATER ESTIMATES

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)		% urban		NATIONAL					RURAL					URBAN				
						Proportion of population using improved water supplies					Proportion of population using improved water supplies					Proportion of population using improved water supplies				
						At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change (basic)	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change (basic)	At least basic	Limited (more than 30 mins)	Unimproved	Surface water	Annual rate of change (basic)
SDG REGIONS																				
Australia and New Zealand	2015	28 547	86	>99	<1	<1	<1	0.01	>99	<1	<1	<1	0.04	>99	<1	<1	<1	0.01		
	2020	30 322	86	>99	<1	<1	<1	0.01	>99	<1	<1	<1	0.04	>99	<1	<1	<1	0.01		
Central and Southern Asia	2015	1 896 327	35	89	4	6	1	0.45	86	5	7	2	0.58	94	3	3	<1	0.05		
	2020	2 014 709	37	91	4	4	<1	0.45	89	5	5	1	0.58	95	3	2	<1	0.05		
Eastern and South-Eastern Asia	2015	2 279 490	56	92	<1	6	1	0.64	85	2	12	2	0.92	97	<1	2	<1	0.05		
	2020	2 346 709	61	94	<1	4	<1	0.64	89	2	8	1	0.92	98	<1	2	<1	0.05		
Latin America and the Caribbean	2015	623 934	80	96	<1	2	1	0.34	86	2	7	6	0.93	99	<1	1	<1	0.12		
	2020	653 962	81	97	<1	1	<1	0.34	90	1	4	4	0.93	>99	<1	<1	<1	0.12		
Europe and Northern America	2015	1 100 090	76	99	<1	<1	<1	0.03	97	<1	2	<1	0.12	>99	<1	<1	<1	-0.00		
	2020	1 116 506	77	>99	<1	<1	<1	0.03	98	<1	1	<1	0.12	>99	<1	<1	<1	-0.00		
Oceania	2015	11 312	23	55	2	17	26	0.31	44	2	21	33	0.39	92	1	4	2	0.06		
	2020	12 356	23	57	2	18	23	0.31	47	3	22	29	0.39	93	<1	4	3	0.06		
Sub-Saharan Africa	2015	958 577	39	60	12	18	10	0.99	44	15	26	15	0.94	84	8	6	2	0.50		
	2020	1 094 366	42	65	13	16	7	0.99	49	17	23	11	0.94	87	7	5	1	0.50		
Northern Africa and Western Asia	2015	481 520	62	90	5	3	1	0.41	82	9	6	3	0.66	96	3	<1	<1	0.14		
	2020	525 869	63	92	6	1	1	0.41	85	10	3	3	0.66	96	3	<1	<1	0.14		
OTHER REGIONAL GROUPINGS																				
Landlocked Developing Countries	2015	473 817	30	64	13	16	7	0.79	53	16	22	9	0.91	90	6	4	<1	0.22		
	2020	533 143	31	68	15	13	4	0.79	57	19	18	6	0.91	91	6	2	<1	0.22		
Least Developed Countries	2015	940 860	32	63	12	17	8	0.81	53	14	22	11	0.74	83	9	6	2	0.47		
	2020	1 057 131	35	67	13	14	6	0.81	57	16	19	9	0.74	85	9	5	<1	0.47		
Small Island Developing States	2015	66 523	61	83	3	9	5	0.14	63	5	19	13	0.16	95	2	2	<1	-0.01		
	2020	69 410	61	83	3	9	5	0.14	64	5	19	12	0.16	95	2	2	<1	-0.01		
Fragile contexts	2015	1 600 667	40	71	9	13	7	0.67	59	11	19	11	0.70	88	6	4	1	0.28		
	2020	1 782 109	43	74	9	11	5	0.67	63	12	17	9	0.70	90	6	4	<1	0.28		
INCOME GROUPINGS																				
Low income	2015	603 234	32	55	16	21	9	0.88	42	18	27	12	0.93	81	11	6	1	0.36		
	2020	686 089	34	59	18	17	6	0.88	47	21	23	9	0.93	83	12	5	<1	0.36		
Lower-middle income	2015	2 750 658	38	85	5	7	3	0.54	81	5	9	4	0.67	93	3	3	<1	0.15		
	2020	2 954 195	40	88	5	5	2	0.54	84	5	7	4	0.67	94	3	3	<1	0.15		
Upper-middle income	2015	2 834 637	63	93	<1	5	<1	0.55	86	2	11	2	0.90	98	<1	2	<1	0.05		
	2020	2 936 970	67	95	<1	3	<1	0.55	90	2	7	<1	0.90	98	<1	1	<1	0.05		
High income	2015	1 188 497	80	>99	<1	<1	<1	0.04	99	<1	<1	<1	0.13	>99	<1	<1	<1	0.02		
	2020	1 214 601	81	>99	<1	<1	<1	0.04	>99	<1	<1	<1	0.13	>99	<1	<1	<1	0.02		
WORLD	2015	7 379 797	54	88	3	6	2	0.42	79	5	11	4	0.61	96	2	2	<1	0.05		
	2020	7 794 799	56	90	4	5	2	0.42	82	6	9	3	0.61	96	2	2	<1	0.05		

COUNTRY, AREA OR TERRITORY	Year	NATIONAL						RURAL						URBAN					
		Proportion of population using improved water supplies						Proportion of population using improved water supplies						Proportion of population using improved water supplies					
		Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped	Safely managed	Accessible on premises	Available when needed	Free from contamination	Piped	Non-piped
SDG REGIONS																			
Australia and New Zealand	2015	-	98	96	-	93	7	-	90	96	-	86	14	97	>99	97	99	94	6
	2020	-	98	96	-	>99	<1	-	90	96	-	>99	<1	97	>99	97	>99	>99	<1
Central and Southern Asia	2015	58	64	71	61	43	51	56	56	66	61	29	62	62	79	81	62	67	30
	2020	62	69	68	68	42	53	62	62	63	70	29	65	63	80	77	63	65	33
Eastern and South-Eastern Asia	2015	-	86	88	-	67	25	-	78	79	-	46	41	92	92	95	92	85	13
	2020	-	89	90	-	73	23	-	83	84	-	52	39	93	93	95	95	86	12
Latin America and the Caribbean	2015	75	92	78	77	90	6	49	76	65	49	72	16	82	96	82	84	95	4
	2020	75	94	78	79	92	6	53	82	66	53	77	15	81	97	81	86	96	3
Europe and Northern America	2015	95	95	96	98	95	4	-	90	93	-	86	12	97	97	97	99	98	2
	2020	96	96	97	98	96	3	-	91	95	-	89	9	97	97	97	99	98	1
Oceania	2015	-	40	34	-	34	22	-	28	29	-	22	24	53	81	53	80	78	16
	2020	-	44	36	-	33	27	-	30	30	-	21	28	53	90	53	78	72	21
Sub-Saharan Africa	2015	27	27	54	33	33	38	11	11	47	20	18	41	51	51	66	53	58	34
	2020	30	31	59	36	35	43	13	13	52	23	20	46	54	56	68	54	56	38
Northern Africa and Western Asia	2015	77	84	78	78	82	14	-	70	69	-	70	21	82	92	83	82	89	10
	2020	79	86	79	79	83	14	-	74	72	-	73	21	82	92	84	82	89	10
OTHER REGIONAL GROUPINGS																			
Landlocked Developing Countries	2015	33	34	63	38	40	37	19	19	58	26	25	44	66	70	73	66	77	19
	2020	35	38	67	41	43	40	22	22	64	29	28	48	66	74	75	66	77	20
Least Developed Countries	2015	33	35	61	37	30	45	25	25	58	30	17	50	52	58	68	52	58	34
	2020	37	40	64	40	33	47	28	28	62	32	19	54	55	63	69	55	60	34
Small Island Developing States	2015	-	68	69	-	65	21	-	46	52	-	42	27	-	82	80	-	80	18
	2020	-	68	69	-	62	24	-	47	52	-	40	29	-	81	80	-	76	21
Fragile contexts	2015	41	46	64	41	36	44	31	33	59	31	19	51	55	66	72	55	60	34
	2020	43	49	67	43	36	47	33	35	62	33	20	54	55	67	73	55	58	38
INCOME GROUPINGS																			
Low income	2015	25	25	57	32	35	36	12	12	52	21	20	41	54	54	69	58	66	26
	2020	29	29	62	36	37	40	14	14	57	24	22	46	58	58	71	58	67	27
Lower middle income	2015	55	61	69	56	42	48	52	52	64	55	29	57	58	74	79	58	64	32
	2020	58	65	68	61	43	50	58	58	62	63	30	60	58	76	77	58	62	35
Upper middle income	2015	75	88	86	75	76	18	-	79	78	-	55	32	90	93	90	90	89	9
	2020	77	90	87	77	81	15	-	84	82	-	62	30	90	93	90	94	90	8
High income	2015	97	99	97	99	97	2	-	96	95	-	93	6	97	>99	97	>99	98	1
	2020	98	>99	98	>99	98	2	-	97	97	-	95	5	98	>99	98	>99	99	1
WORLD	2015	70	74	78	70	64	28	53	59	68	53	40	44	85	88	87	85	84	14
	2020	74	77	78	75	65	28	60	62	68	60	42	46	86	88	86	86		

Annex 9:

REGIONAL SANITATION ESTIMATES

COUNTRY, AREA OR TERRITORY	Year	Population (thousands)	% urban	NATIONAL						RURAL						URBAN												
				At least basic		Limited (shared)		Unimproved		Open defecation		Annual rate of change (basic)		Annual rate of change (open defecation)		At least basic		Limited (shared)		Unimproved		Open defecation		Annual rate of change (basic)		Annual rate of change (open defecation)		
SDG REGIONS																												
Australia and New Zealand	2015	28 547	86	>99	<1	<1	<1	-0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2020	30 322	86	>99	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central and Southern Asia	2015	1 896 327	35	59	11	7	23	2.38	-2.34	52	8	8	32	2.83	-2.86	73	17	5	5	1.18	-0.89							
	2020	2 014 709	37	71	12	5	12			67	9	6	18			79	17	3	<1									
Eastern and South-Eastern Asia	2015	2 279 490	56	84	4	9	3	1.54	-0.27	75	5	15	5	1.94	-0.37	91	4	4	<1	0.73	-0.07							
	2020	2 346 709	61	91	3	4	2			86	4	7	3			95	3	2	<1									
Latin America and the Caribbean	2015	623 934	80	86	4	6	3	0.75	-0.41	67	5	16	11	1.24	-1.17	90	4	4	1	0.51	-0.14							
	2020	653 962	81	89	4	5	2			73	6	15	6			93	4	3	<1									
Europe and Northern America	2015	1 100 090	76	97	<1	2	<1	0.09	-0.00	93	<1	6	<1	0.20	-0.00	99	<1	<1	<1	0.03	-0.00							
	2020	1 116 506	77	98	<1	2	<1			94	<1	6	<1			99	<1	<1	<1									
Oceania	2015	11 312	23	35	4	47	14	-0.01	0.11	24	3	56	18	0.04	0.14	74	8	16	3	-0.17	0.01							
	2020	12 356	23	35	5	46	15			24	4	54	19			71	9	17	3									
Sub-Saharan Africa	2015	958 577	39	30	18	31	22	0.50	-0.72	21	9	38	31	0.33	-0.79	44	31	18	7	0.49	-0.21							
	2020	1 094 366	42	33	19	31	18			23	9	41	27			46	32	17	5									
Northern Africa and Western Asia	2015	481 520	62	87	4	6	4	0.51	-0.32	74	4	12	9	0.67	-0.58	94	3	2	<1	0.28	-0.08							
	2020	525 869	63	88	3	6	3			77	4	12	7			95	2	2	<1									
OTHER REGIONAL GROUPINGS																												
Landlocked Developing Countries	2015	473 817	30	41	10	28	21	0.48	-1.05	32	6	33	29	0.55	-1.30	61	21	15	3	0.08	-0.23							
	2020	533 143	31	43	11	30	16			35	7	37	22			62	22	14	2									
Least Developed Countries	2015	940 860	32	33	15	32	20	0.78	-0.98	27	9	37	27	0.77	-1.07	46	27	22	5	0.50	-0.35							
	2020	1 057 131	35	37	16	31	16			31	9	38	22			48	29	20	4									
Small Island Developing States	2015	66 523	61	68	9	15	8	0.12	-0.15	47	7	30	16	0.05	-0.24	83	10	5	2	0.02	-0.01							
	2020	69 410	61	68	9	15	8			44	7	32	16			83	10	5	2									
Fragile contexts	2015	1 600 667	40	45	14	25	16	0.75	-0.74	34	9	32	25	0.80	-0.93	61	21	15	4	0.36	-0.18							
	2020	1 782 109	43	48	15	24	13			37	10	32	20			62	22	13	3									
INCOME GROUPINGS																												
Low income	2015	603 234	32	29	12	35	24	0.34	-0.95	21	7	40	32	0.32	-1.11	45	24	25	6	0.11	-0.27							
	2020	686 089	34	30	14	37	19			23	8	44	26			46	26	24	4									
Lower-middle income	2015	2 750 658	38	58	12	10	19	1.86	-1.79	51	9	12	28	2.26	-2.24	70	19	6	5	0.85	-0.63							
	2020	2 954 195	40	68	13	8	11			63	9	10	17			75	19	4	2									
Upper-middle income	2015	2 834 637	63	85	4	9	2	1.37	-0.25	76	4	16	4	1.89	-0.38	91	4	4	<1	0.67	-0.08							
	2020	2 936 970	67	91	3	4	1			85	4	8	3			94	3	2	<1									
High income	2015	1 188 497	80	>99	<1	<1	<1	0.04	-0.00	98	<1	2	<1	0.08	-0.00	>99	<1	<1	<1	0.02	-0.00							
	2020	1 214 601	81	>99	<1	<1	<1			98	<1	2	<1			>99	<1	<1	<1									
WORLD	2015	7 379 797	54	73	7	10	10	1.13	-0.76	58	6	16	19	1.55	-1.14	85	8	5	2	0.43	-0.19							
	2020	7 794 799	56	78	7	8	6			66	7	14	13			88	8	3	<1									

COUNTRY, AREA OR TERRITORY	Year	NATIONAL						RURAL						URBAN								
		Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)			Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)			Proportion of population using improved sanitation facilities (excluding shared)			Proportion of population using improved sanitation facilities (including shared)					
		Safely managed	Disposed in situ	Empty and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections	Safely managed	Disposed in situ	Empty and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections	Safely managed	Disposed in situ	Empty and treated	Wastewater treated	Latrines and other	Septic tanks	Sewer connections
SDG REGIONS																						
Australia and New Zealand	2015	71	-	-	71	<1	12	88	-	-	-	-	-	-	-	-	-	-	-	-	-	
	2020	76	-	-	76	<1	12	88	-	-	-	-	-	-	-	-	-	-	-	-	-	
Central and Southern Asia	2015	38	33	-	5	31	26	13	38	38	-	<1	37	22	1	38	24	-	14	20	35	34
	2020	47	40	-	6	38	31	15	50	49	-	<1	48	26	2	41	25	-	16	20	39	38
Eastern and South-Eastern Asia	2015	49	10	-	39	16	25	47	32	13	-	19	30	26	23	62	8	-	54	6	24	65
	2020	60	11	-	49	16	27	52	43	16	-	27	30	31	29	72	8	-	63	6	25	67
Latin America and the Caribbean	2015	28	-	-	28	10	17	63	-	-	-	7	25	31	17	33	-	-	33	6	14	74
	2020	34	-	-	34	9	17	67	-	-	-	9	25	35	19	40	-	-	40	6	13	78
Europe and Northern America	2015	76	-	-	74	5	11	82	44	-	-	44	13	32	48	86	2	-	83	2	4	93
	2020	78	-	-	76	4	10	84	46	-	-	46	13	31	50	87	2	-	85	2	4	94
Oceania	2015	-	-	-	5	14	16	9	-	-	-	1	15	10	2	-	-	-	17	11	38	33
	2020	-	-	-	5	13	16	10	-	-	-	1	14	10	3	-	-	-	17	11	36	34
Sub-Saharan Africa	2015	19	19	-	-	32	9	7	18	18	-	-	27	2	1	22	22	-	-	39	19	17
	2020	21	21	-	-	32	12	7	19	19	-	-	28	3	1	23	23	-	-	38	24	16
Northern Africa and Western Asia	2015	37	-	-	37	11	20	59	-	-	-	18	20	29	30	53	5	-	49	6	15	77
	2020	42	-	-	41	10	18	63	-	-	-	23	18	27	35	56	4	-	52	5	13	80
OTHER REGIONAL GROUPINGS																						
Landlocked Developing Countries	2015	29	25	-	5	36	6	9	26	26	-	<1	33	4	1	37	22	-	15	42	11	29
	2020	31	26	-	5	38	8	9	28	28	-	<1	35	5	1	37	23	-	14	43	13	27
Least Developed Countries	2015	24	24	-	-	32	12	4	23	22	-	<1	29	7	<1	26	26	-	-	40	22	10
	2020	26	26	-	-	35	14	4	25	25	-	-	31	8	<1	27	27	-	-	41	25	11
Small Island Developing States	2015	-	-	-	16	22	25	31	-	-	-	2	30	18	6	25	-	-	25	17	29	47
	2020	-	-	-	16	21	26	30	-	-	-	2	27	18	7	-	-					

Annex 10:

REGIONAL HYGIENE ESTIMATES

REGION	Year	Population (thousands)	% urban	NATIONAL				RURAL				URBAN			
				Basic	Limited (without water or soap)	No service	Annual rate of change (basic)	Basic	Limited (without water or soap)	No service	Annual rate of change (basic)	Basic	Limited (without water or soap)	No service	Annual rate of change (basic)
SDG REGIONS															
Australia and New Zealand	2015	28 547	86	-	-	-	-	-	-	-	-	-	-	-	
	2020	30 322	86	-	-	-	-	-	-	-	-	-	-	-	
Central and Southern Asia	2015	1 896 327	35	65	31	4	0.72	57	38	5	0.81	81	17	2	0.29
	2020	2 014 709	37	69	28	3		61	35	4		82	16	2	
Eastern and South-Eastern Asia	2015	2 279 490	56	-	-	-	-	-	-	-	-	-	-	-	-
	2020	2 346 709	61	-	-	-	-	-	-	-	-	-	-	-	-
Latin America and the Caribbean	2015	623 934	80	-	-	-	-	60	20	20	-	-	-	-	-
	2020	653 962	81	-	-	-	-	-	-	-	-	-	-	-	-
Europe and Northern America	2015	1 100 090	76	-	-	-	-	-	-	-	-	-	-	-	-
	2020	1 116 506	77	-	-	-	-	-	-	-	-	-	-	-	-
Oceania	2015	11 312	23	36	29	35	0.01	27	31	42	0.01	66	23	11	-
	2020	12 356	23	36	28	36		27	30	43		-	-	-	-
Sub-Saharan Africa	2015	958 577	39	25	40	35	0.22	17	43	39	0.14	37	35	28	0.07
	2020	1 094 366	42	26	40	34		18	44	39		37	36	27	
Northern Africa and Western Asia	2015	481 520	62	84	10	6	1.26	76	15	9	2.23	-	-	-	-
	2020	525 869	63	91	7	3		87	10	3		-	-	-	-
OTHER REGIONAL GROUPINGS															
Landlocked Developing Countries	2015	473 817	30	35	37	28	-0.04	26	42	32	0.03	56	26	18	-0.44
	2020	533 143	31	35	37	28		26	42	33		53	28	19	
Least Developed Countries	2015	940 860	32	32	39	29	0.95	26	42	32	1.03	44	32	23	0.53
	2020	1 057 131	35	37	36	27		31	39	30		47	32	21	
Small Island Developing States	2015	66 523	61	53	24	23	-0.26	36	31	33	-0.59	64	19	17	-0.14
	2020	69 410	61	52	28	20		33	37	30		63	23	14	
Fragile contexts	2015	1 600 667	40	43	34	23	0.98	33	40	27	1.33	58	25	17	0.25
	2020	1 782 109	43	48	31	21		40	36	25		59	25	16	
INCOME GROUPINGS															
Low income	2015	603 234	32	28	39	34	0.69	20	42	38	0.74	43	33	25	0.33
	2020	686 089	34	31	38	31		24	40	36		44	34	22	
Lower-middle income	2015	2 750 658	38	63	28	9	0.39	56	35	10	0.55	75	18	8	-0.08
	2020	2 954 195	40	65	27	9		58	33	9		74	18	8	
Upper-middle income	2015	2 834 637	63	-	-	-	-	-	-	-	-	-	-	-	-
	2020	2 936 970	67	-	-	-	-	-	-	-	-	-	-	-	-
High income	2015	1 188 497	80	-	-	-	-	-	-	-	-	-	-	-	-
	2020	1 214 601	81	-	-	-	-	-	-	-	-	-	-	-	-
WORLD	2015	7 379 797	54	67	23	9	0.69	55	33	12	1.08	-	-	-	-
	2020	7 794 799	56	71	21	9		60	29	11		-	-	-	-



UN-Water coordinates the efforts of United Nations entities and international organizations working on water and sanitation issues. By doing so, UN-Water seeks to increase the effectiveness of the support provided to Member States in their efforts towards achieving international agreements on water and sanitation. UN-Water publications draw on the experience and expertise of UN-Water's Members and Partners.

PERIODIC REPORTS:

SDG 6 Progress Update 2021 - summary

This summary report provides an executive update on progress towards all of SDG 6 and identifies priority areas for acceleration. The report, produced by the UN-Water Integrated Monitoring Initiative for SDG 6, presents new country, region and global data on all the SDG 6 global indicators.

SDG 6 Progress Update 2021 - 8 reports, by SDG 6 global indicator

This series of reports provides an in-depth update and analysis of progress towards the different SDG 6 targets and identifies priority areas for acceleration: Progress on Drinking Water, Sanitation and Hygiene (WHO and UNICEF); Progress on Wastewater Treatment (WHO and UN-Habitat); Progress on Ambient Water Quality (UNEP); Progress on Water-use Efficiency (FAO); Progress on Level of Water Stress (FAO); Progress on Integrated Water Resources Management (UNEP); Progress on Transboundary Water Cooperation (UNECE and UNESCO); Progress on Water-related Ecosystems (UNEP). The reports, produced by the responsible custodian agencies, present new country, region and global data on the SDG 6 global indicators.

United Nations World Water Development Report

The United Nations World Water Development Report (WWDR) is UN-Water's flagship report on water and sanitation issues, focusing on a different theme each year. The report is published by UNESCO, on behalf of UN-Water and its production is coordinated by the UNESCO World Water Assessment Programme. The report gives insight on main trends concerning the state, use and management of freshwater and sanitation, based on work done by the Members and Partners of UN-Water. Launched in conjunction with World Water Day, the report provides decision-makers with knowledge and tools to formulate and implement sustainable water policies. It also offers best practices and in-depth analyses to stimulate ideas and actions for better stewardship in the water sector and beyond.

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

GLAAS is produced by the World Health Organization (WHO) on behalf of UN-Water. It provides a global update on the policy frameworks, institutional arrangements, human resource base, and international and national finance streams in support of sanitation and drinking water. It is a substantive input into the activities of Sanitation and Water for All (SWA) as well as the progress reporting on SDG 6 (see above).

The progress reports of the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP)

The JMP is affiliated with UN-Water and is responsible for global monitoring of progress towards SDG 6 targets for universal access to safe and affordable drinking water and adequate and equitable sanitation and hygiene services. Every two years the JMP releases updated estimates and progress reports for WASH in households, schools and health care facilities.

Policy and Analytical Briefs

UN-Water's Policy Briefs provide short and informative policy guidance on the most pressing freshwater-related issues that draw upon the combined expertise of the United Nations system. Analytical Briefs provide an analysis of emerging issues and may serve as basis for further research, discussion and future policy guidance.

UN-WATER PLANNED PUBLICATIONS

- UN-Water Policy Brief on Gender and Water
- Update of UN-Water Policy Brief on Transboundary Waters Cooperation
- UN-Water Analytical Brief on Water Efficiency

More information: <https://www.unwater.org/unwater-publications/>



JMP website: washdata.org

DRINKING WATER

- In 2020, 74% of the global population used safely managed drinking water services, 60% in rural and 86% in urban.
- 2 billion people lacked safely managed services, including 1.2 billion people with basic services, 282 million with limited services, 367 million using unimproved sources, and 122 million drinking surface water.
- Estimates for safely managed services were available for 138 countries and five out of eight SDG regions, representing 45% of the global population.
- Achieving universal access to safely managed services by 2030 will require a 4x increase in current rates of progress (10x in least developed countries (LDCs) and 23x in fragile contexts).

SANITATION

- In 2020, 54% of the global population used safely managed sanitation services, 44% in rural and 62% in urban.
- 3.6 billion people lacked safely managed services, including 1.9 billion people with basic services, 580 million with limited services, 616 million using unimproved facilities, and 494 million practising open defecation.
- Estimates for safely managed services were available for 120 countries and seven out of eight SDG regions, representing 81% of the global population.
- Achieving universal access to safely managed services by 2030 will require a 4x increase in current rates of progress (15x in LDCs and 9x in fragile contexts).

HYGIENE

- In 2020, 71% of the global population had basic handwashing facilities with soap and water at home.
- 2.3 billion people lacked basic services, including 670 million people with no handwashing facilities at all.
- Estimates were available for 79 countries and four out of eight SDG regions, representing 50% of the global population.
- Achieving universal access to basic services by 2030 will require a 4x increase in current rates of progress (7x in LDCs and 5x in fragile contexts).

MENSTRUAL HEALTH

- New indicators related to menstrual health are increasingly included in household survey questionnaires for women and girls age 15 to 49.
- 42 countries had national data available on awareness of menstruation, use of menstrual materials, access to a private place to wash and change, and participation in activities during menstruation.
- A large proportion of women and girls in countries where data are available reported not to have the services they need for menstrual health and there are often substantial disparities between sub-national regions and for women and girls with and without disabilities.
- Further work is needed to refine these indicators and evaluate if others may be more relevant to menstrual needs.